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SAN GABRIEL VALLEY GREENWAY NETWORK
Strategic Implementation Plan

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PUBLIC DRAFT

San Gabriel Valley Greenway Network
Strategic Implementation Plan

Prepared for

Los Angeles County Public Works

February 2025

Tribal Land Acknowledgment
(Water and Land Acknowledgement)

The County of Los Angeles recognizes that we occupy land originally and still inhabited and cared for by the Tongva, Tataviam, Serrano, Kizh, and Chumash Peoples. We honor and pay respect to their elders and descendants – past, present, and emerging – as they continue their stewardship of these lands and waters. We acknowledge that settler colonization resulted in land seizure, disease, subjugation, slavery, relocation, broken promises, genocide, and multi-generational trauma. This acknowledgment demonstrates our responsibility and commitment to truth, healing, and reconciliation and to elevating the stories, culture, and community of the original inhabitants of Los Angeles County. We are grateful to have the opportunity to live and work on these ancestral lands. We are dedicated to growing and sustaining relationships with Native Peoples and local tribal governments, including (in no particular order) the:

- Fernandeno Tataviam Band of Mission Indians,
- Gabrielino Tongva Indians of California Tribal Council,
- Gabrieleno/Tongva San Gabriel Band of Mission Indians,
- Gabrieleno Band of Mission Indians – Kizh Nation,
- San Manuel Band of Mission Indians, and
- San Fernando Band of Mission Indians.

To learn more about the First Peoples of Los Angeles County, please visit the Los Angeles City/ County Native American Indian Commission website at www.lanaic.lacounty.gov. We recognize our responsibility to include these Tribal Nations in what we do for the San Gabriel Valley Greenway Network.

Director's Message

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Director's Message

This page is intentionally left blank. The final version of this greenway plan will include a message from the Public Works Director.

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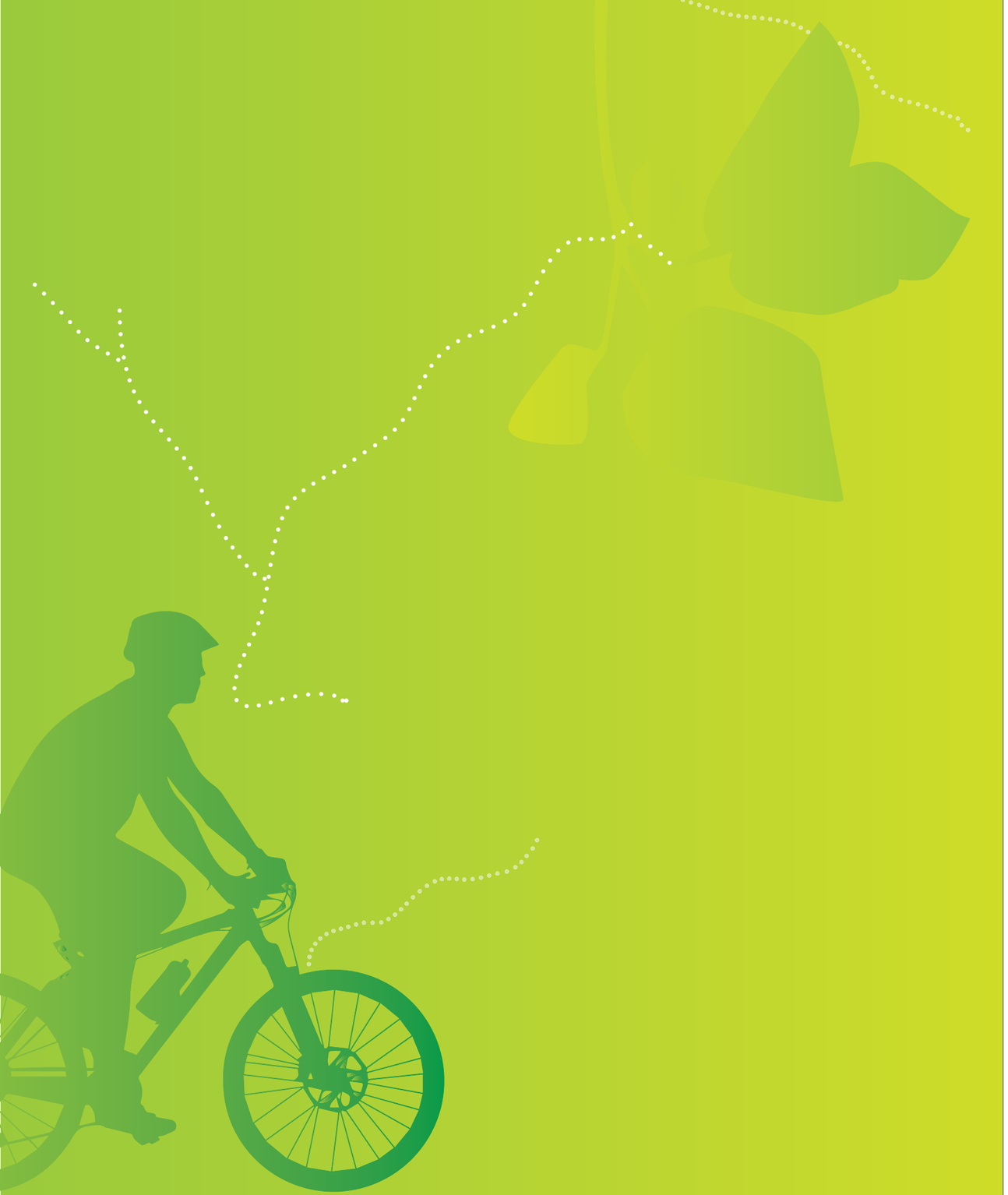
List of Abbreviations

3D	three dimensional
AASHTO	American Association of State Highway and Transportation Officials
ActiveSGV	Active San Gabriel Valley
ADA	Americans with Disabilities Act
BC	Brown and Caldwell
BH	Los Angeles County Beaches & Harbors
BMP	best management practice
BOS	Los Angeles County Board of Supervisors
Catalyst	Catalyst Environmental Solutions
CDC	Los Angeles County Community Development Commission
CEO	Chief Executive Office
CEQA	California Environmental Quality Act
CES	CalEnviroScreen
CGRG	Community and Government Relations Group
CPUC	California Public Utilities Commission
District	Los Angeles County Flood Control District
DPH	Los Angeles County Department of Public Health
DPR	Los Angeles County Department of Parks and Recreation
DRP	Los Angeles County Department of Regional Planning
EIP	Early Implementation Project
EIR	Environmental Impact Report
EWMP	Enhanced Watershed Master Plan
ft	foot, feet
FY	Fiscal Year
GHG	greenhouse gas emissions
GIS	geographic information system
HACOLA	Housing Authority of the County of Los Angeles
HDW	Healthy Design Workgroup
HVC	high visibility crosswalk
KOA	KOA Corporation
LA	Los Angeles
LACAC	Los Angeles County Arts Commission
LA County	County of Los Angeles, Los Angeles County
LA County Public Works	Los Angeles County Public Works
LACoFD	Los Angeles County Fire Department
LACSD	Los Angeles County Supervisorial Districts
LACMTA	Los Angeles County Metropolitan Transportation Authority
MIG	Moore Iacofano Goltsman, Inc.
MSP	Multi-Year Subregional Program
N/A	not available
NAIC	Los Angeles City/County Native American Indian Commission
NGO	non-governmental organizations
NPS	National Park Service
O&M	Operations and Maintenance
PACE	Pacific Advanced Civil Engineering, Inc.
PEH	persons experiencing homelessness
PEIR	Program Environmental Impact Report
PHB	Pedestrian Hybrid Beacon
PNA	Parks and Recreation Needs Assessment
Q&A	question and answer
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RMC	San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy
ROW, R/W	right-of-way
RRFB	rectangular rapid flashing beacon
RTP	Regional Transportation Plan
RWMP	Revised Watershed Management Plan
SCAG	Southern California Association of Governments
SGV	San Gabriel Valley
SGV Greenway Network Plan	The San Gabriel Valley Greenway Network Strategic Implementation Plan
SGVCC	San Gabriel Valley Conservation Corps
SGVCOG	San Gabriel Valley Council of Governments
SWPD	Stormwater Planning Division
SWQDv	stormwater quality design volume
TPL	Trust for Public Land
TPP	Transportation Planning Programs
TSM	Traffic Safety and Mobility
TM	Technical Memorandum
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USFWS	United States Fish and Wildlife Service
USDOT	United States Department of Transportation
WCA	Watershed Conservation Authority



EXECUTIVE SUMMARY

Transforming The San Gabriel Valley Flood Control Right-of-Way Into a World-class Greenway Network

More than two million people live in the dozens of diverse and vibrant communities throughout the San Gabriel Valley (SGV) and many more work and travel throughout this unique region that contains 130 miles of rivers, channels, washes, and creeks. Channelized to protect lives and property from flooding during the late 19th through mid-20th centuries and continuing to serve flood management today, the SGV tributaries have largely been separated from our social, cultural, and ecological communities. Tributaries are rivers, channels, washes, and creeks that discharge into a larger surface water. Today these communities face myriad challenges, including shortages in parklands and open and active recreation spaces, climate change impacts, loss of ecosystems and habitat, resource scarcity, and social inequity.

While land ownership, competing priorities, and funding present hurdles, the SGV tributaries are publicly owned land that present incredible opportunities to greatly benefit communities and people. The San Gabriel Valley Greenway Network Strategic Implementation Plan (SGV Greenway Network Plan) is a multi-objective effort to transform the existing right-of-way (ROW) along the rivers, channels, washes, and creeks in the SGV into a world-class greenway network. Resilient systems are needed to create greenways and connected open space that support the capture and cleaning of water, surface cooling, carbon sequestration, native habitat, parks, recreation, multi-use paths and trails (cyclists, pedestrians, and equestrians), human and ecosystem health, equity, access, mobility, art and culture, and economic opportunity for SGV's diverse communities — all while maintaining flood protection. The extents of the SGV Greenway Network tributaries are shown on Figure ES-1, and a vision of what will be accomplished in the SGV is shown on Figure ES-2.

The SGV Greenway Network Plan is intended to represent a collaboratively developed common vision among local public agencies and community stakeholders and to serve as resource and guide for project proponents, including County of Los Angeles (LA County), cities, other public agencies, communities, and non-governmental organizations (NGO), for future development along the SGV Greenway Network corridors.

Figure ES-1. Map of SGV Greenway Network tributaries

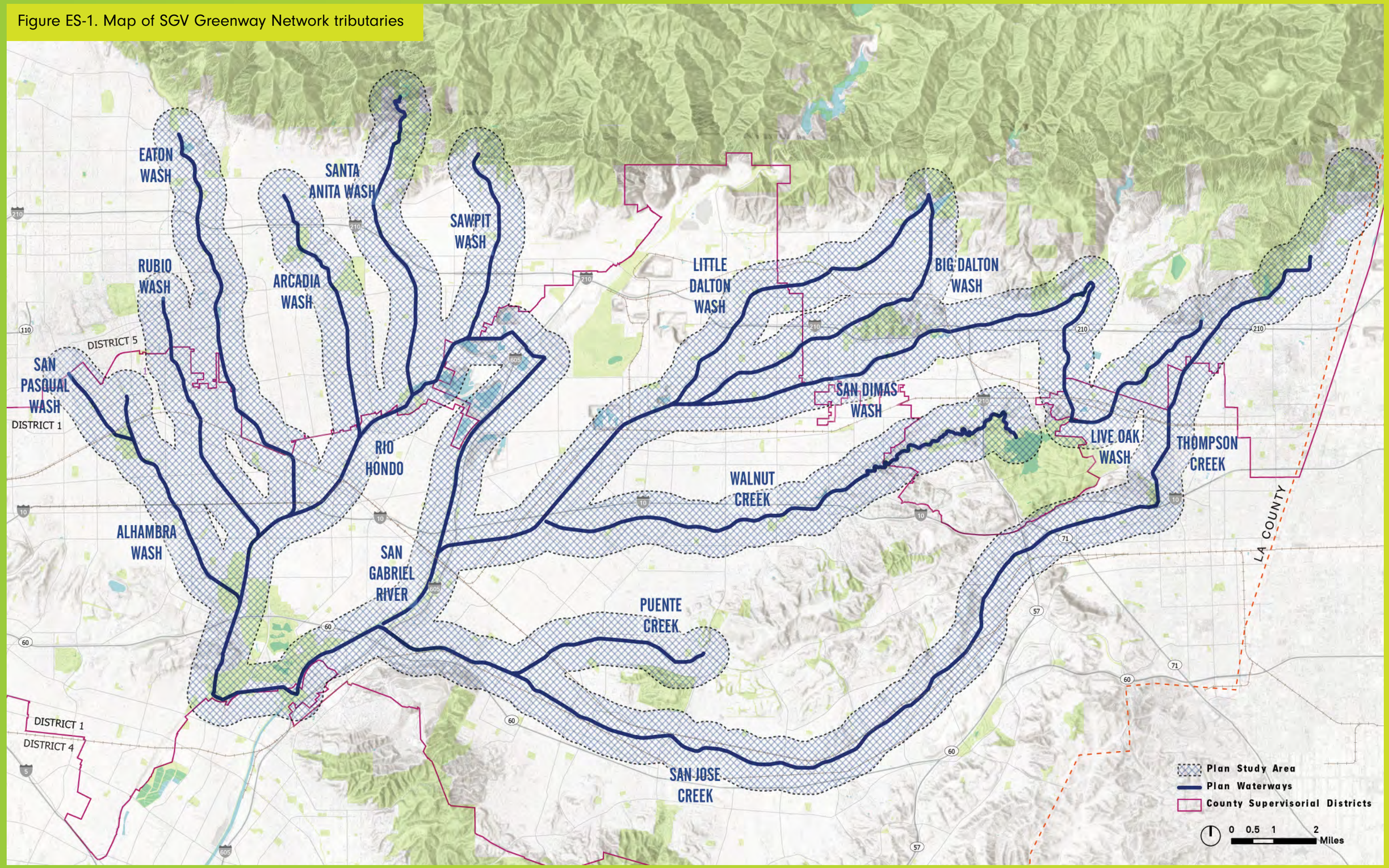


Figure ES-2. 3-D Rendering of example San Dimas Wash at Gladstone Park Greenway Project

Background

The California Greenway Development and Sustainment Act of 2015 describes a greenway as a pedestrian and bicycle, non-motorized vehicle transportation and recreational travel corridor adjacent to an urban waterway. This description allows local jurisdictions to include greenways in their general plans and establishes a greenway easement for tax-exempt, nonprofit organizations for the purpose of preservation or development.

In 2006, the LA County Board of Supervisors (BOS) adopted the San Gabriel River Corridor Master Plan that addressed habitat, recreation, open space, flood control, water supply, and economic development needs of the SGV corridor. This was a result of a stakeholder-driven process that involved multiple cities, public agencies, and a variety of water, community, and environmental groups.

The collaborative planning between various stakeholders in the past has resulted in the construction of Class 1 bike paths along channels like the San Gabriel River and Rio Hondo, and within the Rio Hondo Coastal Basin Spreading Grounds. These examples are models for expanding the active transportation system throughout the SGV. Although many communities are independently pursuing greenways, these efforts in large part lack a holistic and methodical regionwide implementation strategy that result in a fragmented trail network and highlight a demonstrated need for an updated comprehensive plan.

Recognizing the potential, the San Gabriel Valley Council of Governments (SGVCOG) supported the allocation of more than $231 million in Measure M funds toward the implementation of an active transportation program that included a regionwide network of greenways for the SGV. A primary impetus for the subsequent creation of the SGV Greenway Network Plan was the SGVCOG commissioning a report that analyzed the potential benefits, impacts, and opportunities related to a SGV Greenway Network. The SGV Regional Active Transportation Plan includes strategies and actions to improve conditions for walking and bicycling. The Plan provides direction for expanding and upgrading the existing active transportation network and connecting to facilities in adjacent cities and unincorporated Los Angeles County communities.

The Los Angeles County Flood Control District (District), managed by Los Angeles County Public Works (LA County Public Works), operates, and maintains almost 130 miles of open channels that transect nearly every city in the SGV, many of which offer ROW to accommodate community greenways. A typical concrete channel in the SGV with available ROW is Big Dalton Wash near Hilda Solis Park in Baldwin Park, as shown on Figure ES-3.

Greenway development within the District's ROW is well aligned and consistent with the Southern California Association of Government's (SCAG) 2012-2035 Regional Transportation Plan and Sustainable Communities Strategy, the Los Angeles County Metropolitan Transportation Authority (LACMTA) Active Transportation Strategic Plan, and the Los Angeles Countywide Comprehensive 2016 Parks and Recreation Needs Assessment.

There are currently more than a dozen greenway and bikeway Early Implementation Projects (EIP) completed or being implemented throughout the SGV Greenway Network. The EIP serve as great starting points to build future projects per the SGV Greenway Network Plan and expand the connectivity and other benefits of the SGV Greenway Network. Project implementation

Figure ES-3. Big Dalton Wash with available ROW near Hilda Solis Park in Baldwin Park

Figure ES-4. Existing conditions of Greenway along the San Gabriel River in the SGV

Figure ES-5. Community members discuss the Plan at a Covina Famers Market pop-up event

status of EIP varies from early planning through construction. These include Emerald Necklace projects as well as projects on eight of 16 SGV primary tributaries. The Emerald Necklace is a 17-mile long network of existing and future parks, greenways, and trails located along the Rio Hondo and San Gabriel River and is an excellent example of successful collaboration between LA County, cities, NGOs, and residents to make the SGV Greenway Network a reality. An example of a successful greenway project on the Rio Hondo in the SGV is shown on Figure ES-4.

The SGV Greenway Network Plan process started in May 2017 with a motion by BOS to develop a strategic implementation plan for the SGV Greenway Network. The process, led by LA County Public Works, was supported by the LA County Department of Parks and Recreation (DPR). A Steering Committee of 12 partner organizations representing municipalities, non-profit organizations, and other governmental and non-governmental entities were engaged and provided feedback and perspectives throughout the entirety of the community engagement and SGV Greenway Network Plan development process.

From the outset of the plan development, community engagement has been a priority for LA County as illustrated in Figure ES-5. The Plan Team (Plan development team led by LA County Public Works and including DPR, Watershed Conservation Authority (WCA), and the consultant team) understood that the community needed to provide preferences, give feedback, and ask questions at all stages of development to ensure the final SGV Greenway Network Plan would serve the community's needs. Ongoing coordination between LA County, cities and communities, other governmental entities, and non-profit organizations is essential to achieve the SGV Greenway Network Plan's robust vision and goals.

Future projects should reflect the opportunities of specific tributary segments and meet the diverse needs of adjacent communities. Projects must also respect the needs of flood risk management while achieving the SGV Greenway Network Plan's broad goals and objectives.

Visionary and practical, the SGV Greenway Network Plan framework begins with community needs and provides guidance and resources for all jurisdictions to select desired elements and implement projects in the study area. The SGV Greenway Network Plan identifies and describes a series of opportunities for development throughout the SGV Greenway Network where bicycle paths and multi-use greenways can be installed along tributaries to the San Gabriel River and Rio Hondo.

VISION: Create a World-class SGV Greenway Network

The San Gabriel Valley Greenway Network Strategic Implementation Plan is a multi-objective effort to transform the existing ROW along the tributaries in the SGV into a world-class greenway network. Serving as a guide for future development along the SGV Greenway Network corridors, the SGV Greenway Network Plan prioritizes tributary segments, proposes project components, provides project development guidance, and creates an implementation framework and vision for creating multi-benefit projects that advance community, stakeholder, and partner agency goals.

130 miles of potential SGV Greenway Network along 16 tributaries

37 diverse and vibrant LA County communities

200,000+ people live within the Plan area

1. **community**
2. **equity**
3. **circulation**
4. **environment**
5. **synergy**

Figure ES-6. Five key lenses used to develop the SGV Greenway Network Plan's prioritization framework

A prioritization framework was established early in the SGV Greenway Network Plan's development to build a strong foundation and to determine where the greatest impact could be realized in the SGV. Prioritization was accomplished using five key lenses as shown on Figure ES-6: Community, Equity, Circulation, Environment, and Synergy.

Goal-driven Framework and Plan Summary

Flood control systems in the SGV's 130 miles of rivers, channels, washes, and creeks present a tremendous opportunity to create a countywide network of interconnected, multi-use community greenways for linear parks and open space for recreation, bike paths for active transportation, trails for equestrian use, and integrated stormwater management practices. Combining these functions helps expand the singular purpose of LA County's flood control system to meet the needs of the region and the diverse SGV communities by advancing the SGV Greenway Network Plan's six regional and statewide goals, depicted in Figure ES-7, and described below. It should be noted that these are also the goals of Los Angeles County.

Figure ES-7. SGV Greenway Network Plan Goals

- **Promoting Equitable Practices** is at the forefront of assessment and decision making throughout the entirety of the SGV Greenway Network Plan. This is evident in the broad and extensive community engagement efforts that informed the SGV Greenway Network Plan, and by the completion of greenway analyses and by providing project implementation resources equally throughout the SGV. Continued focus on equitable funding is needed throughout implementation to improve environmental justice outcomes.
- **Creating Recreational Opportunities** is a primary benefit of greenway projects, along with creating more open space and improving mobility and physical activity for all potential users.
- **Integrating Stormwater Management** in greenway projects for local and off-site drainage areas accomplishes regionally important stormwater capture, groundwater recharge, and integrated water management.
- **Boosting Connections** to transit, schools, jobs, and everyday destinations is a primary objective of all greenway projects that directly benefit all residents, workers, and visitors. It will help reduce vehicle miles traveled and associated greenhouse gas emissions (GHG).
- **Enhancing Natural Habitats** helps contribute to "quality of life" enjoyment and is achieved by enhancing open spaces adjacent to greenways and following the SGV Greenway Network Plan Design Guidelines and Standards.
- **Enriching Community Well-being** is provided by previously stated goals and by reducing vehicle travel and GHG emissions, planting native trees and vegetation, and reducing heat island effects.

Broad community engagement (i.e., workshops, pop-up events, surveys) was a top priority to inform and publicize the SGV Greenway Network Plan. There were consistent feedback themes on priorities, specifically connectivity, amenities, safety and security, environmental justice, and maintenance. Community feedback was incorporated into the SGV Greenway Network Plan approach and results, including the Design Guidelines and Standards, and example region-wide Conceptual Designs that will help ensure these priorities will be retained throughout SGV Greenway Network Plan implementation.

To further the understanding of the SGV tributaries and the communities which surround them, Tributary Narratives were developed for each tributary using the five key lenses: Community, Circulation, Environment, Equity, and Synergy. As examples, the Equity Story and Environment Story for Alhambra Wash are shown on Figures ES-8 and ES-9.

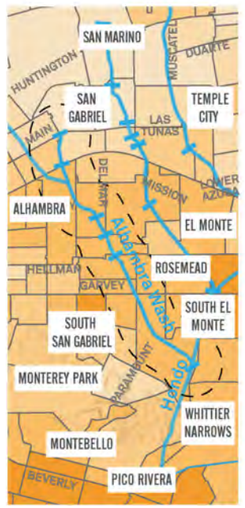
Figure ES-8. Tributary Narratives Equity Story for Alhambra Wash

ALHAMBRA WASH EQUITY STORY

Unfair burden of air, water, and soil pollution can inform the value of nature-based solutions in our design concepts. While socioeconomic factors (e.g., poverty levels, linguistic isolation, etc) can help inform programming.

OVERVIEW

The most environmentally burdened communities are towards the middle of this tributary through Monterey Park and El Monte. The most impacted tract in this area has a CalEnviroScreen percentile score of 86%.



ENVIRONMENTAL BURDEN

According to CalEnviroScreen, exposure to different types of pollution (e.g., air quality, lead risk, diesel, pesticides, etc) is very high throughout most of this area.

SENSITIVITY AND SOCIOECONOMIC ACTORS

CalEnviroScreen rates each census tract's sensitivity to environmental pollution from Very Low to Very High based on socioeconomic and health factors.

The equity story for Alhambra Wash is characterized by high rates of environmental and socioeconomic burden throughout the area.

Figure ES-9. Tributary Narratives Environment Story for Alhambra Wash

ALHAMBRA WASH ENVIRONMENT STORY

Shade study, impervious surfaces, and heat vulnerability can help us see where trees can be the most beneficial.

Tree canopy along Alhambra Wash is mostly average.

Impervious surfaces are most concentrated in South San Gabriel, El Monte, and Montebello, with more opportunities for water infiltration to the north and south. The heat vulnerability index mimics this pattern with the most vulnerable areas near the center of the tributary.

PERCENT WITHOUT TREE CANOPY

Developed by the California Healthy Place Index, this indicator measures the percentage of land without tree canopy.

PERCENT IMPERVIOUS SURFACES

Impervious surfaces are areas of the land hardened by such structures as houses, patios, driveways, and transportation infrastructure. An increase in impervious surfaces can alter the hydrology within a watershed with significant impact on water quality and aquatic and riparian habitat (CHAT).

HEAT VULNERABILITY

The California Heat Assessment Tool (CHAT) was developed by Four Twenty Seven, Inc. in partnership with Argos Analytics, Habitat Seven, and the Public Health Institute. This layer represents the vulnerability of communities to heat-related health impacts.

The environment story for Alhambra Wash shows high heat vulnerability across the community, particularly at the southern end where there is less tree canopy.

Through the prioritization framework, Tributary Narratives, and community engagement, a thorough understanding was developed of the SGV communities and the areas with the greatest needs. The next step was to understand the opportunities and constraints along and adjacent the SGV tributary channels for greenway projects.

A multitude of datasets was used to assess SGV greenway opportunities and constraints, including LA County's geographic information system (GIS) databases, channel as-builts, previous studies, and projects completed and being implemented. Multiple new datasets were created as part of plan development to fill information gaps throughout the SGV. For example, a new dataset created for use in the greenway development analysis was fence line mapping of the SGV channel ROW, which referred to the area directly adjacent each channel under the jurisdiction of the District. Channel ROW width and encroachment was evaluated for opportunities for greenways and complementary project elements on adjacent public parcels.

The resulting SGV Greenway Network Plan consists of greenway design alternatives that illustrate the range of possible strategies that project proponents (the entities leading implementation of future greenway projects in the SGV), including LA County, cities and communities, and NGOs, can use to develop the greenway network. Greenways may include various combinations of users, including pedestrians, cyclists, and equestrians. Guidance is provided on possible design strategies for greenways along the SGV channels; however, it does not prescribe the ultimate use or approach to implementing specific greenway improvements.

The primary greenway project component is a greenway path. A greenway project may also include a combination of the following subcomponents:

- Greenway Amenities
- Pocket Parks and Greenspaces
- Safe Crossings
- Stormwater Management

Each of these project subcomponents include a recommended collection of beneficial project elements and can be implemented individually or in any combination as subsequent projects, driven by the local jurisdiction's needs, funding, and policy decisions. Beneficial project elements are intended to contribute to habitability and the cohesive identity of the greenway network; promote safety, accessibility, and legibility; and build a cohesive identity within the greenway network.

Potential greenway alignments are provided in the SGV Greenway Network Plan, along with opportunities for subcomponents and beneficial elements. Ten example Conceptual Designs are also included, with multiple sheets at different "scales" (greenway network, neighborhood, parcel) to provide ideas for greenways and other project subcomponents and amenities in the SGV. An example Conceptual Design for a potential greenway along Alhambra Wash and connecting to Vincent Lugo Park is shown on Figure ES-10 (neighborhood scale) and Figure ES-11 (parcel scale).

SGV Greenway Network Plan Design Guidelines and Standards (Section 6 and Appendix H) were prepared to support the development of specific design and technical solutions for subsequent projects to be implemented under the SGV Greenway Network Plan. Flexibility is embedded to allow communities to reflect their diverse priorities, art, and culture while maintaining a safe user experience; preserving a unified, cohesive identity along the open space corridor; and promoting best practices and resiliency.

Figure ES-10. Example Conceptual Design for Alhambra Wash at Vincent Lugo Park

NEIGHBORHOOD SCALE

ALHAMBRA WASH AT VINCENT LUGO PARK

In addition to providing a continuous path alignment, some additional enhancements can be incorporated into the project to create multi-beneficial opportunities. Connecting the path to the existing amenities that Vincent Lugo Park already has to offer is the primary objective.

PROJECT POSSIBILITIES

1 INCREASE CONNECTIVITY
Install a bridge across the channel south of the Union Pacific tracks to provide an east-west ped/bike route along the golf course service road and school district road.

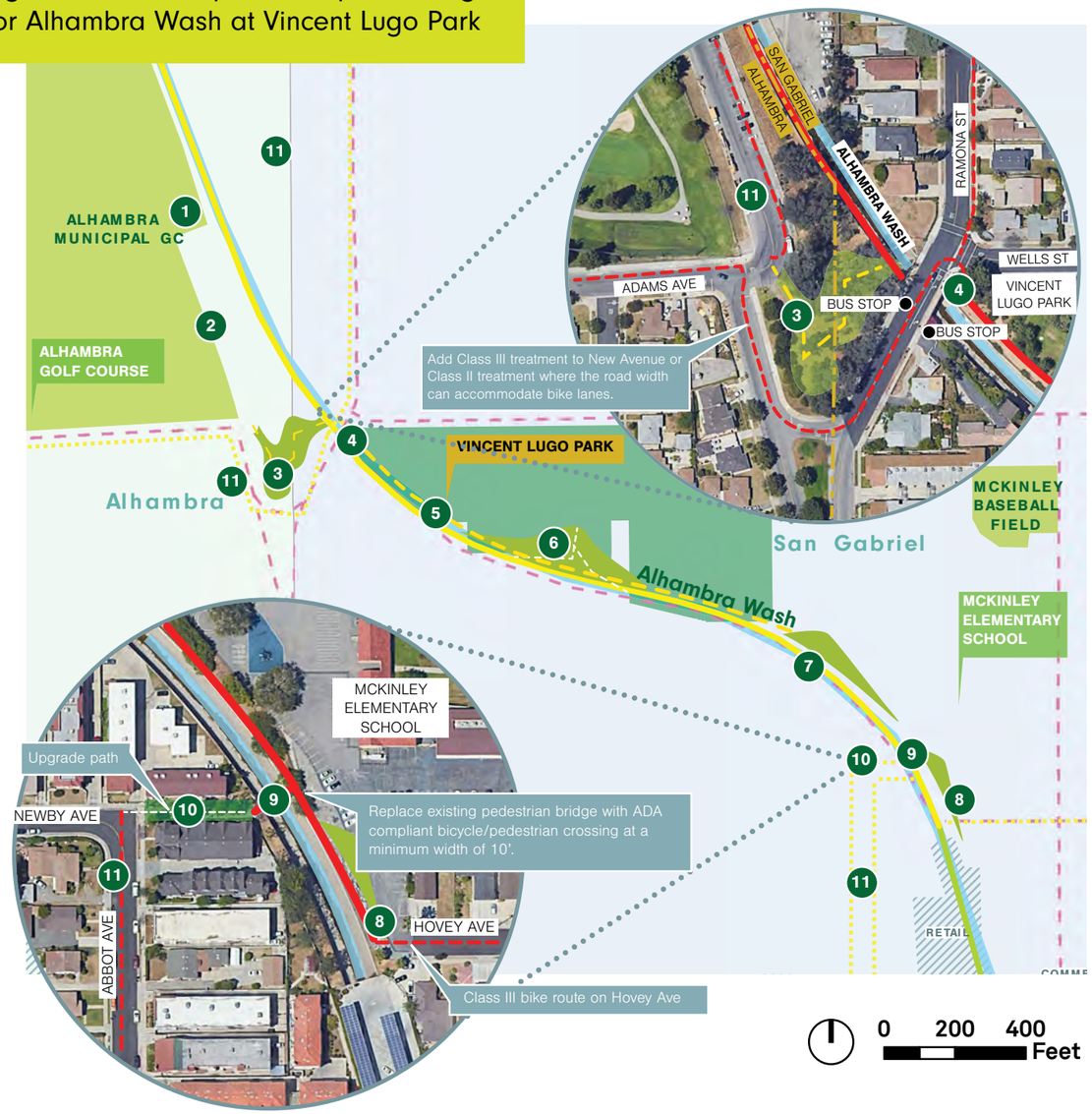
Other connectivity options should be explored and highlighted through the signage program outlined per the design guidelines. Connection should include, but not be limited to: San Gabriel Mission, San Gabriel High School, and Almansor Park.

2 STORMWATER CAPTURE AND TREATMENT
Where the San Pasqual and Alhambra Washes meet, there's an opportunity to provide additional stormwater capture and treatment in the form of a demonstration garden with educational signage.

3 GATEWAY PARK
Vincent Lugo Park is one of the few public open spaces in the area. The park has many amenities including playground space, paved paths, trails, restrooms, a baseball field, extensive parking, and open lawn. Minor enhancements to improve upon the existing plan is advised to align more directly to the greenway project goals. These include converting the existing decomposed granite path along the channel to a paved mutli-use path and adding signage to direct path users to the park's existing amenities.

4 ACCESSIBILITY
Upgrade the existing bridge to conform to ADA standards of access. Add a Class I bike path along the Newby Avenue walkway between the bridge and Abbot Avenue.

Figure ES-11. Example Conceptual Design for Alhambra Wash at Vincent Lugo Park



PARCEL SCALE

ALHAMBRA WASH AT VINCENT LUGO PARK

ELEMENTS TO FEATURE

1. Provide a multi-use path along the channel edge, taking advantage of the existing tree canopy along the Alhambra Golf Course edge. Coordination with the golf course to ensure adequate planting and/or netting is provided to mitigate any safety concerns from flying golf balls will be required. In addition to netting, a visual non-transparent shield is recommended so that golfers teeing off would not be distracted by passing bicyclists or pedestrians.
2. Class II or III bike path along New Avenue to Alhambra Corporation Yard.
3. Open space enhancements to create connection between the neighborhood, open space area, and the proposed path. This could be a small interpretative neighborhood garden to demonstrate garden types such as low water use, habitat, or pollinator gardens.
4. Enhance the existing park entry to become a medium sized gateway, with signage directing users to the Greenway path, and other park amenities, and local destinations.
5. Where feasible, the decomposed granite walking path shall be replaced, or repaired so it aligns with the multi-use path and provides a path for slower traffic.
6. Connection to existing park amenities.
7. Privacy screening between path and school.
8. Demonstration garden at edge of school parking lot. This will act as a small gateway moment at the end of Hovey Avenue.
9. Replace existing pedestrian bridge with ADA compliant bicycle/pedestrian crossing at a minimum width of 10 FT.
10. Small Gateway on west side of bridge.
11. On-street bike route alternatives if a Greenway channel were not available to the south.

Creating an Equitable SGV Greenway Network

LA County is committed to fostering a positive, more equitable future for all residents. The SGV Greenway Network Plan is part of the commitment, as the SGV Greenway Network connects people living and working across diverse geographies, ethnicities, socioeconomic means, and communities. Concurrently, there are multiple needs to be met as expressed in the SGV Greenway Network Plan goals and prioritization framework. The SGV Greenway Network Plan lays out the approaches and resources to create an equitable SGV Greenway Network that will help communities thrive in place.

Greenway projects will improve mobility and increase recreational opportunities and physical activity. Integrating stormwater management will increase groundwater recharge and improve overall LA County water management. Residents, workers, and visitors will have new connections to transit, schools, jobs, and destinations. Natural habitats will be enhanced using open spaces adjacent to greenways. Community well-being will increase through all SGV Greenway Network Plan goals and by reducing vehicle travel and GHG emissions, planting native trees and vegetation, and reducing heat island effects.

The SGV Greenway Network Plan has built-in flexibility and does not prescribe the specific greenway section, users, and project components and elements. Each city or community can create their own projects. Individual cities and communities within the SGV Greenway Network are encouraged to adopt the SGV Greenway Network Plan and coordinate with LA County in implementing greenway projects using the Design Guidelines and Standards and extensive resources. As projects throughout the SGV advance, equity and all goals will remain at the forefront, informing project prioritization, engagement processes, and implementation.

Explore the goals, approach, and resources provided throughout the SGV Greenway Network Plan, which is divided into six major sections and eight appendices. Sections 1 through 4 introduce the SGV Greenway Network Plan description, summary of existing conditions and available data and gaps, the evaluation and prioritization of tributary opportunities, as well as the community engagement aspects of the planning process. Sections 5 and 6 provide guidance and extensive resources to be used by project proponents for greenway implementation.

SGV Greenway Network Strategic Implementation Plan Overview

Section 1: Introduction to San Gabriel Valley Greenway Network Strategic Implementation Plan. Introduction to the SGV Greenway Network and the SGV Greenway Network Plan, including Plan goals, Plan area and tributaries, Plan description and components, natural history and indigenous peoples, flood control improvements, Plan Partners and Plan Team, approach to Plan development, and Plan organization.

Section 2: Existing Conditions Summary. Existing conditions summary of the SGV tributaries and immediately adjacent land including previous efforts and studies; EIP; GIS analysis, database, and mapping; channel characteristics, and Tributary Narratives (key lenses).

Section 3: Engagement Strategy and Results. Community engagement planning including objectives, audiences, activities and materials, schedule, leadership, and reporting of engagement results and integration of feedback into the SGV Greenway Network Plan. Engagement with all stakeholders was the cornerstone plan development. The SGV Greenway Network Plan engagement approaches and materials are equally valuable to greenway project proponents.

Section 4: Project Opportunities Analysis. Development and application of a prioritization framework for the SGV Greenway Network including identifying Tiers 1, 2, and 3 tributary reaches, evaluating Tier 1 tributary opportunities and constraints as well as developing figures for both, and developing safe crossing treatments. The opportunities diagram for Big Dalton Wash is provided in Figure ES-12.

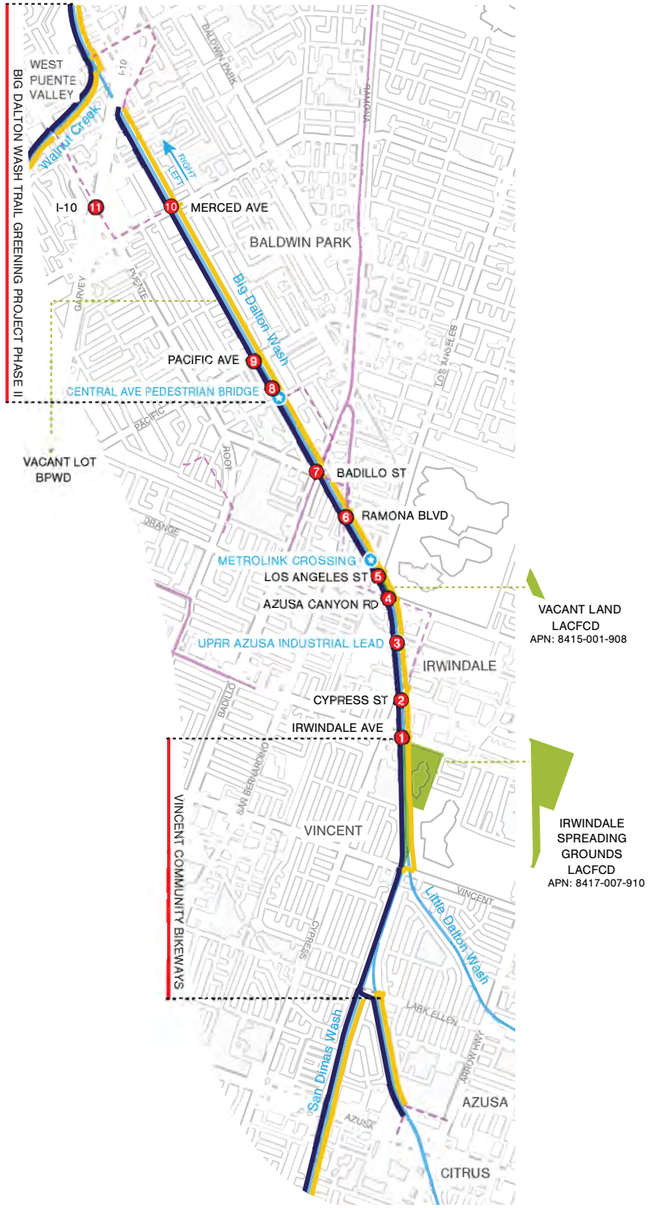
Section 5: Greenway Opportunities and Example Conceptual Designs. Provides tools and resources for identification and development of greenway projects throughout the SGV Greenway Network. Includes evaluating ROW availability and developing greenway alignments and alternative cross sections based on ROW width, project subcomponent opportunities within channel ROW and on adjacent public land (i.e., Greenway Amenities, Pocket Parks and Greenspaces, Safe Crossings, and Stormwater Management), ten example Conceptual Designs, and 3D renderings of potential project elements.

Section 6: Implementation Strategies. Focuses on SGV Greenway Network Plan implementation including extensive guidance for project proponents to complete greenway projects throughout the SGV Greenway Network. Provides guidance and resources for project proponents on project implementation, permitting and approvals, advancing partnerships and community engagement, and pursuing local, state, and federal funding. The SGV Greenway Network Plan Design Guidelines and Standards are summarized and provided as Appendix H.

Figure ES-12. Big Dalton Wash opportunities

Opportunities

Big Dalton Wash



ALIGNMENT POSSIBILITIES
- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK
- BIKE PATH
- EARLY IMPLEMENTATION PROJECTS

PROPOSED CROSSING TREATMENTS
- # CROSSING
  Refer to table on next page for more information

CHANNEL CROSSING
- NON VEHICULAR CROSSING

0 0.3 0.5 mi

Big Dalton Wash

SGV Greenway Network: From Plan to Reality

LA County is the lead coordinator for the implementation of the SGV Greenway Network Strategic Implementation Plan. Simultaneously, it is important to recognize that SGV Greenway Network Plan implementation, and creating a world-class greenway network throughout the SGV, requires a concerted and collaborative effort by LA County, cities and other public agencies, communities, NGOs, advocacy groups, and residents.

To advance the SGV Greenway Network Plan, LA County will establish methods to foster collaboration within the County, as well as with cities, communities, and potential project proponents. This initiative aims to offer ongoing support and resources to streamline the completion of greenway projects and bring the vision of the SGV Greenway Network to fruition. Ensuring consistency in the implementation of greenway projects, adherence to Design Guidelines and Standards will be overseen through the active engagement of the Implementation Team (LA County Public Works and DPR) and the Flood Permit process facilitated by LA County Public Works.

LA County is responsible for and will continue to implement greenway projects along channels in the unincorporated portions of the SGV Greenway Network as funding and staff resources are secured. Cities and communities and other potential project proponents have primary responsibility for implementing greenway projects within city jurisdictions in the SGV Greenway Network.

Potential greenway alignments along SGV flood control channels routinely cross unincorporated LA County and one or more city jurisdictions. For some opportunities, such as completing an important greenway segment through a combination of LA County and city jurisdictions, or if a city does not have the available resources to implement a key connecting segment, multi-jurisdiction partnerships will be needed to complete and maintain these types of projects, assuming funding and resources can be secured. All options for implementation will need to be applied to achieve the SGV Greenway Network Plan vision and create a world-class greenway network throughout the SGV. Completed greenways and current EIP currently being implemented along rivers and washes in LA County demonstrate the viability and successes of multi-jurisdiction collaboration.

The SGV Greenway Network Plan envisions that the implementation of each SGV Greenway Network project to be led by a project proponent (LA County, city, community, or NGO) and to include advancing the project from idea to a completed and maintained community asset. Primary project development phases to be completed by the project proponent may include planning, design and permitting, bidding, construction, and ongoing operation and maintenance. Some projects may not require a public bidding process. These phases are shown on Figure ES-13 with key activities and involved parties. LA County, city, community, NGO, stakeholder, and regulatory agency engagement and coordination are needed early and throughout the implementation process.

Implementation requires committed funding and a capable project team to promote and execute the greenway project using the resources provided in the SGV Greenway Network Plan and appendices as summarized on Figure ES 14.

SGV communities and the region as a whole have an immediate need to address shortages in paths for active transportation, parklands and open and active recreation spaces, climate change impacts, loss of ecosystems and habitat, resource scarcity, and social inequity. The availability of SGV tributary ROW for greenway implementation, combined with strong community and stakeholder commitment, SGV Greenway Network Plan resources, potential funding, and LA County leadership, produce the opportunity to address these challenges, enrich quality of life and community well-being, and create a world-class SGV Greenway Network.

PHASE	KEY ACTIVITIES	INVOLVED PARTIES
PLANNING	• Partner/roles identification • Goals and objectives definition, critical success factors • Data collection, identify data gaps • Opportunities and constraints analysis • Stakeholder and agency engagement • Feasibility analysis, concept development and cost estimating ROW/property ownership/use • Permitting and approval requirements and engagement	• Project proponent responsible with technical consultants assisting • Key regulatory liaisons engaged to understand approval requirements • Early stakeholder engagement essential to project success • LA County Implementation Team
DESIGN AND PERMITTING	• Finalize greenway alignment/sections • Project subcomponent and beneficial elements selection/configuration • Conceptual design • O&M plan/use agreement, and cost estimating • Permit applications (including LACFCD Flood Permit) and environmental documentation submitted, respond to comments • Plan Design Guidelines and Standards Used	• Project proponent responsible with technical consultants assisting • Adjacent projects/communities coordination • Regulatory liaisons for project review and approval • Stakeholder coordination on design (public and advocacy groups)
BIDDING	• Bid package preparation (final construction and bid documents) • Bid advertisement and pre-bid meeting • Bid addenda issued • Bid opening • Bid assessment and award	• Project proponent responsible with assistance from technical consultants • Adjacent projects/communities coordination • Stakeholder coordination on construction expectations and support (public and advocacy groups)
CONSTRUCTION	• Construction • Administration and inspections • Submittal and pay application reviews • Periodic meetings • Design amendments/change orders, if needed • Final inspections and close-out • Permit clearances	• Project proponent is Owner • Technical consultants provides services per Owner • Adjacent projects/communities coordination • Regulatory liaison coordination • Stakeholder coordination, progress and addressing issues
OPERATIONS & MAINTENANCE	• O&M Plan finalized with responsibilities • Post-construction activities maintain greenway project to level of service • O&M reporting as required • Follows LACFCD Flood Permit Use Agreement (Except LACPW projects)	• Project proponent responsible • Project partners if performing some O&M activities • Contractors, if responsible for O&M • Regulatory liaisons if permitting requirements • Stakeholder feedback on O&M needs or general issues

Community and stakeholder engagement should occur throughout the project life.

PHASE	RESOURCES
PLANNING	GIS datasets, Tributary narratives and opportunities and constraints, Greenway alignments/section, Project subcomponent opportunities including Safe Crossings, example conceptual designs, axonal diagrams, Design Guidelines and standards
DESIGN AND PERMITTING	GIS datasets, Tributary narratives and constraints, Greenway alignments/section, Project subcomponent opportunities including Safe Crossings, example conceptual designs, axonal diagrams, Design Guidelines and standards
BIDDING	Project subcomponent opportunities including Safe Crossings, Design Guidelines and standards
CONSTRUCTION	Project subcomponent opportunities including Safe Crossings, Design Guidelines and standards
OPERATIONS & MAINTENANCE	Design Guidelines and standards, LACPW Use Agreement

Figure ES-13. Summary of primary greenway project implementation phases, key activities, and involved parties

Figure ES-14. Summary of primary greenway project implementation phases and resources

SECTION 1

INTRODUCTION TO SAN GABRIEL VALLEY GREENWAY NETWORK STRATEGIC IMPLEMENTATION PLAN

Rio Hondo Bike Path in El Monte

SECTION 1. INTRODUCTION

THE SGV GREENWAY NETWORK PLAN IS A ROADMAP TO IMPLEMENTATION

This section introduces the SGV Greenway Network and the SGV Greenway Network Plan, including plan goals, plan area and tributaries, plan description with subcomponents and beneficial elements, natural history and indigenous peoples, flood control improvements, Plan Partners and Plan Team, approach to plan development, and plan organization.

The San Gabriel Valley Greenway Network Strategic Implementation Plan (SGV Greenway Network Plan) is a multi-objective effort to transform the existing Los Angeles County Flood Control District (District) right-of-way (ROW) along the rivers, channels, washes, and creeks in the San Gabriel Valley (SGV) into a world-class Greenway Network. Serving as a guide for future development along the SGV Greenway Network corridors, the SGV Greenway Network Plan prioritizes planned projects, proposes project components and subcomponents, provides guidance for project development, and creates an implementation framework and vision for creating multi-benefit projects that advance the County, stakeholder, and partner agency goals. The SGV Greenway Network incorporates information and resources from previous plans and studies from throughout the region, including, but not limited to, the LA County Bicycle Master Plan and Emerald Necklace Implementation Plan.

Figure 1-1. San Dimas Wash – Example of gateway enhancement

For over 100 years, LA County and the District have managed ROW for public benefit. This plan is a step forward not only in this service, but also a recognition of thousands of years of the lived experience of people caring for the land in the SGV, and a commitment to support all people thriving equitably into the future. Greenways present opportunities to connect communities through active transportation, celebrate relationships with land and water through access and interpretation, and to improve capture and cleansing of water, provide shelter for people and wildlife, sequester carbon and cool neighborhoods, and support safety and wellbeing through facilities and shaping of the land and plant communities that live here. Greenways can also provide connectivity to existing multi-use trails, bikeways, hiking trails etc.

There have been many ongoing initiatives across District facilities, including the establishment of 39 miles of bikeway from the San Gabriel Mountains to the Pacific along the San Gabriel River, plans for the Los Angeles River, the Emerald Necklace around the San Gabriel and Rio Hondo Rivers in the East San Gabriel Valley, and DPR multi-use trails and park facilities across foothills and communities. This SGV Greenway Network Plan represents profound opportunities to integrate this growing system of greenways through diverse communities to the east and west in the SGV to improve outdoor access and stewardship across jurisdictions.

Throughout LA County, dedicated ROW adjacent to channels have been maintained for operation and maintenance of the channels as shown in Figure 1-1. These dedicated ROWs are referred to as ROW throughout this SGV Greenway Network Plan. For the purposes of the SGV Greenway Network Plan, greenways are located adjacent to the channels, washes, and creeks within these ROWs. To complete an extensive greenway network throughout the expansive SGV, initial planning is focused on developing a greenway along one side of the tributary channels. This does not preclude developing a greenway on both sides of the channel.

The California Greenway Development and Sustainment Act of 2015 describes a greenway as a pedestrian and bicycle, nonmotorized vehicle transportation and recreational travel corridor adjacent to an urban waterway. This description allows local jurisdictions to include greenways in their general plans and establishes a greenway easement for tax exempt, nonprofit organizations for the purpose of preservation or development.

Greenways may include various combinations of paths, trails, and surface treatments to accommodate a variety of users such as pedestrians, cyclists, and equestrians. For the purposes of this SGV Greenway Network Plan, bikeways, paths, pathways, or multi-use paths refer to a paved route for cyclists, walkers, rollers, etc. and typically receive a surface treatment, such as concrete or asphalt. Trails are more specifically defined as unpaved pathways (i.e., compacted earth, crushed granite), which are multi-use in nature and accommodate equestrian, pedestrian, and mountain bike users. This plan provides guidance on various possible combinations for users along the SGV channels, however, it does not prescribe the ultimate use or approach to implement specific greenway improvements. Greenway projects should look for opportunities to accommodate all users and connect with adjacent and intersecting existing and planned greenways, multi-use paths and trails.

1.1 Plan Goals

The SGV Greenway Network Plan was initiated in May 2017, by a motion set forth by the LA County Board of Supervisors (BOS), that stated "The flood control systems in the County rivers, creeks, and channels present a unique opportunity to create a countywide network of interconnected, multiuse community greenways for linear parks and open space for recreation, bike paths for active transportation, multi-use trails for hiking, mountain biking, and equestrian use, and integrated stormwater management practices." The BOS motion also outlines the following specific plan objectives and goals (Figure 1-2):

1 Promoting Equitable Practices
2 Creating Recreational Opportunities
3 Integrating Stormwater Management
4 Boosting Connections
5 Enhancing Natural Habitats
6 Enriching Community Well-Being

Figure 1-2. SGV Greenway Network Plan goals

1 Promoting Equitable Practices

Diverse populations have come to call the SGV home, each with their own traditions and histories. Tributaries of the study area flow through thirty-one LA County communities where over an estimated 2,000,000 people live and work, therefore promoting equitable practices that reflect and uplift all users of the SGV Greenway has been at the forefront of the decision-making process throughout the entirety of the SGV Greenway Network Plan. This can be seen not only in the broad and diverse community engagement efforts but also in the tributary and greenway analyses, potential alignments, example Conceptual Designs throughout the SGV, and the Design Guidelines and Standards accommodation of community preferences and culture. BOS's practice and goal include **"Promoting equitable funding to improve environmental justice outcomes."**

2 Creating Recreational Opportunities

Recreation and active commuting promote a healthy lifestyle, closer connections between communities and landscapes, and benefits for air quality and climate resilience. Numerous bicyclists, pedestrians, and equestrians use the existing LA County regional trails, bikeways, and greenways in the SGV. Implementing the SGV Greenway Network will substantially expand opportunities for active commuting, exercise, and recreation for all types of users throughout the SGV.

As such, the BOS set forth a goal to meet the objectives of: **"Creating access to more open recreational space and promoting physical activity," and "Improving mobility and recreational opportunities for people with disabilities, youth and the aging population, bicyclists, pedestrians and equestrians."**

3 Integrating Stormwater Management/Capture, Groundwater Recharge, Water Quality

Stormwater management is a priority across the LA Basin to capture and reuse stormwater, recharge groundwater, reduce flooding, and improve water quality. Stormwater reuse and groundwater recharge are effective in offsetting increased potable water demand and shrinking water supplies. Stormwater management supports healthy plants, trees, and soil which are key for climate resilience through urban cooling, carbon sequestration, improved air quality, and habitat.

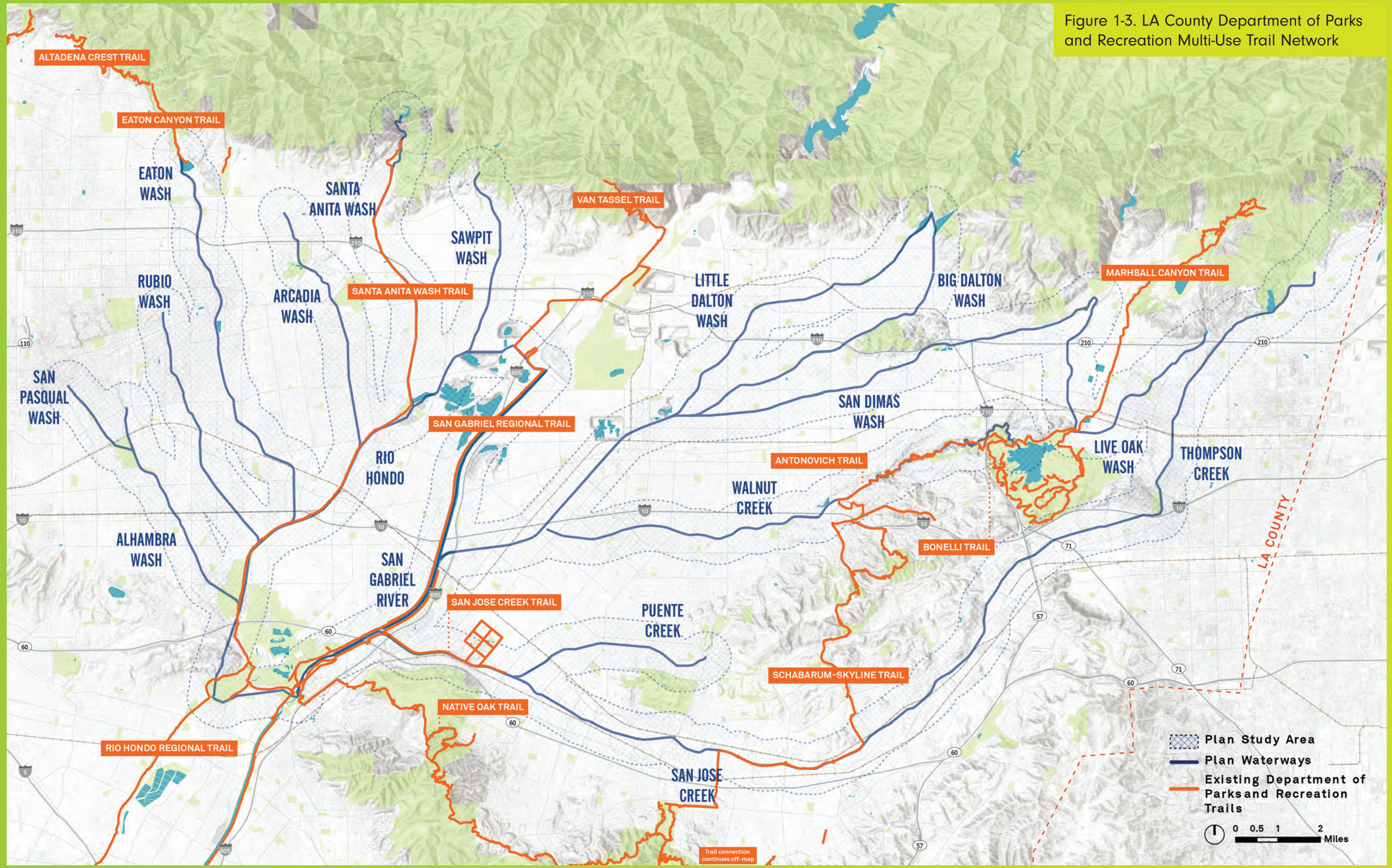
This led the BOS to include the goal of **"Integrating stormwater capture and water management opportunities."** Local and off-site water management is incorporated into planned greenway projects with funding available through the LA County Safe Clean Water Program. The SGV Greenway Network Plan aims to retrofit flood control ROW to provide multiple benefits and implement more sustainable walkable, bikeable greenways with public use spaces that strengthen our diverse communities.

4 Enhancing Connections

Another priority of the SGV Greenway Network Plan is to enhance connectivity by establishing links to existing bikeways and multi-use trails. The goal is to create additional connections that enable residents and visitors to access schools, parks, transit, jobs, shopping, and various other local points of interest.

The SGV Greenway Network Plan includes implementing greenways along more than one hundred miles of tributaries substantially increasing connectivity throughout the SGV. Figure 1-3 shows the extensive network of existing DPR multi-use trails in the SGV which illustrates the many opportunities for future greenway connections to trails. From a regional perspective, east to west connectivity is one of the primary benefits of implementing the SGV Network Plan.

Figure 1-3. LA County Department of Parks and Recreation Multi-Use Trail Network



5 Enhancing Natural Habitats

"Enhancing natural habitats and enriching community well-being" is another important BOS objective. Initiated by previous plans and projects, the SGV Greenway Network Plan aims to adopt, standardize, and expand on those guiding principles. Greenway projects incorporate specific elements such as native plants, gardens, fields to effectively achieve these objectives, in addition to enriching community well-being by presenting more public spaces. Public spaces present opportunities to recognize the history and visions for the future through art, interpretation, material choices, and programmed spaces (i.e., public garden, outdoor classroom, nature walk, educational signage).

6 Enriching Community Well-Being

Finally, the BOS Plan objectives include **"Reducing vehicle miles traveled and associated greenhouse gas emissions."** Disadvantaged communities, including those within the SGV Greenway Network, generally experience degraded air and environmental quality. The SGV Greenway Network Plan provides vast opportunities for alternative greenway transportation and extensive planting of trees and many other types of vegetation to provide communities with green solutions to reduce heat island effects and enhance community well being.

A group of hikers on the Schabarum Skyline Trail in El Monte

1.2 The Plan Area

The SGV Greenway Network Plan area includes over 130 miles of potential greenways and improvements along the District ROW. A 0.5-mile buffer adjacent to each channel was included to capture data in areas that could be reached via a short walk from a potential greenway along the tributaries.

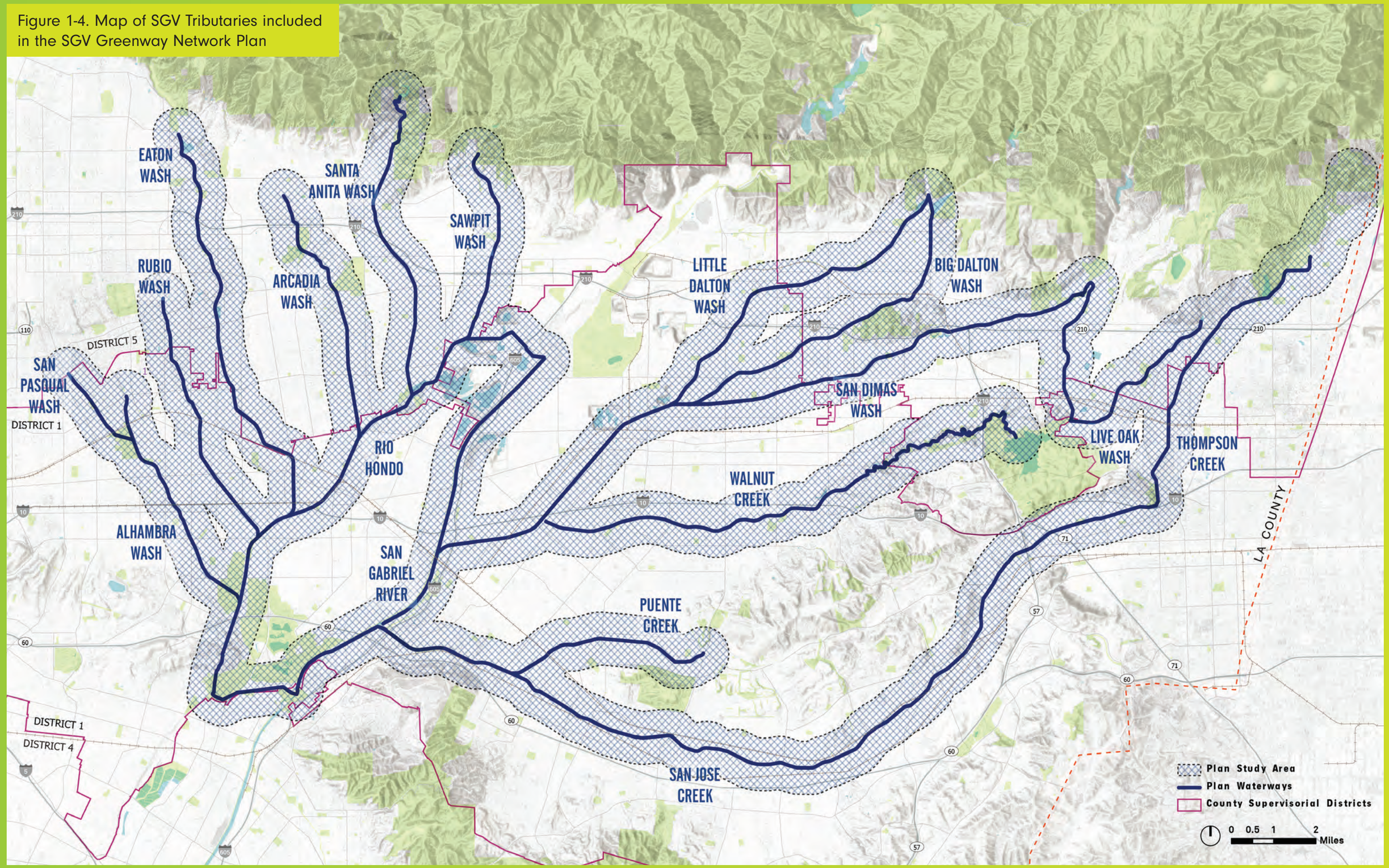
All of the major tributaries of the San Gabriel River and the Rio Hondo within the San Gabriel Valley were included in the SGV Greenway Network Plan area as illustrated in Figure 1-4 and described in detail in subsequent sections. Major tributaries (channels, washes, and creeks), included in the study area are:

- Alhambra Wash
- San Pasqual Creek
- Rubio Wash
- Eaton Wash
- Arcadia Wash
- Santa Anita Wash
- Sawpit Wash
- Little Dalton Wash
- Big Dalton Wash
- San Dimas Wash
- Walnut Creek
- Live Oak Wash
- Puente Creek
- San Jose Creek
- Thompson Creek

Alhambra Wash through Sawpit Wash are tributary to the Rio Hondo. Little Dalton Wash through Thompson Creek discharge to the San Gabriel River.

Highlighted segments of the San Gabriel River and Rio Hondo in Figure 1-4 were also included in the initial SGV area analysis. As the SGV Greenway Network Plan was developed, given their existing greenway development and funding opportunities, they were not considered priority areas for potential greenway implementation, and were not included in the subsequent analysis and conceptual design. This allowed more focus on the SGV tributaries that connect to these rivers.

Figure 1-4. Map of SGV Tributaries included in the SGV Greenway Network Plan



1.3 Plan Description

The SGV Greenway Network Plan includes developing active transportation and recreational corridors for bicyclists, pedestrians, and equestrians; beautify District ROW; and enhance stormwater management and natural habitats around river channels, stormwater channels, washes, and creeks in the San Gabriel Valley. It is intended to be a visionary and practical document for all local jurisdictions within the SGV Greenway Network area, and begins with understanding community needs and provides guidance and resources for jurisdictions to implement future greenway projects in the study area. A prioritization framework was established to determine where the greatest impact could be made through five key lenses: community, equity, circulation, environment, and synergy. This framework can be used to identify future opportunities, demonstrate benefit, and secure funding.

The SGV Greenway Network Plan identifies and describes a series of opportunities for development within the study area where bicycle paths and multi-use paths can be installed along tributaries that connect to the San Gabriel River and Rio Hondo River. The SGV Greenway Network Plan consists of greenway design alternatives that illustrate the range of possible strategies that the proponents of future projects, including but not limited to LA County, cities and communities, and NGOs, can use to develop the greenway network. Greenways may include various combinations of users, including pedestrians, cyclists, and equestrians. Guidance is provided on possible greenway configurations along the SGV channels; however, it does not prescribe the ultimate use or approach to implementing specific greenway improvements.

The primary Greenway project component are greenway paths. A greenway path project may also include one or more subcomponents such as:

- Greenway Amenities
- Pocket Parks and Greenspaces
- Safe Crossings
- Stormwater Management

Each of these project subcomponents include a recommended collection of beneficial project elements and can be implemented individually or in any combination, as driven by the local jurisdiction's needs, funding, and policy decisions. Beneficial project elements are intended to contribute to habitability of the greenway network; promote safety, accessibility, and legibility; and build a cohesive identity within the greenway network.

The SGV Greenway Network Plan also includes Design Guidelines and Standards (summarized in Section 6.4.1 and included in their entirety as Appendix H) that provide a framework to support the development of specific design and technical solutions for projects to be implemented under the SGV Greenway Network Plan while presenting a unified, cohesive identity along the open space corridor and promoting best practices and resiliency. Table 1-1 shows the project component and subcomponents and their respective beneficial project elements. Photographs provided throughout the SGV Greenway Network Plan are illustrative and do not necessarily meet all SGV Greenway Network Plan and Design Guidelines and Standards requirements.

Table 1-1. San Gabriel Valley Greenway Project Component, Subcomponents, and Beneficial Elements

Main project component: Greenways consisting of Multi-use Paths and Trails, Bike Paths and Bikeways, Pedestrian Paths, Equestrian Trails.				
	Greenway Amenities	**Pocket Parks and Greenspaces**	**Safe Crossings**	**Stormwater Management**
Subcomponent: Beneficial Project Elements	• Barriers: Fencing, Guardrails, Rails, Privacy Screen, Gates • Lighting • Hydration Stations • Seating, Benches, Picnic Tables • Bike Parking, Racks • Bike Aid/Service Stations • Equestrian Amenities • Landscaping • Gateways and pavilions • Shade Structures • Shaded Seating (combination of seating and shade structure) • Privacy Buffers/Screens • Restrooms • Kiosks • Trash Cans, Pet Waste Stations • Emergency Safety Call Boxes • Signage: Bikeways, Wayfinding, Informational, Confirmation, Interpretive, Directional, Pavement Markings, Striping, Markers • Gardens (e.g., Low Water Use, Habitat, Pollinator) • Trees • Landscaping • Irrigation • Community: Public Art, Message Boards, Educational Signage • Access for Maintenance and Emergency Vehicles	• Pocket Parks • Parks • Playgrounds • Sports Fields • Sports Courts • Open Fields • Dedicated Walking Paths (e.g., tracks, nature paths, sidewalks) • Urban Agriculture • Planted Median • Fitness Equipment • Greenhouses • Storage Sheds • Outdoor Classroom (combination of seating, shade, and signage structures) • Parking Lots	• ADA-Compliant Accessible Ramps • Signage • Signals • Bridges: Pedestrian, Equestrian, Bike, Multi-use • Within Public ROWs: Class II, II, IV Bike Lanes, Routes, and Paths to form Connections between Greenways • Curb Extensions and Raised Median Islands • Undercrossings, Overcrossings of Channels, Streets, Freeways, and Railroads • Decks and Cantilever Greenway Segments Over Channels • Street Markings	• Bioretention • Permeable Pavement • Subsurface Infiltration • Constructed Wetlands • Extended Detention Basin • Proprietary Devices

1.3.1 Plan Component and Subcomponents

The following provides a brief description of the Greenway Path, the primary SGV Greenway Network Plan component, and each of the four subcomponents. Additional information and details on these and the beneficial project elements are provided in Section 5 and in the SGV Greenway Network Plan Design Guidelines and Standards.

1.3.1.1 Greenway Paths

Greenway paths such as bikeways and multi-use trails are great examples of future construction possibilities along the San Gabriel Valley tributaries. Tributary ROWs are often appropriately wide enough to accommodate a pathway and pass-through neighborhoods with existing or potential access points to other path segments, parks, or other community benefit features (e.g., schools, fairgrounds, etc.). A Greenway project length could be up to 5 miles with a path width typically from 12 to 24 feet. Examples of greenways are provided in Figures 1-5 to 1-8.

Projects designed along the San Gabriel River tributaries and washes present opportunities to combine greenways with stormwater capture and reuse, small parks, attractive landscaping, and other amenities to better serve the public. All potential future projects are expected to include a greenway path in SGV tributary ROW. Potential bikeway design types are described briefly below and in more detail in Section 5 and Appendix H (Design Guidelines and Standards).

Whenever possible, a Class I bikeway or multi-use greenway is the preferred design for segments of the SGV Greenway Network. The California Department of Transportation (Caltrans) classifies facilities with exclusive ROW for bicyclists and pedestrians, away from roadway and with cross flows by motor traffic minimized as Class I bikeways. Class I bike facilities support both recreational and commuting opportunities and are commonly situated along rivers, shorelines, canals, utility ROWs, railroad ROWs, within school campuses, or within and between parks. Class I bikeway is the default bikeway design in District and USACE channel ROWs.

To create continuity between dedicated on-channel bikeways and multi-use greenways, where there is insufficient channel ROW, connecting bicycle routes may need to be located off-channel and along streets and/or roadways. Off-channel facilities may be designed as Class II, III, or IV bikeways depending on the road type, posted speed limit, surrounding area, and the preferred level of separation between the bicycle and vehicle ROW.

Class II and IV bikeways provide some type of division between the bicycle lane and motor vehicle lanes, are preferred for safety, and should be used if space is available, or if space can be provided with street improvements. Class IV bikeways include additional protection through a physical barrier between bicycle and vehicle traffic. Although not preferred, Class III bike routes, which provide for shared use of a roadway among bicyclists and motor vehicles, may also be used to provide continuity where a Class II or Class IV bikeway is not feasible, and other conditions are met.

Class III bike routes provide for shared use of a street or roadway among bicyclists and motor vehicles, generally with no striping or physical barrier for separation. These may be appropriate for local streets with limited traffic and low speed limits. For most streets and roadways, a safer Class II or IV bikeway should be considered and implemented, if feasible.

Class IV bikeways are also referred to as separated bikeways or cycle tracks. They provide an added degree of safety compared to a Class II bikeway through the addition of a physical barrier between bicyclists and motor vehicles on the adjacent roadway. Class IV bikeways are preferred due to safety and encourage greater use and provide access to a larger number of users.

Figure 1-5. Example District channel ROW suitable for conversion to a bike path or multi-use path. This site is situated between the San Dimas Wash and an existing park, Hollenbeck Park, where opportunities for offsite stormwater management have been identified.

Figure 1-7. A completed Class I bike path along the San Gabriel River

The greenway alignment is the primary component of all future SGV projects. All project subcomponents and beneficial elements are optional, discretionary, and can be proposed in many different configurations and/or combinations by project proponents.

Figure 1-6. An example of a multi-use path constructed along a creek

Figure 1-8. Example of an inflexible barrier separating bikeway from traffic (Class IV bikeway)

1.3.1.2 Greenway Amenities

Greenway amenities (Table 1-1) include small structures/features that improve safety and/or serve to enhance the recreator experience along the greenway. These features are not standalone projects but would be optional additions to greenways. Examples include:

- Barriers: Fencing, Guardrails, Rails, Privacy Screen, Gates
- Lighting
- Hydration Stations
- Seating, Benches, Picnic Tables
- Bike Parking, Racks
- Bike Aid/Service Stations
- Equestrian Amenities
- Landscaping
- Gateways
- Shade Structures
- Shaded Seating (combination of seating and shade structure)
- Privacy Buffers/Screens
- Restrooms
- Kiosks
- Trash Cans, Pet Waste Stations
- Emergency Safety Call Boxes
- Signage: Bikeways, Wayfinding, Informational, Confirmation, Interpretive, Directional, Pavement Markings, Striping, Markers
- Gardens (e.g., Low Water Use, Habitat, Pollinator, Community)
- Trees
- Landscaping
- Irrigation
- Community: Public Art, Message Boards, Educational Signage
- Access for Maintenance and Emergency Vehicles

The addition of these amenities to new greenways would provide users respite from the sun and heat, as well as resting places to gather or picnic and overall enhance the attractiveness, usefulness, and accessibility of the greenway path. Illustrative examples of amenities are shown in Figures 1-9 to 1-12.

Figure 1-9. Example shade structure and existing bike path along Big Dalton Wash near Hilda Solis Park

Figure 1-10. Example of benches and rest area along an existing greenway path

Figure 1-11. Bike parking along greenways is an amenity that allows greenway users to rest and secure their bicycles while they visit businesses or other attractions along the greenway.

Figure 1-12. Interpretive signs and displays are used to educate users and expand the SGV Greenway Network into something more than a commuter corridor.

1.3.1.3 Pocket Parks and Greenspaces

Many opportunities for expansion of existing park features or creation of new parks and greenspaces are possible along San Gabriel Valley tributaries based on initial feasibility assessment efforts. During early assessments, numerous potential parks or greenspaces were considered feasible (see Section 5). In many cases, the SGV tributary ROW provides access to areas where public use could be optimized by the addition of greenspaces to complement construction of bike paths and multi-use paths in neighborhoods where these facilities are greatly needed. Pocket parks and greenspaces can be developed into a wide range of configurations with many different combinations of beneficial elements to provide the community needs and wants as follows:

- Playgrounds
- Sports Fields
- Sports Courts
- Open Fields
- Dedicated Walking Paths (e.g., tracks, nature paths, sidewalks)
- Urban Agriculture
- Planted Median
- Fitness Equipment
- Greenhouses
- Storage Sheds
- Outdoor Classroom (combination of seating, shade, and signage structures)
- Parking Lots
- Sidewalks

In addition, many of the Greenway Amenities listed in the previous section could also be beneficially placed in pocket parks and greenspaces. A typical pocket park would be up to 1 acre in size and located immediately adjacent to a planned greenway path. Substantial additional information on pocket parks and greenspaces is provided in Section 5 and the Design Guidelines and Standards (Appendix H). Examples of greenway pocket parks are shown in Figures 1-13 to 1-16. An example of a District ROW with space that could be used to create a pocket park along the project area is shown in Figure 1-17.

Figure 1-13. Lewis MacAdams Riverfront Park
Source: MRCA

Figure 1-14. Lewis MacAdams Riverfront Park
Source: MRCA

Figure 1-15. Lewis MacAdams Riverfront Park
Source: MRCA

Figure 1-16. Walnut Creek Nature Park, an example pocket park

Figure 1-17. Example of an opportunity to combine a greenway path with a small pocket park in the bump-out (left side of photo) adjacent to Walnut Creek

1.3.1.4 Safe Crossings

Safe crossings are needed at all intersections, roads, bridges, railroad tracks, and over channels. Roadway crossings are typically completed at grade with signage, markings, and signals due to the simplicity and lower cost. In some cases, roadways can be traversed using an undercrossing which is usually cost prohibitive unless already in place for an existing maintenance drive. Highways are a major obstacle to greenway continuity and require an alternative on-street Class II, III, or IV bikeway or a very expensive overcrossing (bridge). Expected projects may include the construction of bridges/crossings up to a maximum of 400 feet long and 12 feet wide.

Channel crossings may be facilitated by utilizing existing roads and railroad tracks, which may require addition of safety signals, crosswalk signage, and other infrastructure meant to protect cyclists and pedestrians from road and rail traffic. Channel crossings could also be achieved with dedicated cyclist, pedestrian, equestrian, or multi-use bridges. Some bridges with sufficient width are present already and could be converted to multi-use crossings by removing stairs and adding ramps. Other existing bridges will require complete replacement to provide the required minimum width for dedicated users.

Important considerations for roadway crossings include ensuring safe and appropriate distances from the nearest intersection or routing the crossing to an intersection with signals and/or highly visible crosswalks when possible. For railroad crossings, California Public Utilities Commission (CPUC) coordination will be required. Substantial additional information on safe crossings is provided in Section 5.2 and the Design Guidelines and Standards (Appendix H). Examples of existing crossings in the Project Area as well as an example of a controlled intersection are shown in Figures 1-18 to 1-21.

Figure 1-18. Existing pedestrian bridge crossing over Big Dalton Wash

Figure 1-19. An inaccessible railroad crossing over Walnut Creek

Figure 1-20. Union Pacific Railroad Tracks Cross San Jose Creek in West Covina, CA

Figure 1-21. Example protected intersection in San Francisco, CA

1.3.1.5 Stormwater Management

Stormwater management is a priority across the LA Basin. SGV Greenway Network project proponents are encouraged to use every opportunity to capture stormwater, control flooding, recharge groundwater, and improve water quality. LA County requires a stormwater Best Management Practice (BMP) to treat or infiltrate a site's stormwater quality design volume (SWQDv) where new infrastructure (impervious surface) is proposed with a preference for nature-based solutions. The protocol for quantifying a site's SWQDv is detailed in Section 11 of the Design Guidelines and Standards (Appendix H). With any new construction (e.g., a bikeway), a stormwater BMP must be selected to manage the calculated SWQDv.

Numerous storm drains convey stormwater runoff from adjacent watershed areas through pipes and discharge directly to the tributaries throughout the SGV. On planned greenway projects with wider ROWs and adjacent project elements (gateway, park, etc.) larger stormwater BMPs can be planned and constructed to capture adjacent watershed areas and further control flooding, recharge groundwater, and improve water quality.

Fig 1-22. Example bioretention basin with pipe inflow

Reducing impervious surface area is an overall beneficial change to the landscape and would allow more water to enter the soil as well as dedicated stormwater treatment facilities. Stormwater management options function primarily in three categories:

- **Infiltration,** where runoff is directed to percolate into the underlying soils. Infiltration generally reduces the volume of runoff and increases groundwater recharge.
- **Treatment,** where pollutants are removed through various unit processes, including filtration, settling, sedimentation, sorption, straining, and biological or chemical transformations.
- **Storage,** where runoff is captured, stored (detained), and slowly released into downstream waters. Storage can reduce the peak flow rate from a site but does not directly reduce runoff volume.

Combining a reduction of impervious surfaces with greenway paths and parks fulfills the SGV Greenway Network Plan's goals of creating multi-benefit projects. Stormwater treatment options may be included as a component of these projects and would vary by site based on the unique constraints and needs of the location.

BMP implementation will depend on available ROW and specific greenway project formulation which may limit the use of some types of BMPs. BMP selection should be at the designer's discretion considering project objectives and constraints but is subject to District approval. In cases where specific pollutants are of concern, the appropriate treatment technology should be implemented on a case-by-case basis.

The following includes a brief description of the primary types of stormwater management BMPs that are suggested/highly recommended for SGV greenway projects. Bioretention and permeable pavement are the primary types for treating new impervious surface from greenways and on-channel areas. Additional practices may be used to treat off-channel drainage areas including subsurface infiltration, constructed wetlands, and extended detention basin. Detailed information related to SGV greenway project stormwater BMP alternatives including photograph examples is provided in Section 11 of the SGV Greenway Network Plan Design Guidelines and Standards (Appendix H).

Bioretention

Bioretention (practices include planter, curb extension, basin, and strip) is a shallow landscaped depression that provides stormwater storage, infiltration, and evapotranspiration (LA County, 2014). Practices can be constructed along the sides of greenways, streets, in the median, or adjacent to parking and other impervious surfaces. Areas are typically planted with native, drought-tolerant plant species (e.g., wildflowers, sedges, rushes, ferns, shrubs, small trees) that do not require fertilization and can withstand wet soils for at least 24 hours. Underdrains are used for flow through treatment systems (also called biofiltration) in areas with lower permeability native soils, or where there is a desire to limit infiltration into adjacent soils (e.g., along wash channel walls). Treated water discharges through the underdrain to the storm drain or wash. Examples of these practices are shown in Figures 1-22, 1-23, and 1-24.

Permeable Pavement

Permeable pavement (including "permeable interlocking concrete pavers, pervious concrete, and porous asphalt") "is a surface that can infiltrate stormwater runoff through sublayers of sand and gravel. Permeable interlocking concrete pavers is comprised of a layer of durable concrete pavers separated by joints filled with small stones. Pervious concrete is made from carefully controlled amounts of water and cement materials with little to no sand or fine aggregate particles which creates void spaces that convey water through the surface. Porous asphalt, or "open-graded" asphalt, pavement contains no fine aggregate particles, which creates void spaces in the pavement and allows water to collect within and drain through the pavement" (LA County, 2014). Underdrains are used in areas with lower permeability native soils. Treated water discharges through the underdrain to the storm drainage system.

Subsurface Infiltration

Subsurface infiltration (practices include tree well filter, surface flow and piped flow) is a "narrow trench constructed in pervious areas designed to retain and infiltrate stormwater runoff into the underlying native soils and groundwater table. [Subsurface infiltration practices] are typically filled with gravel or engineered soil or may instead contain manufactured underground stormwater storage chambers. [Subsurface infiltration] provides stormwater runoff treatment through filtration, adsorption, biological treatment, evapotranspiration, and infiltration as water flows through the media profile and into surrounding soils. [Subsurface infiltration] is used for small contributing drainage areas to store and treat stormwater runoff underground and out of sight" (LA County, 2014). Subsurface infiltration shall only be used in pervious areas outside the channel ROW.

Constructed Wetlands

A constructed wetland is a “treatment system consisting of a forebay and permanent pool with aquatic plants. Constructed wetlands typically consist of an inlet with energy dissipation, a sediment forebay for settling out coarse solids and to facilitate maintenance, a base with shallow sections (1 to 2 feet deep) planted with emergent vegetation, deeper areas or micro pools (3 to 5 feet deep), and an outlet structure” (LA County, 2014). An impermeable liner is routinely required to maintain the permanent pool.

Before designing a constructed wetland for stormwater management, consider the hydrology of the project area, and water availability for maintaining wetland vegetation. The LA area receives very limited rainfall. In some cases, it may be possible to supplement runoff with dry weather baseflow from an adjacent existing storm sewer currently discharging to the wash, or the wash itself.

Extended Detention Basin

“Extended detention basins are permanent basins formed by excavation and/or construction of embankments to temporarily detain stormwater runoff to allow for settling of sediment particles before the stormwater runoff is discharged. An extended detention basin reduces peak stormwater flow rates, provides stormwater runoff treatment, and can provide hydromodification control. Extended detention basins are designed to drain completely between storm events over a specified period of time. The slopes, bottom, and forebay of extended detention basins are typically vegetated” (LA County, 2014).

Proprietary Devices

“Proprietary devices are commercial products that typically aim at providing stormwater treatment in space-limited applications, often using patented innovative technologies. The most commonly encountered classes of proprietary stormwater quality control measures include hydrodynamic separation, catch basin insert technologies, cartridge filter-type controls, and proprietary biotreatment devices” (LA County, 2014). A list of District accepted technologies may be found online (LA County, 2013), and must be approved by LA County Public Works on a case-by-case basis.

Fig 1-23. Example bioretention sidewalk planter

Fig 1-24. Example bioretention basin with surface inflow

1.3.2 Design Guidelines and Standards

The SGV Greenway Network Plan Design Guidelines and Standards were created to describe the types of projects that potential project proponents may want to focus on, design elements to be considered, and ongoing operations and maintenance best practices. The guidelines will ensure overall greenway consistency and provide a framework of best practices for greenway development within the San Gabriel Valley.

For project components outside of the District ROW, additional requirements and standards may apply based on the project location and project type. For example, bicycle facilities adjacent to a roadway (referred to as Class II and Class IV bikeways) should be designed based on Caltrans design criteria.

Design priorities for the SGV Greenway Network Plan include safety, connectivity, comfort, community engagement, connection to the environment, and vector control. The requirements and recommendations included in this document are consistent with or complement those of the Los Angeles River Master Plan (LA River Master Plan) and the Emerald Necklace Implementation Plan for dedicated greenways. Therefore, these planning documents are an additional resource.

While a majority of the proposed Design Guidelines are not described as mandatory requirements, select Design Guidelines (such as those related to bikeway and greenway minimum dimensions, emergency and maintenance vehicle access, and key design elements) are described as requirements (through the use of “must” and “shall”) as summarized in Table 1-2.

Table 1-2. Design Guidelines and Standards Key Required Features

Element	Key Features
Class I Bikeway	• Must meet Caltrans Standards for Class I Bikeway • Minimum width of 4 feet paved surface in each direction of travel, 8 feet total • Must have 2 feet durable/drivable all weather surface shoulder on each side • Where a fence, wall or other structure is alongside the bike path there must be 2 feet clearance between the obstruction and bikeway (a 2 feet shoulder satisfies this requirement). • Must have minimum 12 feet of unobstructed drivable width (path and shoulders), 13 feet ROW, and 10 feet vertical clearance below the bottom of any overhead structures • Must support use for emergency and maintenance vehicles • Drainage infrastructure and pavement slope shall be provided for the greenway so stormwater runoff drains immediately from the surface and does not pond. • Pedestrians may use a Class I Bikeway, if no separate pedestrian facility is available, and it must conform to Americans with Disabilities Act (ADA) standards. • With multi use (cyclists with pedestrians and/or equestrians), signage is required for safety and to alert one user of the potential to encounter another user type.
Multi-use Greenway	• Includes Class I Bikeway key features listed above • A natural surface trail that accommodates hikers, mountain bikers, and equestrians.
Cantilever Bikeway/ Greenway Section and Overcrossing	• Shall maintain the flood capacity of the channel and convey the 100-year storm event with no increase in peak water stage • Feature structural integrity and not impacting the channel structural integrity must be addressed by a CA licensed structural engineer throughout implementation • Must be designed and constructed to comply with all local and District or USACE requirements. Early coordination is required to understand potential issues and requirements.
Class II Bikeways	• For the exclusive use of bicycles and at a minimum must provide a striped lane for one-way bike travel on a street or roadway • Bike lane markings shall be retroreflective and placed at a constant distance from the centerline

Table 1-2. Design Guidelines and Standards Key Required Features

Element	Key Features
Class III Bikeways	• May be used where a Class I, II, or IV bikeway is not feasible • Must be suitable for use as a shared bicycle and vehicle route, and maintained consistent with the needs of bicyclists
Class IV Bikeway	• For the exclusive use of bicycles and must include at least one of the specified vertical elements and a minimum horizontal buffer width to separate bikeway and vehicular traffic
Signage	• The SGV Greenway Network logo shall be incorporated into all signage • All signs shall be in multi-language format. English shall be the primary language with the secondary language selected by the community and by project
Intersection crossings	• Facilities intended primarily for bicyclists must conform to the Caltrans Highway Design Manual (HDM) and all signs, signals, and pavement markings must conform to the California Manual on Uniform Traffic Control Devices (CAMUTCD). If the facility also serves pedestrians, the facility must also conform to Americans with Disability Act (ADA) standards. Design of crossings are subject to the approval of the owner of the roadway being crossed, whether it be LA County, a city, or a private entity. A CA licensed civil engineer must design a crossing that involves fixed works.
Stormwater management	• Stormwater associated with new infrastructure (impervious cover) must be managed per Los Angeles County low impact development requirements and treat or infiltrate post-construction runoff. • With any new construction (e.g., bikeway), a stormwater BMP must be selected to manage the calculated SWQDv through on-site infiltration or an alternative action. There are three primary categories of stormwater BMPs that could be used as part of greenway development: 1. On-channel treatment or infiltration and treatment 2. Off-channel treatment of less than 10 acres of project area 3. Off-channel treatment of more than 10 acres of project area • Where infiltration reliant BMPs are proposed, they must meet LA County requirements and all BMPs must meet LA County setback requirements • For Class II, III, and IV Bikeways, stormwater drainage from and across the roadway and separated bikeway must be evaluated and addressed in the design of the Bikeway. Adequate drainage must be provided so that stormwater runoff will flow unimpeded across the surface to the nearest storm drain and will not pond in the roadway nor the bikeway.

1.4 Background and History of the Plan Area

This section introduces the background and history of SGV Greenway Network Plan area. The natural and cultural history of the SGV provides a backdrop for understanding how the region later developed and the need for flood control channels, which are the main focus of this SGV Greenway Network Plan.

1.4.1 Natural History

Historically, the SGV was dominated by a constantly shifting network of shallow streams and river channels which conveyed water across vast wetland areas to the ocean. These dynamic waterways were a result of the San Gabriel Mountains which rise steeply to the north of the SGV as shown in Figure 1-25. Through the dynamic relationships of topography, geology, and climate the San Gabriel Mountains transport tremendous amounts of sediment and water into the SGV during major rain events, presenting both challenges and a significant source of the region's water supplies.

During large storms, the streams of the SGV would overflow and change course rapidly throughout the alluvial floodplain. Even the path of the San Gabriel River has shifted and changed directions throughout history, at times joining the Rio Hondo, Los Angeles River, or even east to the Santa Ana River and Coyote Creek. (source: Grossinger, R. M.; Sutula, M.; Stein, E.; Dark, S.; Longcore, T.; Hall, N.; Beland, M.; Casanova, J. 2007)

These rivers, creeks, and streams have also supported great concentrations and diversity of plant and animal life and have been central in the traditions and lives of people for generations.

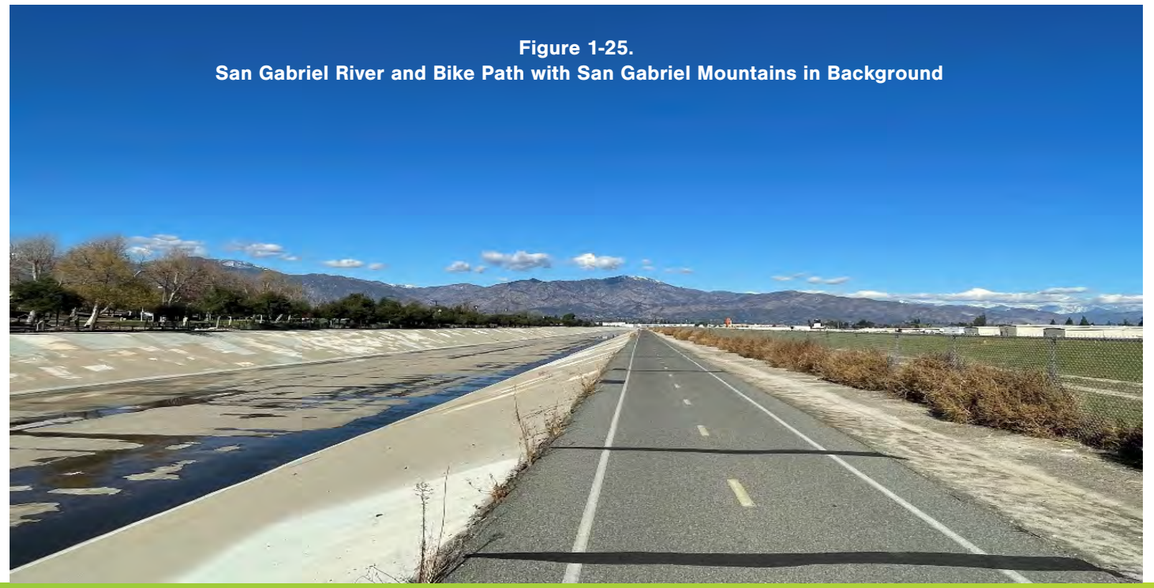


Figure 1-25.
San Gabriel River and Bike Path with San Gabriel Mountains in Background

1.4.2 Indigenous Peoples

Native Tongva people lived amongst these shifting streams and rivers which provided ample water and food supply for thousands of years, as shown by the pictographs in Figure 1-26. Tongva villages were mostly located on high ground, with an understanding of the dangerous winter floods. At least twenty-six Tongva villages as shown in Figure 1-27 were located along the San Gabriel River, and another eighteen were close by. Anthropologists believe the Tongva may have been some of the more advanced native inhabitants of California, establishing currency and complex trade systems with neighboring tribes, cultivating trees and plants for food, and having a formal government structure. The SGV, with its fertile soils and more rainfall than the coastal plain, had the highest population density of Tongva people in the region. Villages in the SGV included Alyeupkigna, Amuscopopiabit, Awingna, Comicranga, Cucamonga, Guichi, Houtnga, Isanthcogna, Juyubit, Perrooksnga, Sibanga, and Toviseanga. The village of Sejatnga was located at the Whittier Narrows.

Figure 1-26. Pictographs in SGV near confluence of west and north forks of San Gabriel River - 1937
Source: Los Angeles Public Library

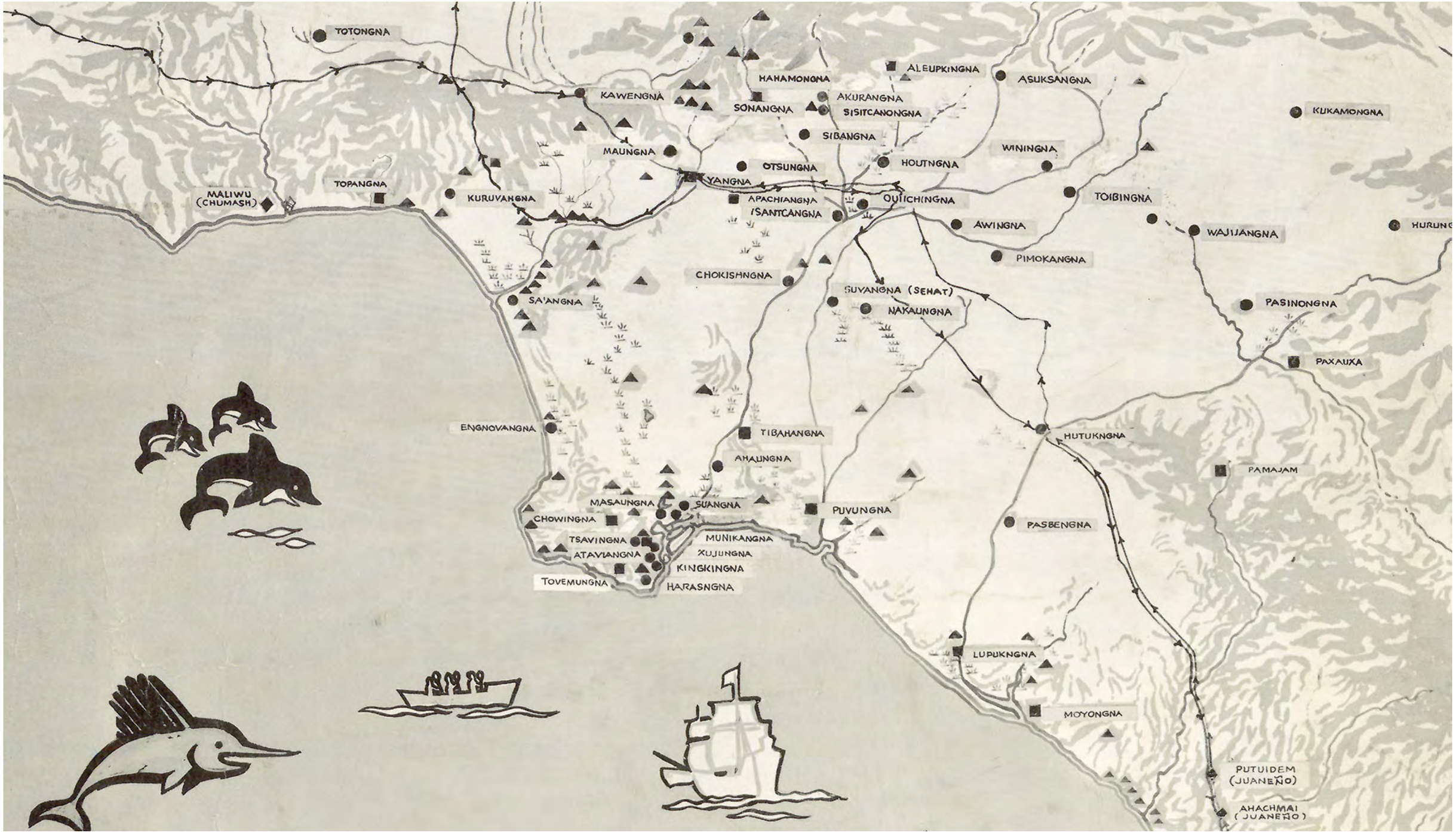


Figure 1-27. Map of Indigenous Villages in the Los Angeles area

Source: Los Angeles Times

1.4.3 Development and Flood Control

As the SGV became colonized by Spanish missionaries (Figure 1-28), miners (Figure 1-29) and began to urbanize, tributary flooding presented a constant threat to development.

Mission San Gabriel was established near Whittier Narrows in 1772 but didn't last long as flood water damaged the structure. The mission moved to higher and drier ground in 1775. Major floods also impacted mining camps throughout the 1800's, sweeping away equipment and buildings. As development intensified in the SGV, so did the damage caused by flood events.

The 1880s had three major floods (1884, 1886, 1889). The 1884 Flood caused widespread damage in the San Gabriel Valley. During this time, the watercourses tended to meander, so flow paths were unpredictable. Even prior to urbanization, the farmers found this problematic. After the 1889 Flood, LA County started on a great agricultural and industrial expansion. LA County's 1890 population was about 100,000 people. By 1914 the population was about 790,000 (about the size of Ventra County's today).

A major flood in 1914 destroyed many buildings and roads that had sprung up in towns throughout the SGV. This drove the first organized civil engineering effort to control flooding in the area. In 1915 the State Legislature adopted the Los Angeles County Flood Control Act, which created a flood control district known today as the Los Angeles County Flood Control District (District). The mandate of creating the District was to provide flood protection and water conservation. The District began to install flood control measures including various dam projects which reduced the destruction in the SGV. However, during the flood of 1938 (Figure 1-30), both the San Gabriel and the Rio Hondo Rivers (Figure 1-31) overflowed their banks causing significant damage.

Since 1915, the District has been building and maintaining an extensive drainage and water conservation system throughout LA County to reduce the risk of flooding, improve local water supply reliability, and provide for passive recreational opportunities. Most of the once natural tributaries of the Rio Hondo and the San Gabriel River were channelized using concrete to establish predictable flow paths. Additionally, urbanization has made existing land used for groundwater recharge irreplaceable and vital to the sustainability of regional drinking water supplies. Figure 1-32 shows when many of the open channel systems within the SGV were built and Figures 1-33 through 1-37 show aerial imagery of SGV channels from 1961 to the present.

Figure 1-28. Mission San Gabriel
Source: Los Angeles Public Library

Figure 1-29. San Gabriel Canyon Miner
Source: California State Library

The channel system was installed in various phases over multiple decades with the majority of channels being constructed in the 1960s and 1970s with involvement from both the LA County and the United States Army Corps of Engineers (USACE). This extensive network of ROW in the San Gabriel Valley now presents an excellent opportunity to accommodate an extensive greenway network.

Figure 1-30. Hog Barn collapsed in 1938
Source: Los Angeles Public Library

Figure 1-31. Flooded Rio Hondo River in 1951
Source: Los Angeles Public Library

Figure 1-32. Map showing estimated construction timing for open drainage channels in the SGV
Source: LA County Public Works

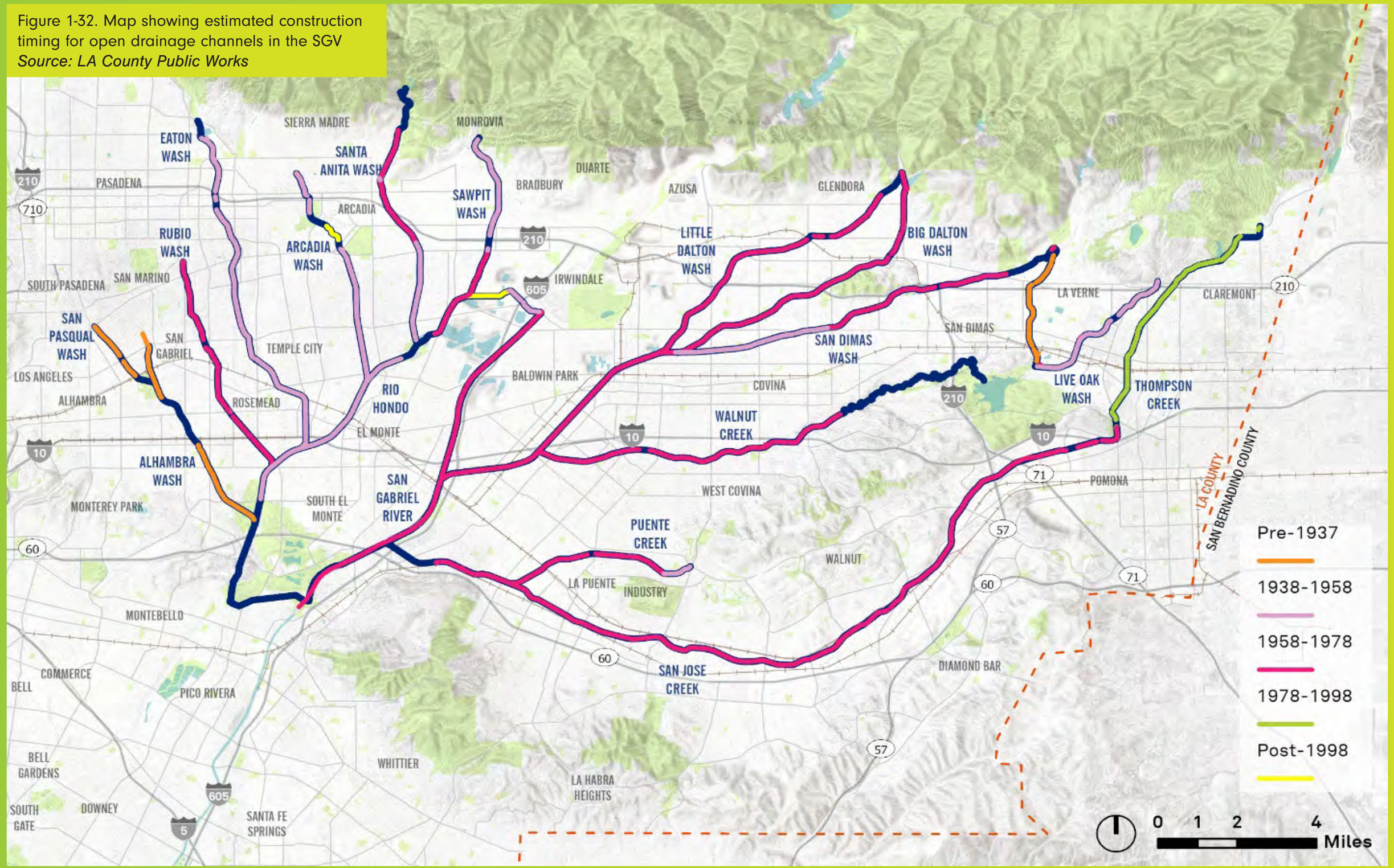


Figure 1-33. Rio Hondo in 1961

Source: Los Angeles Public Library

Figure 1-34. Walnut Creek channel through residential area in Baldwin Park

Figure 1-35. San Jose Creek at transition to soft bottom near San Gabriel River confluence

Figure 1-36. Big Dalton Wash near Hilda Solis Park in Baldwin Park

Figure 1-37. Santa Anita Wash in Monrovia

1.5 Plan Partners and Plan Team

The SGV Greenway Network Plan was developed with transparency and community engagement at the forefront of the process. Community engagement input was incorporated into the SGV Greenway Network Plan to represent the needs and desires of the District, cities, communities, and all stakeholders with an interest in the SGV Greenway Network.

The core Plan Team consisted of LA County Public Works and Plan Partners, LA County Department of Parks and Recreation (DPR) and Watershed Conservation Authority (WCA), and the consultant team. The Steering Committee provided oversight throughout the SGV Greenway Network Plan process, as shown on Figure 1-38 and described further below.

Figure 1-38. SGV Greenway Network Plan Team and Steering Committee structure

1.5.1 Plan Team

The Plan Team was led by LA County Public Works Stormwater Planning Division (SWPD) which represented the Project Management team. Other SGV Greenway Network Plan Team members included LA County Public Works Transportation Planning Programs (TPP) Division, LA County Department of Parks and Recreation (DPR) and the Watershed Conservation Authority (WCA). This team provided vision and direction throughout the planning process and led engagement efforts with both the community and the Steering Committee.

1.5.2 Steering Committee

The Steering Committee included the District, LA County Supervisorial Districts 1 and 5 (LACSD), Southern California Association of Governments (SCAG), San Gabriel Valley Council of Governments (SGVCOG), Active San Gabriel Valley (ActiveSGV), San Gabriel Valley Conservation Corps (SGVCC), Trust for Public Land (TPL), San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC), Nature for All, and the Los Angeles City/County Native American Indian Commission (NAIC). The group met regularly with the SGV Greenway Network Plan Team to review information and deliverables and provide feedback and perspectives throughout the entirety of the SGV Greenway Network Plan development process.

They also supported the community engagement of the planning process by promoting community engagement events and providing feedback to materials presented at the events.

It should be noted that LA County Supervisorial District 4 was included and participated in the Steering Committee from the start of the SGV Greenway Network Plan development process. However, due to the 2021 redistricting of the LACSD boundaries, the SGV Greenway Network Plan area no longer includes LACSD District 4 jurisdiction.

1.5.3 Consultant Team

The consultant team was led by Brown and Caldwell (BC), who served as the prime consultant and lead engineer, providing stormwater, green infrastructure, water resources, and planning expertise. Other firms on the consultant team included:

- Studio-MLA: Landscape Architecture, urban design, and planning firm
- Catalyst Environmental Solutions (Catalyst): environmental consulting firm
- KOA Corporation (KOA): transportation engineering firm
- Pacific Advanced Civil Engineering, Inc. (PACE): civil engineering firm
- Moore Iacofano Goltsman, Inc. (MIG): community engagement firm

1.6 Approach to Plan Development

SGV Greenway Network Plan development began with an extensive review of previous efforts, studies, and greenway projects completed throughout the SGV. It was also important to gather available information for ongoing efforts and planned greenway projects in the SGV. Collected information was then cataloged, organized, and analyzed for information/data gaps (Section 2). The Plan Team's goal was to maintain a community based and data driven approach to SGV Greenway Network Plan development through a continuous review process of efforts and studies throughout the region as well as extensive communication and collaboration with the public through workshops and pop-up events.

Due to the large SGV Greenway Network Plan area to be analyzed, early in development, a scoping exercise was conducted to establish a focus area. Tributaries were segmented and divided based on jurisdictional boundaries or other natural barriers. Each tributary segment and adjacent communities were assessed through five key lenses:

- **Circulation:** The circulation lens focuses on parts of the community that have the least access to transit and/or vehicles based on American Community Survey data.
- **Equity:** The equity lens was based on CalEnviroScreen 3.0 data, which maps environmental and socioeconomic burden such as sensitivity and exposure to environmental pollution.
- **Community:** The community lens gathers key information about community gathering spaces, park needs, locations of activity generators, and open spaces. It also includes key demographic data such as ethnic population, household income, and density.
- **Environment:** The environment lens focuses on environmental conditions along each tributary such as impervious surfaces, heat vulnerability, and tree canopy.
- **Synergy:** The synergy lens includes previous efforts and studies, Early Implementation Projects (EIP), and vacant/public land which can be a starting point for finding project opportunities and ways to coordinate with existing projects.

Together these lenses were agreed upon by the Steering Committee members and served as the foundation of the planning process for this plan. More detail on the lenses is included in Sections 2 and 4.

Throughout the SGV, various jurisdictions are at different levels of greenway project implementation. This allowed for focus to be shifted from areas with significant progress to underserved areas and regions of the SGV that lack accessibility and green spaces. After the assessment of each tributary through the priority lenses, the tributaries were categorized in three tiers: Tier 1, Tier 2, and Tier 3. The Tier 1 tributary reaches were assigned the highest priority and used as a starting point to identify constraints and opportunities as well as develop greenway alignments and example Conceptual Design alternatives. Tier 2 and Tier 3 reaches remain an integral part of the SGV Greenway Network Plan and future greenway network, but the initial focus is on the Tier 1 reaches which have a more immediate need based on the prioritization framework. The evaluation and categorization of the different tiers is explained in Section 4 of this plan.

Within each Tier 1 reach, opportunities were identified to enhance greenway projects by including adjacent open spaces and adding project subcomponents and beneficial elements. Multi-use/multi-benefit greenways, greenway amenities, pocket parks and greenspaces, safe crossings, and stormwater management were layered together into larger greenway concepts for Tier 1 reaches distributed throughout the SGV Greenway Network.

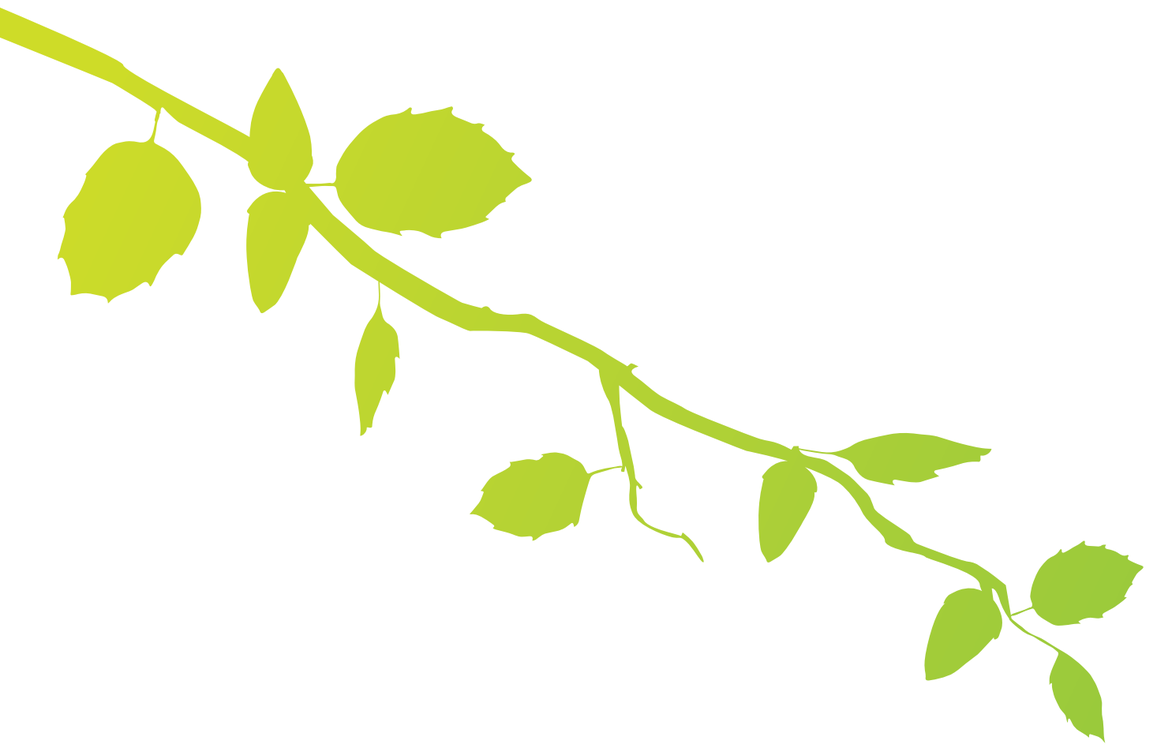
Ten example Conceptual Designs were developed, including greenways and project subcomponents and beneficial elements to provide a broad range of ideas for greenway project implementation by any jurisdiction (project proponent) anywhere in the SGV Greenway Network. The Conceptual Designs provide examples of how a greenway project could be developed and are not intended to present an actual project that will be built. There are at least hundreds of potential combinations of greenways, subcomponents, and beneficial elements to create a greenway project.

The Design Guidelines and Standards is a companion document to the SGV Greenway Network Plan that provides greenway project requirements and guidance, allowing project proponents to tailor their project to the community while ensuring a safe and consistent visual brand and user experience throughout the SGV Greenway Network. The purpose of the Design Guidelines and Standards is to describe the types of greenway projects, subcomponents, and beneficial elements to be considered, and to provide a framework for good and consistent project development. Numerous options for greenway sections are illustrated along with many other beneficial project element examples and descriptive information (Section 6 and Appendix H).

Equestrian trail users near water

1.7 How to Use This Document

The SGV Greenway Network Plan is divided into six major sections, two minor sections, and eight appendices. Sections 1 through 4 introduce the SGV Greenway Network Plan and description, summary of existing conditions and available data and gaps, and the evaluation and prioritization of tributary opportunities, as well as the community engagement aspects of the planning process. Sections 5 and 6 provide extensive resources to be used by project proponents for greenway implementation. Sections 7 and 8 present supporting information and references that support the SGV Greenway Network Plan.



Section 1	This section introduces the SGV Greenway Network and the SGV Greenway Network Plan, including plan goals, plan area and tributaries, plan description with subcomponents and beneficial elements, natural history and indigenous peoples, flood control improvements, Plan Partners and Plan Team, approach to plan development, and plan organization.
Section 2	This Section serves as the foundation for subsequent plan element and focuses on the existing conditions of the SGV tributaries and immediately adjacent land. The section includes previous efforts and studies, early implementation projects, and geographic information system (GIS) analyses/database/mapping, channel characteristics, and Tributary Narratives (key lenses). Tributary Narratives serve as a valuable resource for planners, designers, and community members, offering insights into key aspects of each tributary. These narratives inform and guide future revitalization efforts and greenway projects.
Section 3	This section describes the Community Engagement Strategy and Results including engagement with the Steering Committee, municipalities, stakeholders, and the community. Engagement with all stakeholders was the cornerstone of plan development. This section also outlines how public comments were incorporated into the planning process.
Section 4	This section includes the development and application of a prioritization framework for the SGV Greenway Network including identifying Tiers 1, 2, and 3 tributary reaches, evaluating Tier 1 tributary opportunities and constraints and developing figures for both, and developing crossing treatments. Identification of project opportunities and constraints, as well as gaps, are vital for future project development.
Section 5	This section is focused on the development and presentation of resources for greenway project implementation throughout the SGV, including channel ROW availability, greenway alignments and alternative cross sections based on ROW width, potential project subcomponents within channel ROW and on adjacent public land (Greenway Amenities, Pocket Parks and Greenspaces, Safe Crossings, and Stormwater Management), and ten example Conceptual Designs, 3D renderings of select greenway sections, subcomponents, and beneficial elements.
Section 6	This section provides guidance for project proponents to implement projects throughout the SGV Greenway Network. Includes key responsibilities and involved parties across five phases of project implementation: planning, design and permitting, bidding, construction, and operations and maintenance (O&M). Also provides guidance and resources for project proponents on permitting and approvals, advancing partnerships and community engagement, and local, state, and federal funding sources. The SGV Greenway Network Plan Design Guidelines and Standards are summarized and provided as Appendix H.

The supporting sections include the following:

Section 7	This section includes references, list of tables, list of figures, and acknowledgements.
Section 8	All Plan Appendices are provided as separate PDFs.The appendices include technical memorandums and other relevant documents that were developed for this project. These documents were used to develop the SGV Greenway Network Plan.

SECTION 2

EXISTING CONDITIONS SUMMARY

SECTION 2. EXISTING CONDITIONS SUMMARY

BUILDING ON PREVIOUS EFFORTS AND ROBUST DATA

This Section serves as the foundation for subsequent plan elements and focuses on the existing conditions of the SGV tributaries and immediately adjacent land. The section includes previous efforts and studies, early implementation projects, and geographic information system (GIS) analyses/database/mapping, channel characteristics, and Tributary Narratives (key lenses). Tributary Narratives serve as a valuable resource for planners, designers, and community members, offering insights into key aspects of each tributary. These narratives inform and guide future revitalization efforts and greenway projects.

Numerous relevant planning and design efforts were previously completed on greenways, trails, parks and open space, flood control, green infrastructure and water quality, and transportation projects in the SGV. These documents were instrumental in creating an implementation framework for multi-benefit greenway projects that advanced the goals of the communities, stakeholders, and partner agencies throughout the SGV. The goal of the current conditions evaluation and document review was to synchronize the SGV Greenway Network Plan with ongoing planning and design endeavors. Also, by reviewing the plans, studies, and projects in the area of SGV greenways and flood control ROW, the Plan Team obtained a clearer understanding of the current gaps and opportunities and where this effort should prioritize its resources and next steps.

2.1 Compilation of Efforts and Studies

Existing reports and data, including planned stormwater, active transportation, and greenway projects within the SGV, were reviewed, summarized, and mapped. These investigations were summarized in the Compilation of Efforts and Studies Technical Memorandum (TM) in Appendix A. The TM includes a document summary with descriptions; key outcomes; proposed, planned, or completed stormwater, active transportation, park, trail, and greenway projects; and potentially relevant greenway design standards. In addition, the geolocation, implementation agency, project status, and the funding status for each plan, project, or study were identified and consolidated into a master summary and map. Figure 2-1 displays an aerial view of one greenway project, San Dimas Wash at Gladstone Park, that was reviewed as part of the Compilation of Efforts and Studies TM.

Figure 2-1. Aerial view of San Dimas Wash at Gladstone Park

2.1.1 Summary of Existing Plans and Studies

Plans and studies reviewed, cataloged, and summarized include the following:

- 2006 San Gabriel River Corridor Master Plan, LA County Public Works
- 2012 Bicycle Master Plan, LA County Public Works
- 2012-2035 Regional Transportation Plan, SCAG
- 2014 SGV Regional Bicycle Master Plan, Cities of Baldwin Park, El Monte, Monterey Park, San Gabriel, and South El Monte
- 2015 City of Los Angeles CEQA Guidelines 15168 Addendum to LA County Flood Control District EWMP Programmatic Environmental Impact Report (EIR), City of Los Angeles
- 2015 County of Los Angeles Enhanced Watershed Management Programs (EWMP) Program EIR, District
- 2015 East SGV Watershed Management Plan, East SGV Watershed Management Group

Users along the Emerald Necklace multi-use trail

- 2015 San Gabriel River Trail Summary Report, DPR
- 2016 Active Transportation Strategic Plan, LA County Metropolitan Transportation Association (LACMTA)
- 2016 Los Angeles Countywide Parks and Recreation Needs Assessment (PNA), DPR
- 2016 Rio Hondo/San Gabriel River Revised Watershed Management Plan (RWMP), LA County Public Works
- 2016 Upper San Gabriel River Enhanced Watershed Management Plan, Los Angeles Regional Water Quality Control Board
- 2017 Emerald Necklace Implementation Plan, WCA
- 2018 City of Los Angeles Ballona Creek Greenway Bacteria EIR, City of Los Angeles
- 2018 SGV Regional Active Transportation Plan and Greenway Network Study, SGVCOG
- 2019 LA County Sustainability Plan, LA County
- 2019 Transit to Parks Strategic Plan, LACMTA
- 2020 East SGV Active Transportation Plan, LA County Public Works
- 2020 Open Channel Condition Inspections, LA County Public Works
- Adopted Regional Multi-Use Trail System, LA County General Plan, Chapter 10, DPR

Some of the documents reviewed provided only general information related to the SGV and were not used in the development of the SGV Greenway Network Plan. In review of the existing plans and studies described above, relevant design guidelines or standards that may support SGV Greenway Network implementation were catalogued and compiled into another searchable database for use in development of the Design Guidelines and Standards.

Plans and studies that mentioned greenway, multi-use trail, or bikeway design standards and guidelines and were reviewed for the Plan included:

- 2012 Bicycle Master Plan, LA County Public Works
- 2012-2035 Regional Transportation Plan, SCAG
- 2013 County of Los Angeles Trails Manual, DPR
- 2016 Active Transportation Strategic Plan, LACMTA
- 2017 Emerald Necklace Implementation Plan, WCA
- 2018 SGV Regional Active Transportation Plan and Greenway Network Study, SGVCOG

Additionally, plans and standards developed after the initial Compilation of Efforts and Studies TM were reviewed on an as-needed basis. These reviewed documents are not included in the Compilation of Efforts and Studies TM, but the information, data, and guidance provided in these documents was included and integrated in the planning process. These documents included:

- 2022 Los Angeles Countywide Park Needs Assessment Plus (PNA+), DPR
- 2022 LA River Master Plan, LA County Public Works

Figure 2-2 illustrates the planned and constructed projects in the SGV identified from the review of previous efforts and studies. Information about identified projects was utilized in the project prioritization process.

2.1.2 Mapping Gap Analysis

Literature reviews were conducted to identify gaps in existing plans and greenway projects along channel segments with the SGV Greenway Network Plan study area. Planned projects were cataloged, geocoded, and mapped. Geocoded data was used to create a master heat-map of projects, revealing areas with existing planning, design, and construction activities.

Figure 2-3 illustrates the gaps in the previous planned or constructed greenway projects in the SGV. At the time of review, gaps include the northern portions of the Santa Anita Wash, Arcadia Wash, Rubio Wash, Alhambra Wash, as well as the southern portion of Alhambra Wash.

Working with the Steering Committee, the maps were used to identify if any remaining greenway or project gaps existed. The Steering Committee also assisted by validating which projects were “real” and adding any projects the original literature review may have missed. “Real” projects were projects considered in design or construction, planned with funding, or heavily backed by the community and implementing agencies. This was vital for regions of the plan area where there were ideas for implementation, but no actionable results.

The San Gabriel River and Rio Hondo specific were included in the initial SGV area analysis. As the SGV Greenway Network Plan was developed, given their existing greenway planning, development and funding opportunities (San Gabriel River Master Plan and the Emerald Necklace Implementation Plan), these river segments were not included for further analysis. Connections to these segments were considered throughout the planning process in order to achieve the SGV Greenway Network Plan’s goal of creating a world-class and interconnected greenway network.

Figure 2-2. Summary map of existing plans, and studies reviewed within the SGV

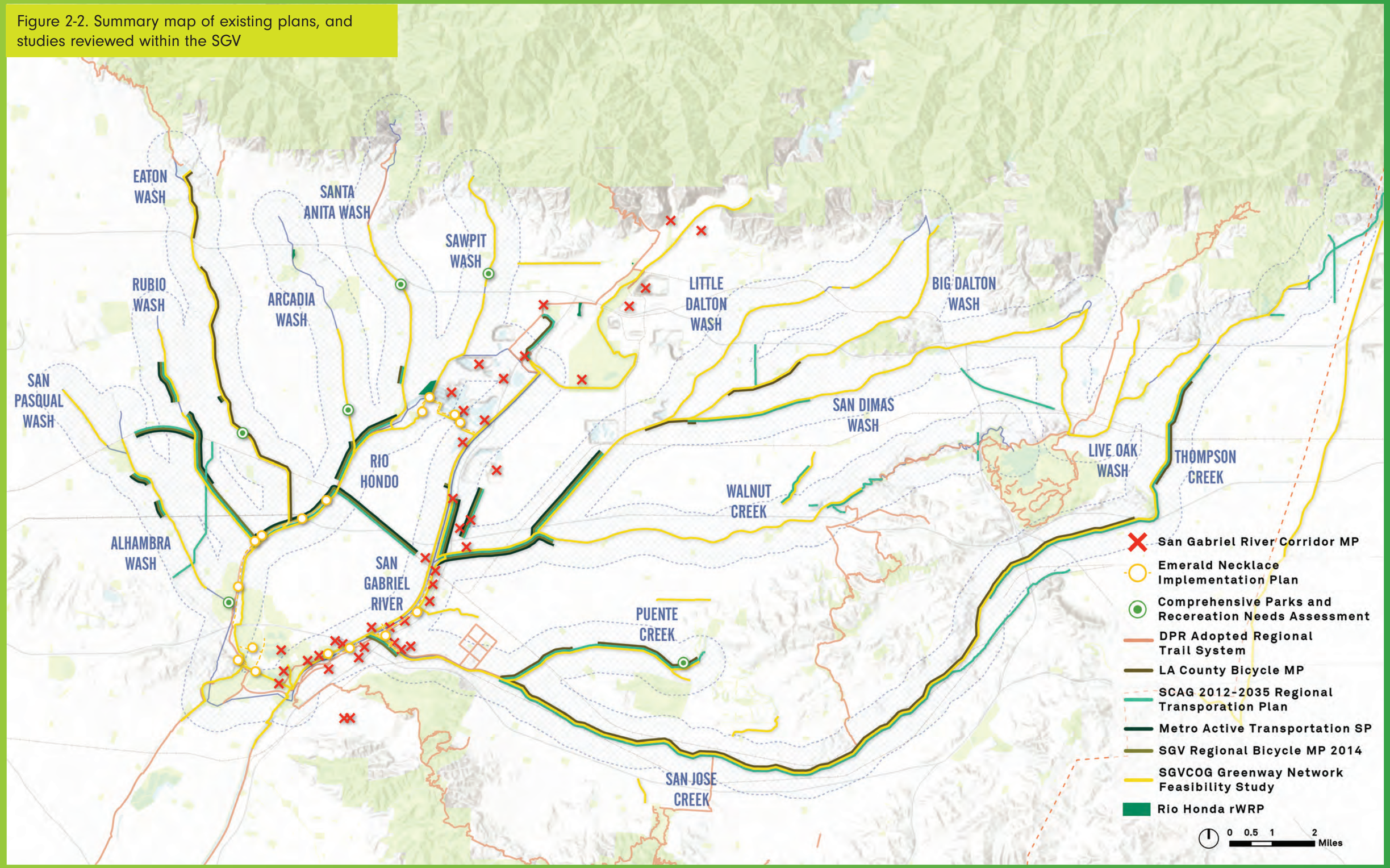
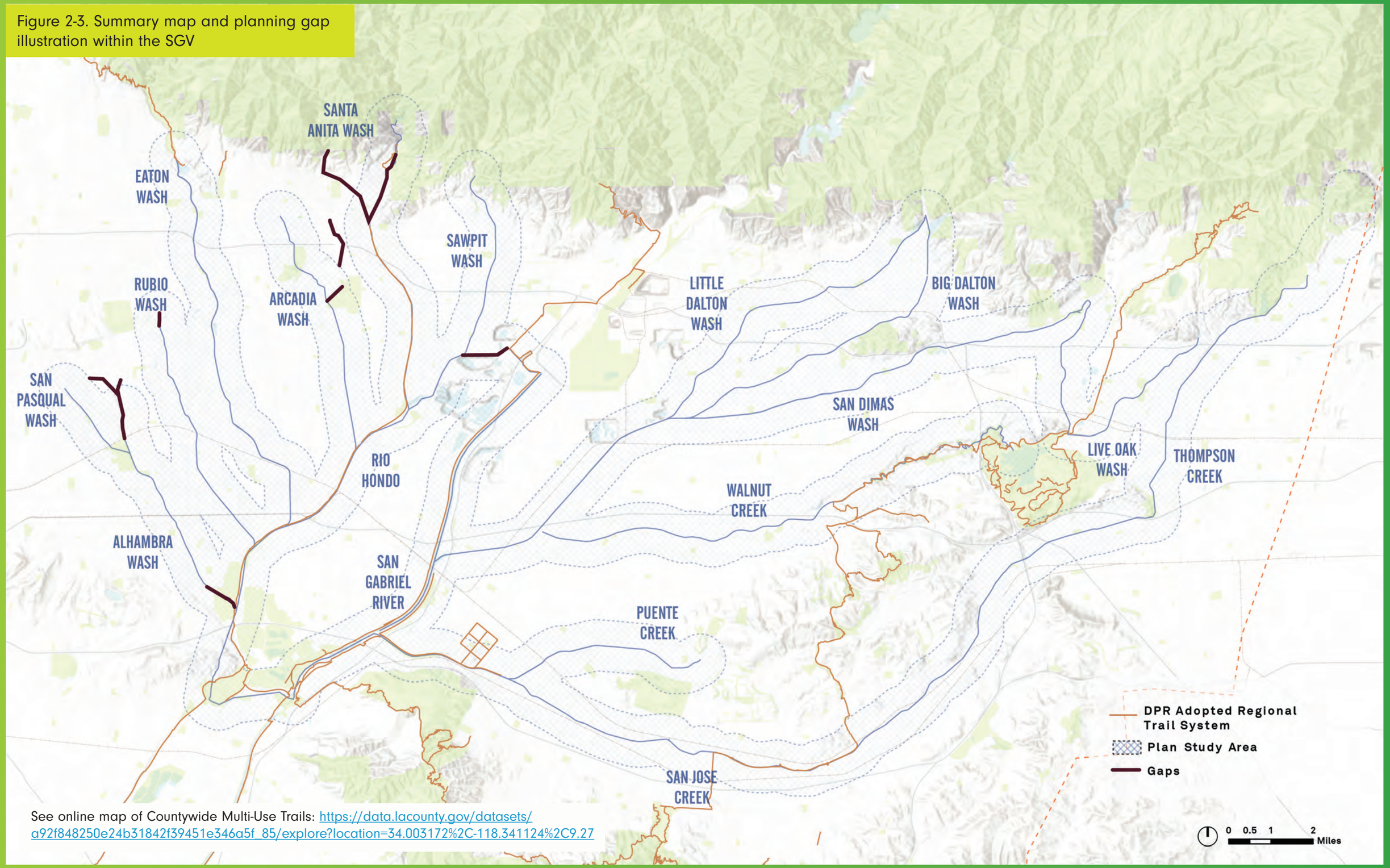


Figure 2-3. Summary map and planning gap illustration within the SGV



See online map of Countywide Multi-Use Trails: https://data.lacounty.gov/datasets/a92f848250e24b31842f39451e346a5f_85/explore?location=34.003172%2C-118.341124%2C9.27

2.1.3 Review of Referenced Design Guidelines and Standards for Planned Projects

The plans and studies reviewed contained numerous traffic/transportation, bike path, and wayfinding/signage standards and guidelines. Most plans and studies reviewed referred to the following:

- California Manual on Uniform Traffic Control Devices for bicycle signage, wayfinding standards, and signage colors.
- American Association of State Highway and Transportation Officials' (AASHTO) Guide for the Development of Bicycle Facilities which provides guidance on dimensions, use, and layout of specific bicycle facilities.
- AASHTO's A Policy on Geometric Design of Highways and Streets which provides current design research and practices for highway and street geometric design, and The California Highway Design Manual which establishes uniform policies and procedures to carry out highway design functions for the California Department of Transportation.

Until June 2022, the District followed the 2004 LA River Master Plan Design Guidelines and Plant Palette Document to develop and permit greenway projects within its ROW. Subsequently, LA County Public Works introduced the updated 2022 LA River Master Plan and Design Guidelines. The 2006 San Gabriel River Master Plan and the 2014 Emerald Necklace Implementation Plan referred to the 2004 LA River Master Plan Design Guidelines for greenway and bikeway design standards. Additionally, the Emerald Necklace Implementation Plan specifically mentions to follow the standards in the LA County 2012 Bicycle Master Plan. The SGV Regional Active Transportation Plan and Greenway Network Study (2019) prepared by the SGVCOG also provide design standards.

In collaboration with the Plan Team new Design Guidelines and Standards have been developed for the SGV Greenway Network Plan, which take into consideration previous pertinent design guidelines and standards. The SGV Greenway Network Plan Design Guidelines and Standards aim to consolidate and expand on those efforts specifically for the diverse SGV. More information is provided in Section 6.4.1 and a copy of the Design Guidelines and Standards is included as Appendix H.

2.2 Early Implementation Projects

There are various planned greenway, multi-use trails, and bikeway projects within the SGV that have advanced into design, construction, or have been recently completed. These are referred to as Early Implementation Projects (EIP) and are being developed by various project proponents such as LA County, cities, joint LA County/city, and other organizations within the SGV. It is essential for these projects to be identified and incorporated into the plan in order to build momentum, increase connectivity, and align the plan with existing efforts.

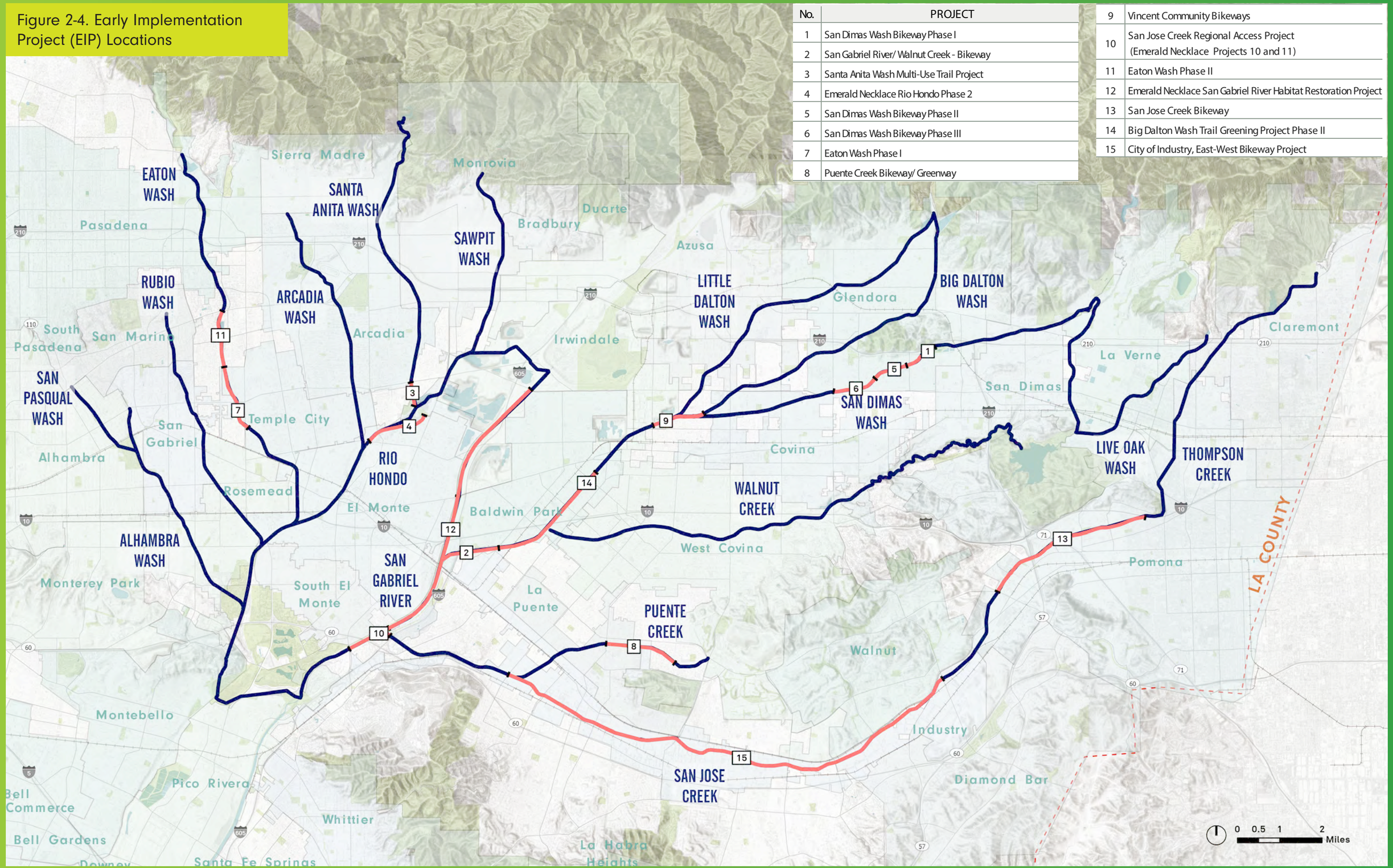
EIP proponents were engaged to assess the status of these projects, collect design documentation, learn from previous efforts, and evaluate opportunities to connect future greenway projects to EIP. Connecting the Plan's opportunities for future greenway projects to EIP will fill gaps and create a more continuous greenway system in the SGV. To learn more about the engagement efforts with municipal stakeholders please refer to Section 3.

EIP information contained in this section is preliminary as the project development is ongoing and subject to change. For full project details and current project status, please contact the prospective entity leading the project. Future project proponents should also check with LA County Public Works and individual city planning departments to understand the status of any existing projects in the area before pursuing future Greenway project planning or design. A summary of EIP locations is shown on Figure 2-4 and EIP information is shown in the following section.

The EIP described in this SGV Greenway Network Plan are included to establish an understanding of existing and planned projects to assist in future planning efforts and were not developed as part of the plan. It is important to note the project proponents of these EIP are responsible for their own compliance with the CEQA Act and all other local, state, and Federal requirements.

Figure 2-4. Early Implementation Project (EIP) Locations

No.	PROJECT
1	San Dimas Wash Bikeway Phase I
2	San Gabriel River/ Walnut Creek - Bikeway
3	Santa Anita Wash Multi-Use Trail Project
4	Emerald Necklace Rio Hondo Phase 2
5	San Dimas Wash Bikeway Phase II
6	San Dimas Wash Bikeway Phase III
7	Eaton Wash Phase I
8	Puente Creek Bikeway/ Greenway
9	Vincent Community Bikeways
10	San Jose Creek Regional Access Project (Emerald Necklace Projects 10 and 11)
11	Eaton Wash Phase II
12	Emerald Necklace San Gabriel River Habitat Restoration Project
13	San Jose Creek Bikeway
14	Big Dalton Wash Trail Greening Project Phase II
15	City of Industry, East-West Bikeway Project



2.2.1 Early Implementation Project Descriptions

A brief summary of each known EIP including description, length, status, and lead entity follows.

1. San Dimas Bikeway Phase I

Description: 1-mile greenway along the San Dimas Wash from Sunflower Avenue to Forbes Spreading Grounds incorporating drought-tolerant landscaping, rest areas, informative signs, safety fencing, pocket parks, public art, new crosswalks, and lockable gates (Figure 2-5).

Status: Completed 2019
Lead: City of Glendora

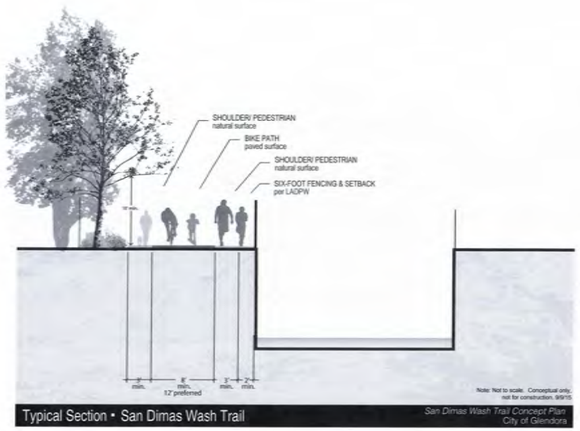


Figure 2-5. Typical section from San Dimas Greenway Project

Source: City of Glendora

2. San Gabriel River/Walnut Creek – Bikeway

Description: 2.2-mile bicycle path from Ramona Boulevard to Baldwin Avenue along the San Gabriel River and continuing along the Walnut Creek at Baldwin Park Boulevard (Figure 2-6).

Status: Permitting
Lead: City of Baldwin Park
Scheduled Completion: 90% Complete, 10% Remaining Not Available (N/A) – Waiting on Funding

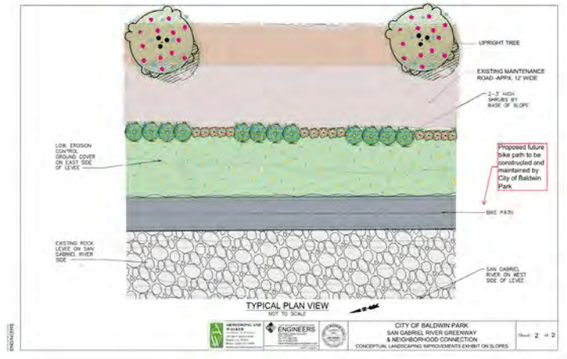


Figure 2-6. Typical Plan view of SGR/Walnut Creek Bikeway project

Source: City of Baldwin Park

3. Santa Anita Wash Multi-Use Trail Project

Description: The proposed project includes the design, realignment and reconstruction of a segment of the existing multi-use trail and Class I bike path. The Project will allow for unobstructed public access to the regional multi-use trail and bike path. This project will also allow for the continued operation and maintenance of the City's golf course.

Status: "Funding required"
Lead: City of Arcadia/LA County Department of Parks and Recreation
Scheduled Completion: (N/A)

4. Emerald Necklace Rio Hondo Trail and Peck Road Water Conservation Park Phase II Improvements

Description: 1.2-mile pedestrian path, Americans with Disabilities Act (ADA) access improvements to Rio Hondo Regional Bike Path, and including bioswales, native trees and shrub plantings.

Status: Completed 2023
Lead: Amigos de los Rios

5 and 6. San Dimas Bikeway Phase II and III

Description: 1.65-mile path from Gladstone St and Sunflower Ave to Arrow HWY & Grand Ave consisting of an urban path class I bicycle and pedestrian along the San Dimas Wash. The project includes paved pathways, native landscaping, irrigation systems, gateways, fencing, handrails, signage, and rest areas.

Status: Design
Lead: City of Glendora
Scheduled Completion: N/A

7. Eaton Wash Phase I

Description: 0.4-mile Bikeway and Greenway between Longden Avenue and Rosemead Boulevard. Improvements to include multi-use striping, new omega fencing along channel, retaining structures, landscaping and irrigation, new gates, and wayfinding signage.

Status: Design
Lead: LA County Public Works
Scheduled Completion: Winter 2029

8. Puente Creek Greenway/Bikeway

Description: 1.9-mile Bikeway and Greenway between Valinda Avenue and Hacienda Boulevard. Improvements include access road improvements, multi trail striping, new omega fencing along the channel and adjacent ROW, landscaping, wayfinding signs, new access gates, and a rest area with benches.

Status: Design Plans, Specifications, and Cost Estimate Completed October 2022
Lead: LA County Public Works
Scheduled Completion: TBD- Pending project rescoping

9. Vincent Community Bikeways and Greenway

Description: 3.1-mile bikeway and greenway along Big Dalton Wash between Irwindale Avenue and Lark Ellen Avenue and between Arrow Highway and Citrus Avenue. Improvements include access road improvements, multi trail striping, new omega fencing along the channel and adjacent ROW, landscaping, wayfinding signs, new access gates, and a rest area with benches Proposed off-channel bike lanes on Irwindale Avenue, Arrow Highway, and Lark Ellen Avenue. Improvements include high-visibility crosswalks and wayfinding signage at various locations.

Status: Completed December 2024
Lead: LA County Public Works

10. San Jose Creek Regional Access Project (Emerald Necklace-Projects 10 and 11)

Description: The proposed project will construct 2.5 miles of a Class I bike path and 1.8 miles of multi-use trail along San Jose Creek and the San Gabriel River to accommodate pedestrians, bicyclists and equestrians; as well as a 230-feet single span bridge over San Jose Creek that will provide a critical connection between the existing Class I bike path on the southern bank of the creek to the new bike path and trail that will be developed along the northern bank.

Status: 30% Design Complete
Lead: LA County Public Works
Scheduled Completion: N/A – Waiting on Funding

11. Eaton Wash Phase 2

Description: 1-mile bikeway and greenway between Huntington Drive and Longden Avenue.

Status: Planning
Lead: LA County Public Works
Scheduled Completion: N/A

12. Emerald Necklace San Gabriel River Phase II Habitat Restoration Project

Description: Enhance the San Gabriel River and its existing trail and recreation area along 5.85 miles and 10.6 acres. Phase I includes removing invasive weeds and planting native tree and shrubs, approximately 900 native tress and 460 shrubs. Phase II includes trail improvements, low impact development improvements, decorative gates, educational and wayfinding signage.

Status: Construction
Lead: Amigos de los Rios
Scheduled Completion: 90% Complete, 10% Remaining N/A – Waiting on Funding

13. San Jose Creek Bikeway

Description: The Project will design and construct a 3.5-mile multimodal bike path along San Jose Creek within the city. This active transportation corridor will enhance east-west trail connectivity in the area, including safe and direct routes to six schools, residences, workplaces, commercial centers, and several parks. By expanding mobility and access and addressing safety concerns for residents of all ages and abilities, the proposed project will increase access to recreation, jobs, schools, and reduce pollution by supporting the use of active transportation within the city and nearby communities. The project will ultimately connect to the existing San Jose Creek Bike Path and future San Jose Creek Regional Access project identified in the Emerald Necklace Implementation Plan. These projects will provide connections to the future Duck Farm River Park and 28-mile-long San Gabriel River Bikeway Network providing further connection to the Gateway and South Bay Cities of the County.

Status: Design
Lead: City of Pomona
Scheduled Completion: N/A

14. Big Dalton Wash Greening Project Phase II

Description: 2.8-mile passive recreational greenway and bikeway with native landscaping, drought tolerant trees, bioswales, gardens, installation of LED solar lighting, four public art displays, benches, shade structures, hydration stations, and bike repair stations, along Big Dalton Wash between Central Avenue and Baldwin Park Boulevard (Figure 2-7).

Status: Design
Lead: City of Baldwin Park
Scheduled Completion: N/A

15. City of Industry, East-West Bikeway Project at San Jose Creek

Description: The proposed Project includes construction of a 9.9-mile Class I bike path within the District ROW along San Jose Creek, between 7th Avenue and Grand Avenue within the City of Industry in Supervisorial District 1. The proposed project improvements will feature a bike path, striping, signage, fencing, access gates, 5 staging areas with decorative hardscape, benches, shade structures, bike racks, trash containers, lighting, and security cameras within District ROW. The project will also include the installation of Rectangular Rapid Flashing Beacons (RRFBs) and in-pavement lighted crosswalk systems at 13 locations where the bikeway will cross major and minor arterial roads, outside District ROW. Jurisdiction along the project reach includes the City of Industry (9 miles) and the LA County unincorporated community of Walnut (approximately 0.9 mile). The City of Industry will maintain the project improvements.

Status: Design
Lead: City of Industry
Scheduled Completion: TBD

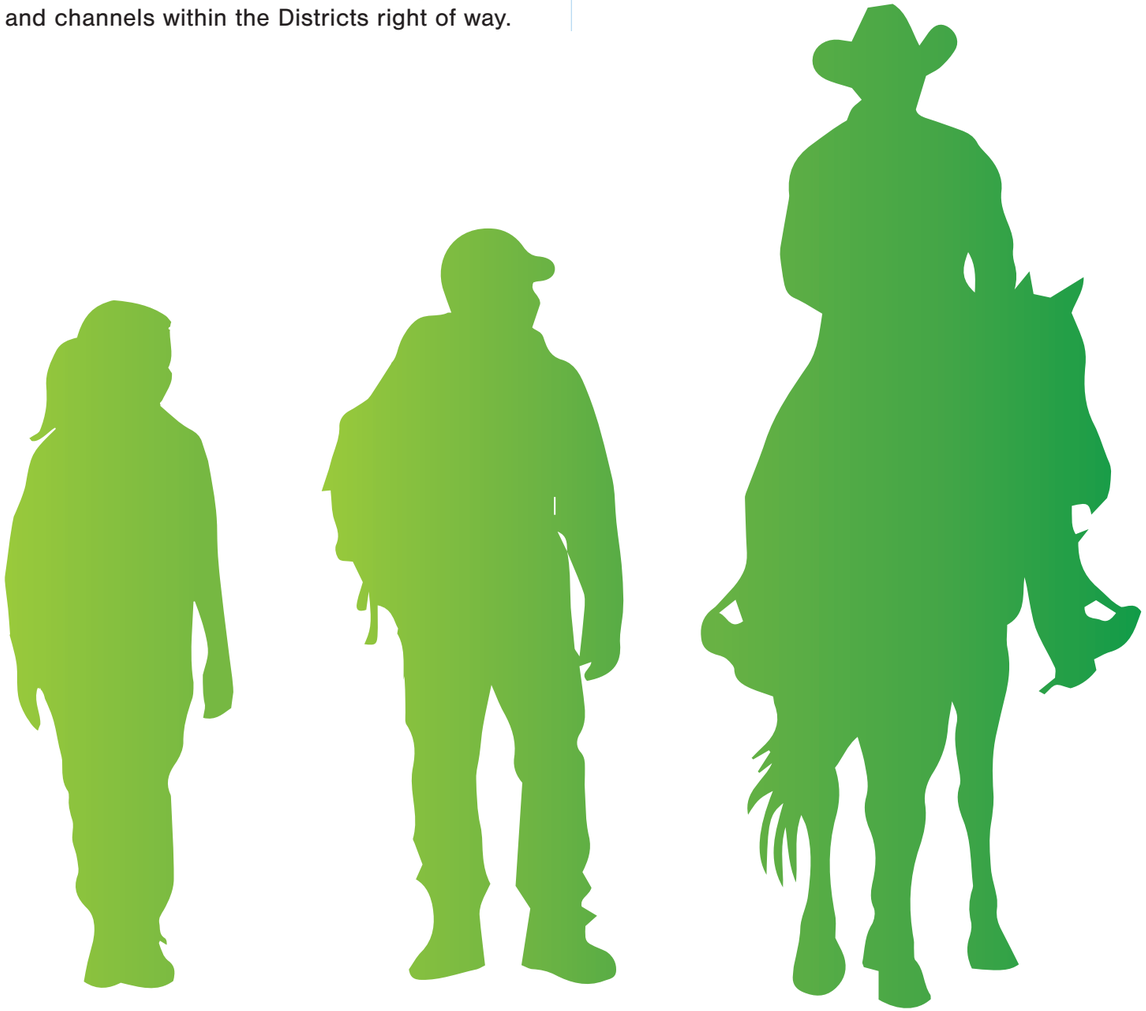
Figure 2-7. Big Dalton Wash Greening Project Garvey Avenue Pocket Park

Source: City of Baldwin Park

2.3 Los Angeles County Regional Multi-Use Trail Network

The County strives to make all trails multi-use and accessible to all non-motorized users including pedestrians, equestrians, and mountain bikers, where appropriate. DPR operates and maintains more than 240 miles of regional multi-use trails across the County, approximately 1/3 of which are located along rivers and channels within the Districts right of way.

These multi-use trails are by large unpaved, natural surface trails that in many areas both complement and serve as a low impact alternatives to the County's paved bikeways. Figure 2-8 shows the existing multi-use trails in the project area.



2.4 Existing Parks and Open Space in the San Gabriel Valley

In addition to the existing multi-use trail network in the San Gabriel Valley, there are also many existing parks and open spaces which are enjoyed by the community. The SGV Greenway Network Plan seeks to add new parks and open spaces to the project area, as well as connect and provide access to the many existing parks in the SGV. Opportunities for connections to existing parks and open space were used as scoring criteria during the selection of focus areas (Section 4). DPR's Park Needs Assessment was also used as scoring criteria to understand and prioritize areas within the network that are experiencing pressure from a lack of parks. Figure 2-9 shows an overview of parks and open space in the SGV.

Hikers on a multi-use trail in the SGV

Figure 2-8. Multi-Use Trails in the SGV

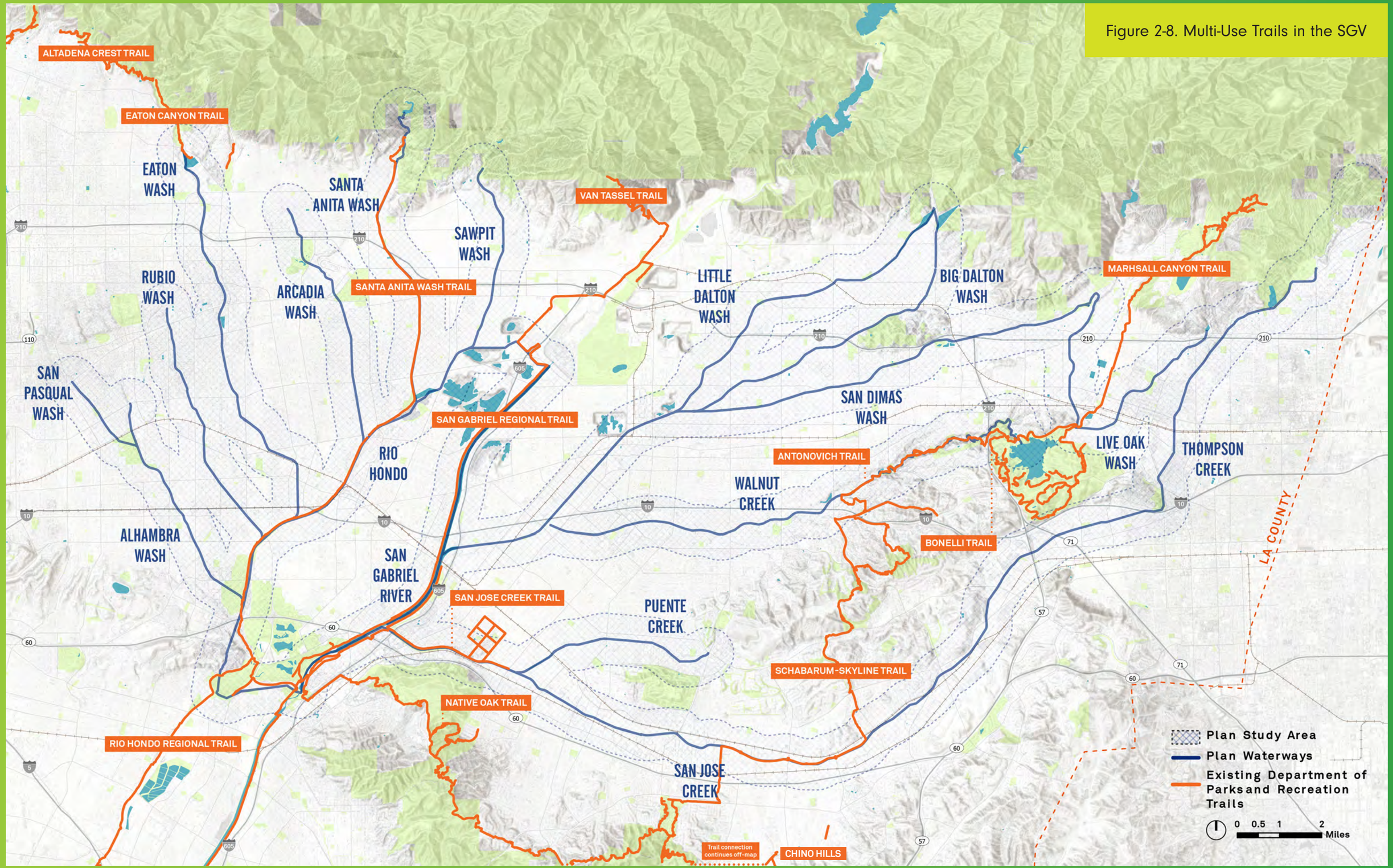
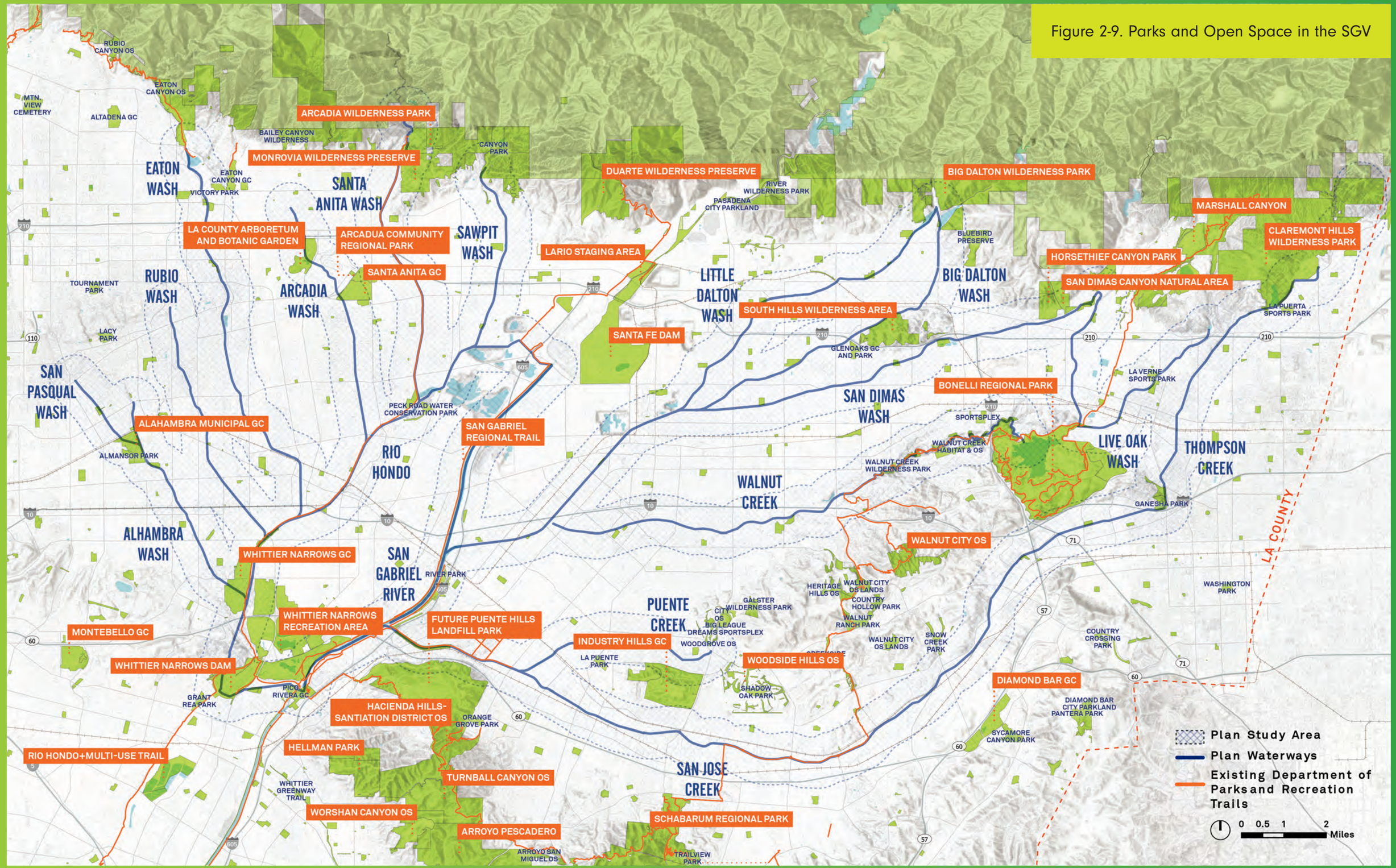


Figure 2-9. Parks and Open Space in the SGV



2.5 Data Research and Digital Database Development

Comprehensive data encompassing physical, environmental, and social attributes of SGV and its habitats, informed plan development (Sections 2.1 through 2.4). Diverse datasets were researched to evaluate greenway potential, constraints, project alignments, and example Conceptual Designs. Information was collected from site visits, LA County's GIS databases, channel as-builts, and past studies and projects. Data examples are illustrated in Figure 2-10, while Table 2-1 provides a GIS data overview.

Multiple new datasets were created as part of plan development to fill information gaps throughout the SGV. For example, a new dataset created for use in the greenway development analysis was fence line mapping of the SGV channel ROW, which referred to the area directly adjacent to each channel, potentially available for greenway development, under the jurisdiction of the District or USACE. Additional gaps were filled in developing tools for project development outlined in Section 5.

Each channel ROW width and any encroachment was evaluated for opportunities for greenway paths and project subcomponents on adjacent public parcels. Collected data was used extensively for multiple mapping analyses including the GIS mapping of County Channels, the GIS Base Map Channel ROW, the Channel ROW Mapping Analysis, and the GIS Analysis of Existing Channels included in Appendix B: GIS Analysis, Database, and Mapping.

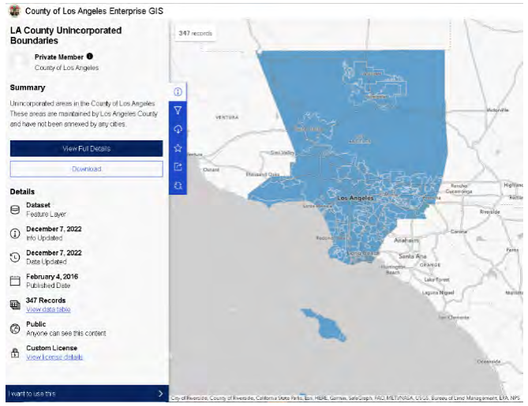


Figure 2-10. Data Collection from LA GIS Warehouse, As-built Documents and Existing Plans

Numerous site visits were conducted throughout Plan development to assess existing conditions of the channel ROWs, existing and potential greenways and access points, open space and park opportunities, operational and maintenance activities, safety and security, locations of existing and potentials crossings and bridges, vacant lands, adjacent land use, and utility corridors. Connectivity to community centers, schools, colleges, commercial areas, transit, and other destinations were also reviewed during site visits, along with potential greenway and project amenities.

Table 2-1 SGV GIS Data Resources

Category	Layer Description	Layer Name
Community	Population Density (2010 Census)	Population_Density_Census 2000
Community	Park Need (DPR Parks Needs Assessment)	Park_Need_Codes_PNA2014
Community	CalEnviroScreen Raw Percentile Scores	CalEnviroScreen2018
Circulation	Activity Generators - Land Use	Circulation_Activity_Generators_landuse
Circulation	Activity Generators - Community Centers	Activity_Generators_Community_Centers
Circulation	Number of Schools	Activity_Generators_Schools
Circulation	Existing Bikeways (miles) within the Buffer	Circulation_Existing_Bikeways_ATSP2016
Circulation	Existing Bikeways (along) segment	Circulation_Existing_Greenways_SGVCOG_Study_2018
Circulation	Trails (miles) in the Buffer	Circulation_Existing_Trails_DPR2015
Circulation	Railway Lines Intersection	Circulation_Railway_Crossings
Circulation	Railway Lines	Circulation_Railways_OSM_2020
Circulation	Intersections	Circulation_Intersections
Transit	Bus Stops	Circulation_Transit_Bus_Stops
Transit	Rail Stations	Circualtion_Transit_Rail_Stations
Environment	Tree Canopy Coverage	Environment_LARIAC_Trees
Environment	Significant Ecological Area	Environment_Significant_Ecological_Areas
Synergy	"Line" Projects	Synergy_Previous_Efforts_and_Studies_Memo_Line_Projects
Synergy	"Point" Projects	Synergy_Previous_Efforts_and_Studies_Memo_Point_Projects
Synergy	Vacant Gov Owned Parcels	Synergy_Vacant_Gov_Owned_Parcels
Synergy	EIP along segment	Synergy_Early_Implementation_Projects
Synergy	Previously Planned Bikeway Projects - ALL	Synergy_LA_County_Proposed_Bikeways_ALL_MetroATSP_2016
Constraints	Intersections - Complexity	Constraints_Tier_1_Project_Areas_Intersections_Ranked
Constraints	LACFCD Parcels - ALL	Constraints_LACFCD_Parcels_All
Constraints	Tier 1 Project Areas by Ownership - other	Constraints_Tier_1_Project_Areas_by_ownership_other
Constraints	Tier 1 Project Areas by Ownership - quitclaim	Constraints_Tier_1_Project_Areas_by_ownership_quitclaim
Constraints	Tier 1 Project Areas by Ownership - easement	Constraints_Tier_1_Project_Areas_by_ownership_easement
Constraints	Tier 1 Project Areas by Ownership - fee	Constraints_Tier_1_Project_Areas_by_ownership_fee
Scoring	Tier 1 Projects: Top 20 from final weighting scenario plus "Gap Closures"	Scoring_Tier_1_Priority_Segments
Scoring	Project Area Segments	Scoring_Segments_All
Scoring	Project Area Segment Buffers	Scoring_Segments_All_Buffers
Base Layers	Project Area 0.5-mile buffer	Base_Layer_Project_Area_05_mi_buffer
Base Layers	Project Area Channels	Base_Layers_Project_Area_Channels

2.6 GIS Analysis, Database, and Mapping

Analysis of the existing LA County channel ROW was critical in identifying areas for potential greenways without impacting flood protection, maintenance, and operational activities.

Technical data was collected with a focus on digital mapping information and channel physical data. Digital mapping information was obtained from internal LA County sources as well as external sources such as the Steering Committee. The mapping database focused on information within the channel ROW, which included channel design center line, channel boundary/property lines, channel improvements, channel high resolution aerial photographs, digital topography, and channel improvement types (rectangular, concrete trapezoidal, concrete with earth bottom, and earthen floodplain) (see Appendix B: GIS Analysis, Database, and Mapping). Additional channel data included as-built construction plans for channel improvements. Collected data was reviewed and organized into a database which was used to determine any potential data gaps. For more information about viewing and accessing this database, please contact LA County Public Works at sgvgreenway@pw.lacounty.gov.

A GIS base map was prepared for the channel ROW and adjacent area to assess both the opportunities and constraints based on the existing configuration. The base map utilized a high-resolution aerial photograph of the channel ROW which included property lines, ownership, adjacent land use, channel maintenance roads, utilities, and channel improvements as well as tabular information on the channel geometric characteristics and hydraulics.

A mapping "constraints" analysis was completed for the tributary ROWs to define the available space for constructing greenways and associated amenities. The constraints analysis included both the physical and regulatory constraints associated with the tributary segment. Regulatory constraints were based on parcel or channel ownership or designation. Physical constraints defined existing limitations on potential greenway within the channel ROW area which included utilities, bridges, geotechnical, land-use, maintenance and access, topography, and encroachment by adjacent properties. While some of these constraints could be included and utilized in greenway development such as existing recreational areas, many constraints could pose a conflict or obstruction to planned development such as utility boxes or water lines and land being utilized for other purposes. Access to the channel for maintenance must also be maintained or included when developing greenways, which could constrain the greenway in many areas.

2.7 Channel Characteristics

ROW and channel physical information was collected using a combination of GIS data, available channel construction as-builts, aerial imagery, and field reconnaissance. This process yielded estimated ROW width and the base width of the channel. Aerial imagery was used to assist with identifying new construction, fences, and other obstructions and encroachments in the channel ROW. Due to the age of many channel construction plans (over 50 years), subsequent construction in the SGV was often absent from channel as-builts and nearby ROW. Channel cross-sections, including geometric data, were created approximately every 100 feet (ft) along the channel center line. The channel material, base width, side slopes, Manning's roughness coefficient, height of channel wall, and channel invert (bottom) were estimated for each cross-section. Locations of existing paths, access and maintenance drives, storm drain outlets, and existing fencing were also mapped. Channel information provided in Appendix B: GIS Analysis, Database, and Mapping can be useful when developing a future greenway project. Typical channel sections are rectangular in shape as shown on Figure 2-11.

2.7.1 SGV Tributary Channels

Open drainage channels discharging to the San Gabriel River and Rio Hondo Channel (tributaries) included in this SGV Greenway Network Plan vary in size and character. Ranging from larger trapezoidal channels and box channels to natural bottom channels, the primary function of these systems is to efficiently convey flood waters and protect life and property. At the top of most channels, a property ROW exists that is used for maintenance operations. These ROW conditions were analyzed for this SGV Greenway Network Plan for their potential to serve as greenways (Figure 2-12).

ROW as presented in the SGV Greenway Network Plan is either fee-owned, a quitclaim, or an easement. Projects proposed on easement areas may require the acquisition of property rights from the underlying property owner in addition to authorization from LA County and the District. This should be a high priority to evaluate and determine the specific requirements early in the planning process.

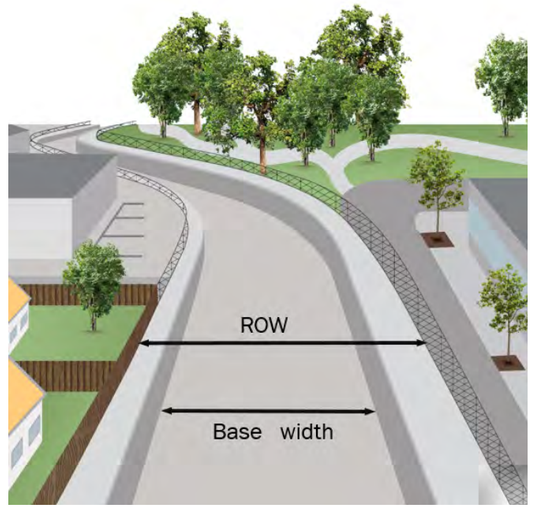


Figure 2-11. ROW and channel characteristics analysis

Figure 2-12. Walnut Creek channel with ROW and fencing

Users on the San Gabriel River Path

2.8 Tributary Narratives

Tributary Narratives were developed for the SGV Greenway Network tributaries and can be used as a resource for planners, designers, and community members to understand key aspects of each tributary and inform future revitalization efforts and greenway projects. The Tributary Narratives were developed as a first step in understanding the tributaries and the communities which surround them. The Plan Team collected data and compiled "Tributary Narratives," which aim to tell the story of each tributary through the following key lenses:

- **Community** – This lens was developed by gathering key information about community gathering spaces, park needs, locations of activity generators, and open spaces, and by mapping key demographic data such as ethnic population, household income, and density.
- **Circulation** – This lens was developed by identifying major crossings, railways, multi-use trails, existing bikeways, activity generators, schools, transit stops, and railways crossings and analyzing their impact on future Greenway projects. This included identifying which parts of the community have the least access to transit and/or vehicles based on American Community Survey data.
- **Environment** – This lens was developed by mapping environmental conditions along each tributary such as impervious surfaces, heat vulnerability, and tree canopy. This information could help inform the tributaries' ability to improve environmental conditions.
- **Synergy** – This lens was developed by creating a Synergy story, which was informed through previous efforts and studies, EIP, and vacant/public land. The Synergy story could be a starting point for finding project opportunities and ways to coordinate with existing projects, and included the mapping of jurisdictional data about who maintained the channel and what type of ownership agreement the adjacent ROW parcels were under, describing some of the legal complexities to project implementation. Major road/railway crossings and available ROW widths were also mapped as part of the Synergy story to show some of the physical constraints that may add to a project's complexity.
- **Equity** –This lens was developed by mapping CalEnviroScreen 3.0 environmental and socio-economic burden data such as sensitivity and exposure to environmental pollution.

SGV Tributary Narratives helped inform the greenway alignments and example Conceptual Designs (discussed in Section 5). Information about community needs, connectivity, schools, activity centers, etc. helped contextualize the Conceptual Designs and make sure important connections were made.

The following sections provide an overview of key findings from each Tributary Narrative. For complete Tributary Narratives; see Appendix C.

2.8.1 Alhambra Wash

Overview

- Alhambra Wash is a 4.7-mile tributary which weaves through a complex urban and suburban fabric of diverse communities.
- Alhambra Wash runs through the cities of San Gabriel, Alhambra, Rosemead, as well as unincorporated LA County communities.
- Alhambra Wash presents complex physical challenges to implementation with constrained ROW, complex intersections, and jurisdictional challenges to implementation, including a section north of Valley Blvd. which is owned by the US Army Corp of Engineers.
- Alhambra Wash is rich with potential destinations for greenway users, including commercial/retail areas along Las Tunas Drive and Valley Boulevard.
- Garvey Park, Whittier Narrows Recreation Area, and Vincent Lugo Park also serve as potential destinations for users of the greenway.
- Schools adjacent to the tributary include San Gabriel Mission Elementary, Richard Garvey Intermediate, Eldridge Rice Elementary, and Saint Therese Catholic.
- Few existing bikeway connections exist in the area aside from the Rio Hondo bike path to the south.
- A multi-use path along the utility easement between Graves Avenue and the Union Pacific ROW was proposed by the SCAG Regional Transportation Plan in 2012.
- There is an existing Rio Hondo River Trail - Walnut Grove Ave Connector, which runs across the Whittier Narrows Golf Course along the Alhambra Wash and connects to the Rio Hondo River Trail to the south.

- Alhambra Wash was identified as a top project by the SGVCOG Greenway Study in 2018. Short sections of Alhambra Wash between Ramona Street and Hovey Avenue as well as between Del Mar Boulevard and I-10 were also identified for greenway development in multiple previous plans.
- Environmentally, the area surrounding Alhambra Wash is lacking tree canopy, has high concentrations of impervious surfaces, and a highly vulnerable heat index.


Drone Image of Alhambra Wash

Circulation

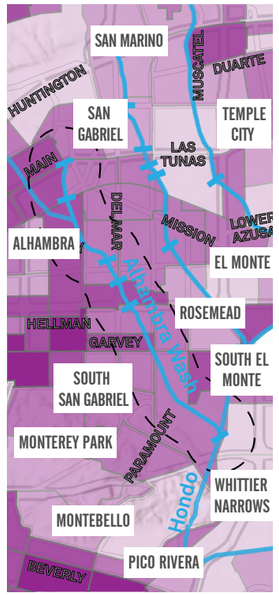
VEHICLE/TRANSIT ACCESS

Focused to the west of Alhambra Wash, the communities of Monterey Park, Rosemead, and Alhambra show the highest concentrations of households without vehicle access. However, these communities also show greater access to transit than their neighbors to the north and south.

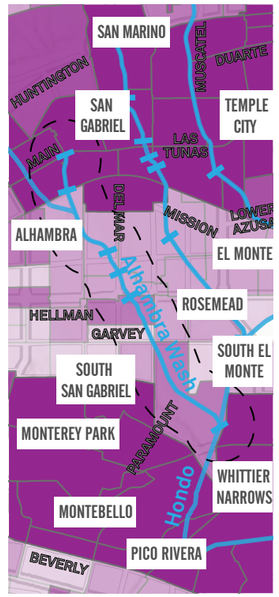
EXISTING BIKEWAYS

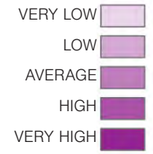
Few existing bikeways exist in the area, aside from the Rio Hondo bike path and a short segment along Junipero Serra.

NO VEHICLE ACCESS



NO TRANSIT ACCESS

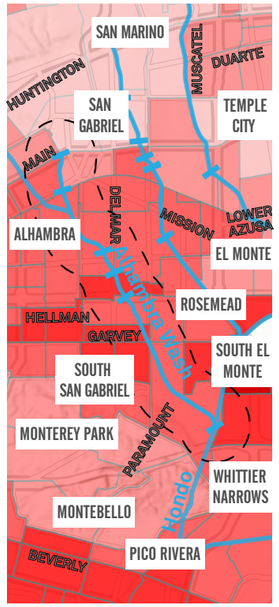




Environment

Tree canopy along Alhambra Wash is mostly average.

Impervious surfaces are most concentrated in South San Gabriel, El Monte, and Montebello, with more opportunities for water infiltration to the north and south. The heat vulnerability index mimics this pattern with the most vulnerable areas near the center of the tributary.

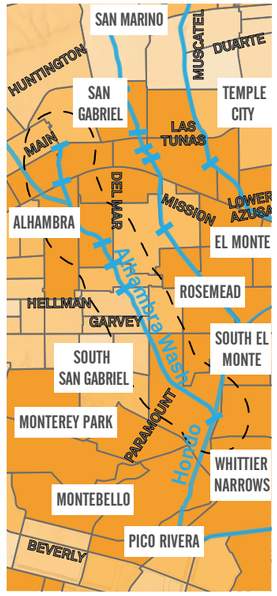


HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Equity

The most environmentally burdened communities are towards the middle of this tributary through Monterey Park and El Monte. The most impacted tract in this area has a CalEnviroScreen percentile score of 86%.



ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

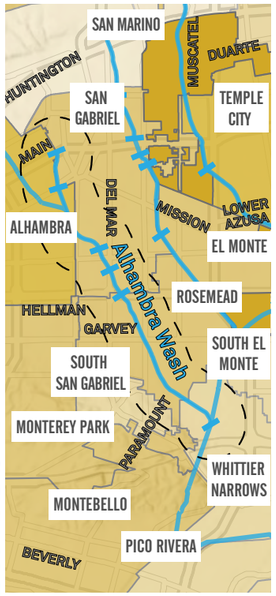
Community

GATHERING SPACES

Activity Generators are concentrated along Las Tunas Blvd., and Valley Blvd.

PARK NEED

The southern end of the tributary is near existing parks along the Rio Hondo and Whittier Narrows. The northern segment has fewer parks and is showing “High” to “Very High” park need.



PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

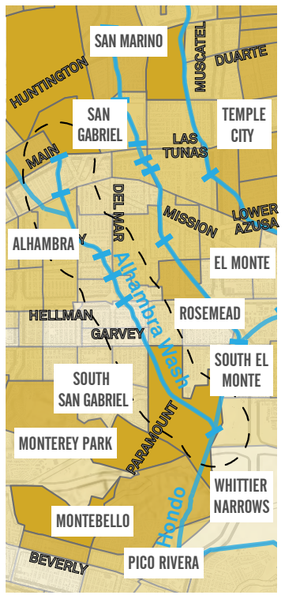
Community

INCOME

Median incomes in this area are mixed, however we see the highest incomes north near Pasadena and south near the unincorporated area. The lowest average household incomes are in South San Gabriel, Pico Rivera, and South El Monte.

POPULATION

Demographics in the area are diverse, with a large Asian population throughout the area, concentrating in the lower portion of the Wash.



MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Synergy Opportunities

- Few existing bikeway connections exist in the area aside from the Rio Hondo bike path to the south.
- A multi-use path along the utility easement between Graves Avenue and the Union Pacific Right-of-way was proposed by the Southern California Association of Governments’ (SCAG) Regional Transportation Plan in 2012.
- Alhambra Wash was identified as a top project by the San Gabriel Valley Council of Governments’ (SGVCOG) Greenway Study in 2018. Short sections of Alhambra Wash between Ramona Street and Hovey Avenue as well as between Del Mar Blvd and the I-10 were also identifi ed for greenway development in multiple previous plans.
- Alhambra Wash presents complex physical challenges to implementation with constrained right-of-way, complex intersections, and jurisdictional challenges to implementation, given that the Wash is partially controlled by the United States Army Corps of Engineers.

- EMERALD NECKLACE 2017
- PARK NEEDS 2016
- LA CTY BIKE MASTERPLAN 2012
- GREENWAY NETWORK
- REGIONAL TRANSIT 2012
- REGIONAL TRANSIT 2012
- METRO ACTIVE PLN 2016
- LA CTY PROPOSED BIKEWAYS
- EARLY IMPLEMENTATION
- VACANT GOV PARCELS

RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The parcels along Alhambra Wash are mostly owned through Easement and Fee agreements. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened.

However, north of Valley Blvd., a large segment of the wash is owned by the US Army Corp of Engineers; this may add significant legal complexity/time to implementing a greenway or other amenities in this area.

A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

OWNERSHIP AGREEMENT

- EASEMENT
- OTHER
- FEE

EXISTING CONDITION CONSTRAINTS

Alhambra Wash has a highly constrained Right-of-way on either side of the channel. Most of the tributary does not have an adjacent access road, with less than 8 feet of available space. There is a short segment of available space along the Alhambra Municipal Golf Course, a short section near the I-10, and another to the south, near the Rio Hondo.

Exploring a greenway along Alhambra Wash would likely include more complex solutions such as cantilever decks, or an incised channel.

INTERSECTIONS & CROSSINGS

- STREET INTERSECTIONS
- RAILROAD CROSSINGS

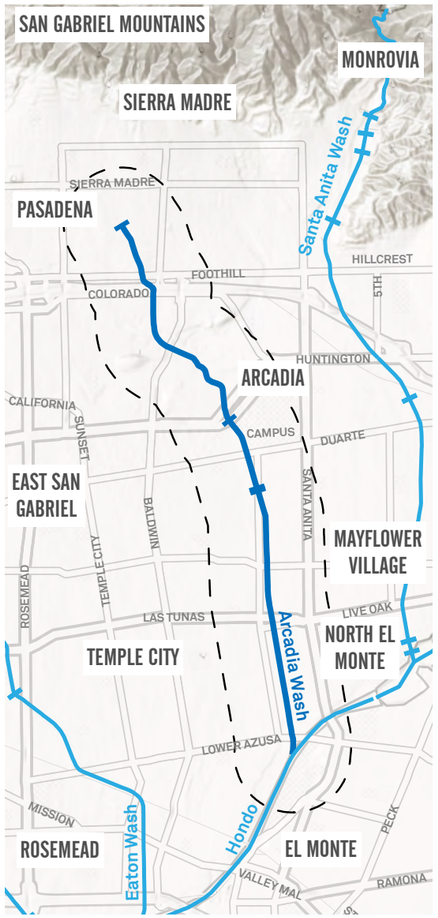
ROW WIDTH

- < 8 FT
- 8-13 FT
- 13-26 FT
- > 26 FT

2.8.2 Arcadia Wash

Overview

- Arcadia Wash is approximately 5 miles in length.
- Arcadia Wash passes through Arcadia, Temple City, and El Monte.
- Arcadia Wash presents physical and legal opportunities for greenway development; however, a large section of Arcadia Wash is underground north of Huntington Boulevard.
- Arcadia Wash weaves through a mostly residential area with a few larger destinations in the vicinity such as the Santa Anita Racetrack, the County Arboretum, and the Santa Anita Golf Course.
- Several schools are in the adjacent area including Longley Way Elementary, Holly Avenue Elementary, and Cleminson Elementary.
- Residents in the area generally have access to a vehicle, with low access to public transit.
- Arcadia Wash is adjacent to a large Asian population as well as Hispanic populations toward the south of the tributary.
- Income levels in the area vary, with higher average incomes in the communities along the northern section of the wash.
- There are on-street routes planned in the area but no previously planned projects along the Wash itself.
- The existing Rio Hondo River Multi-Use Trail connects to Arcadia Wash.
- Arcadia Wash provides a potential connectivity to the Regional Rio Hondo Trail or constraints due to connectivity gaps.
- Environmentally, Arcadia Wash is in average need of tree canopy and permeable surfaces. Some larger areas of impervious surfaces near the center of the tributary.




Drone Image of Arcadia Wash

Circulation

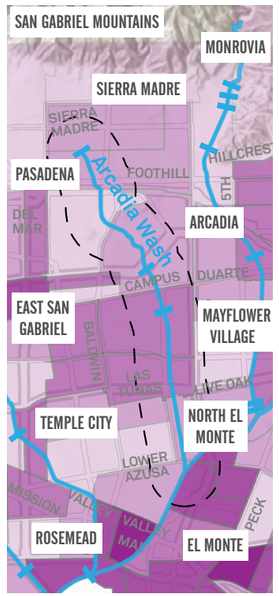
VEHICLE/TRANSIT ACCESS

Most communities in the Arcadia Wash area have “average” access to vehicles, aside from a concentration of no vehicle access in the south near Rosemead. Additionally, the entire area lacks access to high quality transit.

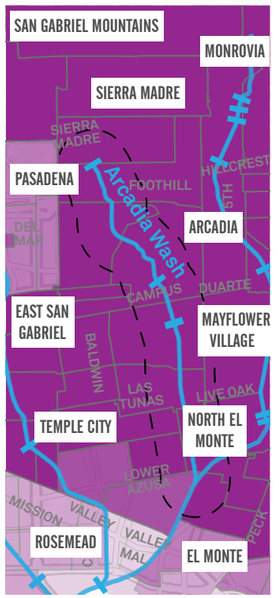
EXISTING BIKEWAYS

Few existing bikeways are in the area, aside from the Rio Hondo bike path.

NO VEHICLE ACCESS



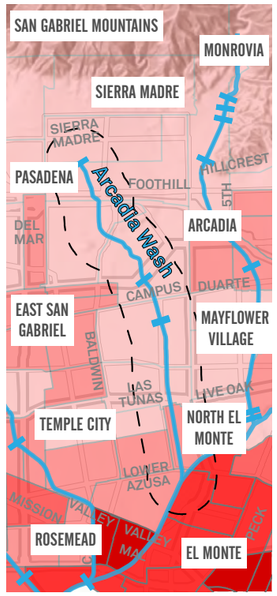
NO TRANSIT ACCESS



Environment

Arcadia Wash has a healthy tree canopy throughout much of the adjacent area, with only a few small areas to the south lacking tree canopy. Also, this area has an average heat vulnerability index, with high heat vulnerability near El Monte.

This area has average permeability. There is a concentration of impervious surfaces in the center of the tributary, likely due to the racetrack and its adjacent parking lots which affect water quality.

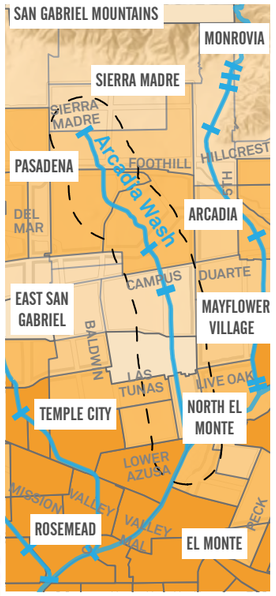


HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Equity

Socioeconomic and sensitivity factors in the area rank average. Environmental burden in the area is also average. The area most environmentally burdened is in Arcadia. Like much of the San Gabriel Valley, residents of this area are affected by asthma and pockets of linguistic isolation.



ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

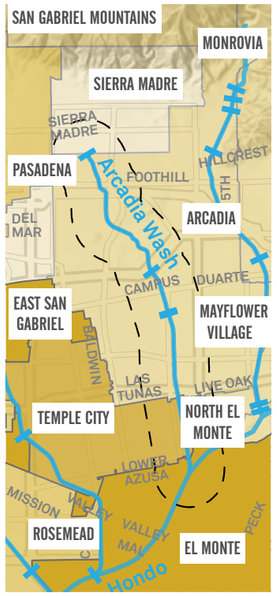
Community

GATHERING SPACES

As a mostly residential area, there are few activity generators along Arcadia Wash. Major activity centers include the adjacent schools, the Los Angeles County Arboretum and Botanic Garden, and the Santa Anita Golf Course.

PARK NEED

Park need is average throughout the tributary area, aside from a concentration of high need in the southern area near North El Monte and Rosemead.



PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

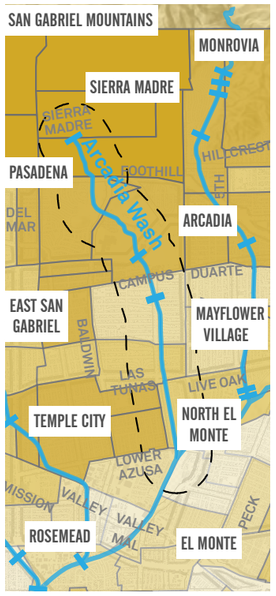
Community

INCOME

Median incomes in this area are average to high, with some northern areas in the top 10% bracket for the County.

POPULATION

Demographics in the area are diverse, with a large Asian population throughout the area, concentrating in the lower portion of the Wash.



MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Synergy Opportunities

- This area lacks both existing and planned bikeway infrastructure, aside from the Rio Hondo multi-use path to the south. The Temple City Profile from the Parks Needs Assessment calls for a “New Park in the General Vicinity of Area Along Eaton and Arcadia Wash.” Additionally, the community identified “development and construction of multi-purpose trails along the County Flood Control Channels throughout the City limits” as a top priority.
- There are also several planned routes in adjacent areas, such as Temple City and East San Gabriel.

RIGHT-OF-WAY OWNERSHIP COMPLEXITY

Arcadia Wash is completely within the Los Angeles County Flood Control District jurisdiction, operating through various Fee and Easement agreements. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened.

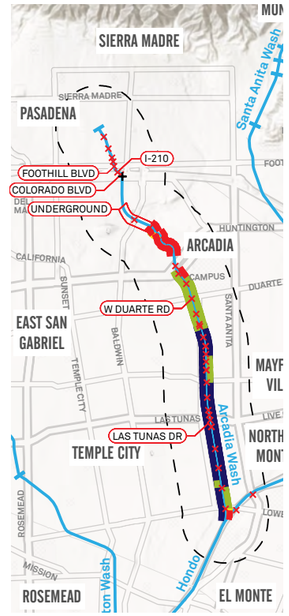
A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

OWNERSHIP AGREEMENT

- EASEMENT
- OTHER
- FEE

EXISTING CONDITION CONSTRAINTS

Arcadia Wash presents great physical opportunities for a greenway with most of the right-of-way adjacent to the channel being greater than 13 feet. It should be noted that north of Huntington Blvd, the tributary is mostly underground and covered by the Santa Anita Racetrack.



INTERSECTIONS & CROSSINGS

- STREET INTERSECTIONS
- RAILROAD CROSSINGS

ROW WIDTH

- < 8 FT
- 8-13 FT
- 13-26 FT
- > 26 FT

2.8.3 Big Dalton Wash

Overview

- At 16.6 miles, Big Dalton Wash is one of the longer tributaries in the study area, stretching from the San Gabriel River to the Angeles National Forest.
- Big Dalton Wash passes through Glendora, Azusa, Covina, as well as unincorporated Los Angeles County.
- The available ROW along Big Dalton Wash is promising, with most areas having over 13 ft of available width.
- There are approximately 26 schools within ½ mile of Big Dalton Wash.
- Households surrounding Big Dalton Wash generally have access to a vehicle and lack access to high quality transit.
- Income levels in the area vary; average household income to the east near Glendora is in the top 10 percent for LA County. Areas in the west near Baldwin Park and El Monte is in the lowest 10 percent.
- Presently, a section of this tributary is being improved with a bikeway and greenway stretching for 2 miles in length along Big Dalton Wash between Irwindale and Lark Ellen Avenues, and between Arrow Highway and Citrus Avenue.
- Limited portions of Big Dalton Wash have been proposed for greenways in other studies.
- Environmentally, the area has limited tree canopy and is vulnerable to heat island effects.

Circulation

VEHICLE/TRANSIT ACCESS

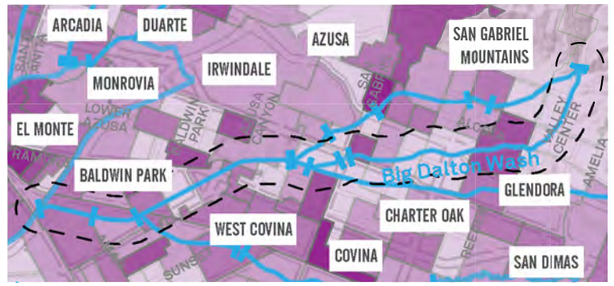
Aside from a small area near the center of the wash near Covina and Azusa, the households surrounding Big Dalton Wash generally have access to a vehicle. Similarly, most of the surrounding area is without access to high quality transit.

EXISTING BIKEWAYS

The tributary is in the vicinity of many existing on-street bike routes in Glendora, as well as parts of Covina, and down to the San Gabriel River. The City of Baldwin Park is currently designing a 2.8-mile passive recreational greenway from Walnut Creek at Baldwin Park Blvd to Big Dalton Wash at Central Avenue.

NO VEHICLE ACCESS

NO TRANSIT ACCESS

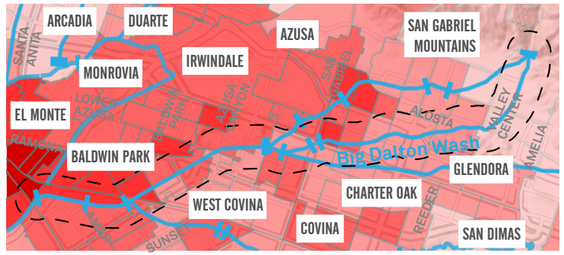


Environment

The area surrounding Big Dalton Wash has limited tree canopy. This is contributing to heat vulnerability in the area, which is highest in the western portion of the wash. Fortunately, the amount of impervious surfaces in the area appears to be average to low, contributing to less water runoff pollution issues than we have seen in other areas.

HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

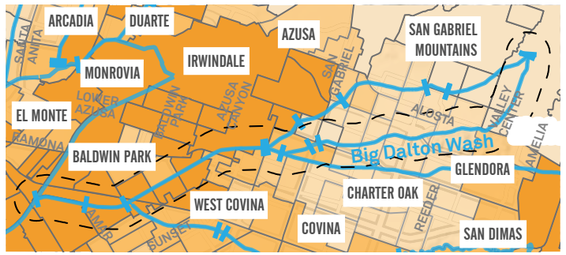


Equity

Socioeconomic factors and environmental burden are concentrated in the western half of Big Dalton Wash. Certain areas in Baldwin Park towards the San Gabriel River are in the 98th percentile for environmental burden.

ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

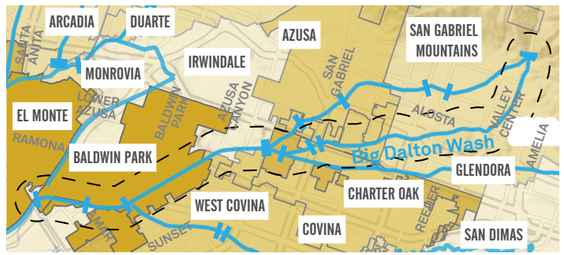


Community

Major gathering and recreation spaces along Big Dalton Wash include the South Hills Wilderness Area as well as the Glenoaks Golf Course and Park. Big Dalton Wash stretches all the way from the San Gabriel River and the Duck Farm property to the Big Dalton Wilderness Park in the Angeles National Forest and could serve as a connection between the two.

PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Community

INCOME

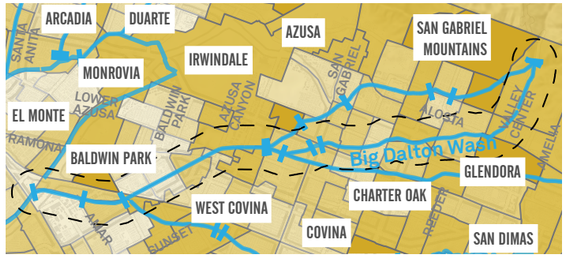
Median Household income in this area is average to high, aside from some areas to the west near the San Gabriel River. Big Dalton Wash serves as a connection between those earning the lowest 20% of median household income in the County, and the highest 10%.

POPULATION

There is a large Hispanic population in the area, concentrated mostly toward the west at the confluence of the San Gabriel.

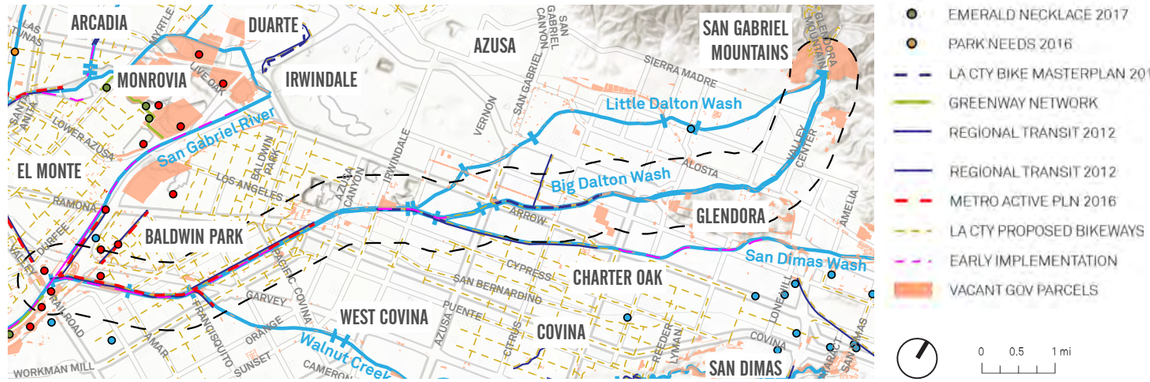
MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Synergy Opportunities

- Hondo multi-use path to the south. The There are many proposed on-street facilities in this area that could make potential connections to the greenway.
- A greenway has been proposed previously along the western portion of Big Dalton Wash between the San Gabriel River and Ramona Ave. This segment was in the Metro Active Transportation Strategic Plan as well as the LA County Bicycle Master Plan.
- A 2.8 mile passive recreational greenway is currently be designed from Walnut Creek at Baldwin Park Blvd to Big Dalton Wash at Central Avenue.
- A 3.14 mile bikeway and greenway is currently being designed between Irwindale Ave and Lark Ellen Ave and between Arrow Hwy and Citrus Ave.



RIGHT-OF-WAY OWNERSHIP COMPLEXITY

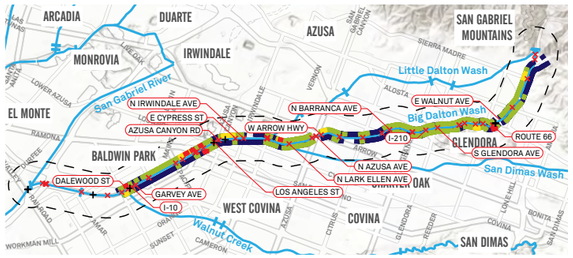
The underlying parcels of Big Dalton Wash are mostly owned by the County Flood Control District, enabling potential greenway implementation. Some easement agreements may need to be updated to allow for uses other than flood control. Additionally, Big Dalton Wash is operated and maintained entirely by the County Flood Control District. A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

OWNERSHIP AGREEMENT

EASEMENT FEE OTHER

EXISTING CONDITION CONSTRAINTS

The adjacent right-of-way along Big Dalton Wash is generally available and wide enough for a greenway. Certain sections of the tributary, such as near Azusa Avenue and Alosta Avenue, are undergrounded. There are also major crossings of freeways and major arterials that could present challenges along this long corridor.



INTERSECTIONS & CROSSINGS × STREET INTERSECTIONS + RAILROAD CROSSINGS

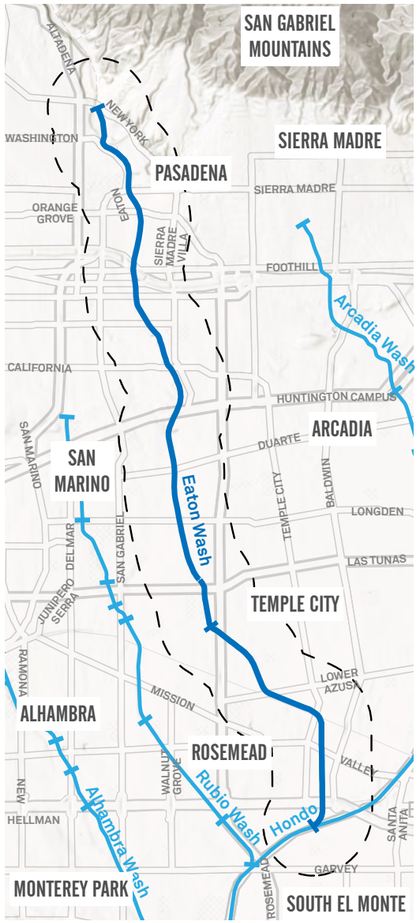
ROW WIDTH < 8 FT 8-13 FT 13-26 FT > 26 FT

2.8.4 Eaton Wash

Overview

- Eaton Wash is an 8.1-mile tributary flowing from Pasadena to the Rio Hondo.
- Eaton Wash passes through Pasadena, Temple City, El Monte, Rosemead, as well as unincorporated Los Angeles County.
- Eaton Wash has a promising amount of ROW available along its banks with most areas meeting the minimum requirement for a greenway (13 ft). Underground segments and intersections may present challenges to alignment.
- Eaton Wash has a dam and two (2) groundwater recharge facilities which are being utilized to sustain local drinking water supplies.
- Schools in the area include Chaim Weizmann Jewish School, Living Way Christian Academy, Hale School, Pasadena Continuation High, Jefferson Middle, Savannah Elementary, and Cortada Elementary.
- Retail, office and industrial spaces along Colorado, Huntington, Valley Boulevard and Las Tunas may drive activity along the tributary.
- The area has low access to transit.
- Average household income is generally average to high throughout the corridor.
- Portions of greenway along Eaton Wash are currently in an implementation phase: A 0.4-mile bicycle path between Longden Ave and Rosemead Boulevard, as well as a 1-mile bikeway and greenway between Huntington Drive and Longden Avenue.
- Presently, a section of this tributary is being improved with a bikeway and greenway stretching for 1.1-mile-long along two segments of Eaton Wash with the first segment between Longden Avenue and Muscatel Avenue and the second between Las Tunas Drive and Rosemead Boulevard in the Cities of San Gabriel and Temple City and the Unincorporated East San Gabriel Community.

- Eaton Wash was identified as a top project in the 2018 SGVCOG Greenway Study, as well as in the 2012 LA County Bicycle Plan.
- Eaton Canyon Nature Center, Equestrian Park, and Eaton Canyon Trail can serve as potential destinations for users of the Eaton Wash greenway.
- Eaton Wash also connects to the existing Rio Hondo River Trail along the Rio Hondo ROW.
- There is a lack of tree canopy in the area south of Las Tunas.




Drone Image of Eaton Wash

Circulation

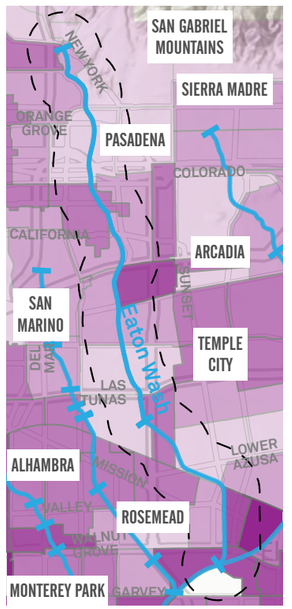
VEHICLE/TRANSIT ACCESS

North of Sierra Madre and south of Las Tunas, there is a lack of access to reliable transit. Most of the Eaton Wash community has access to a vehicle.

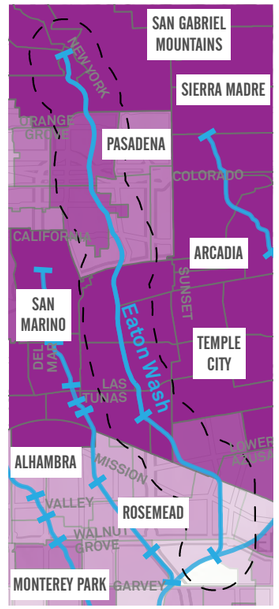
EXISTING BIKEWAYS

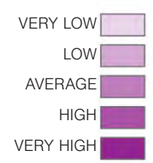
Existing bikeways are concentrated to the north in Pasadena. There is also an existing Class IV bikeway along Rosemead Blvd that would provide an additional connection to the greenway.

NO VEHICLE ACCESS



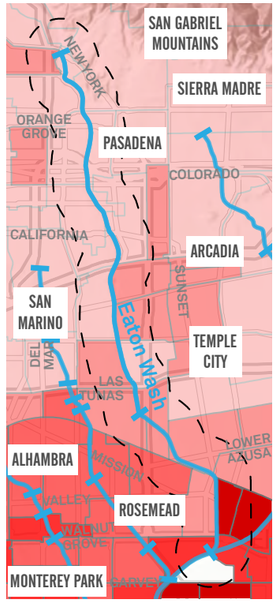
NO TRANSIT ACCESS





Environment

South of Las Tunas, there is high to very high heat vulnerability in many areas. This is also the area that lacks a strong tree canopy. Areas with a high percentage of impervious surfaces are concentrated in the area south of Huntington Drive.



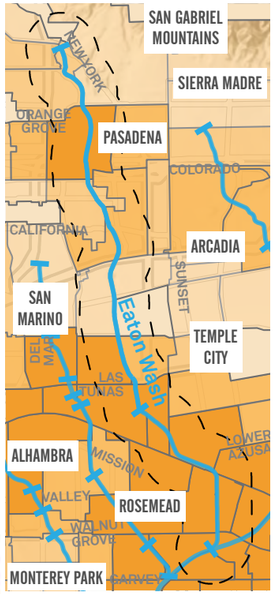
HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Equity

North of Longden Ave, sensitivity and socioeconomic factors range from low to very low. Pollution exposure is high to very high, particularly in the Pasadena and East Pasadena area.

South of Longden Ave, the community generally suffers from very high environmental burden. There is also an over-representation of sensitive populations (e.g. asthma, housing burden, linguistic isolation) south of Valley Blvd.



ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

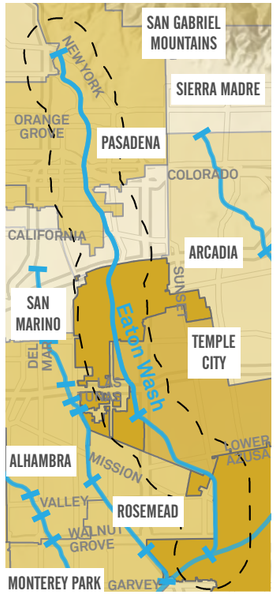
Community

GATHERING SPACES

There are retail, office and industrial spaces along Colorado, Huntington and Las Tunas that may generate activity along a future greenway.

PARK NEED

The Department of Parks and Recreation Park Needs Assessment shows High to Very High park need south of Huntington Drive.



PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

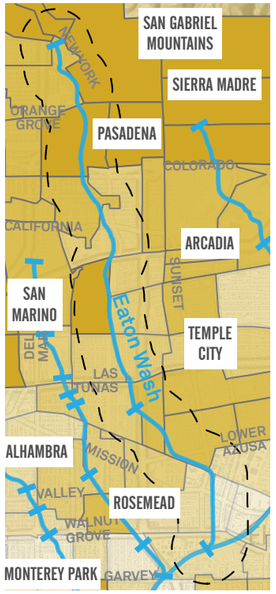
Community

INCOME

The Eaton Wash community has income that is higher than the County's average, especially to the north.

POPULATION

South of Huntington Drive, there is a strong Asian community.



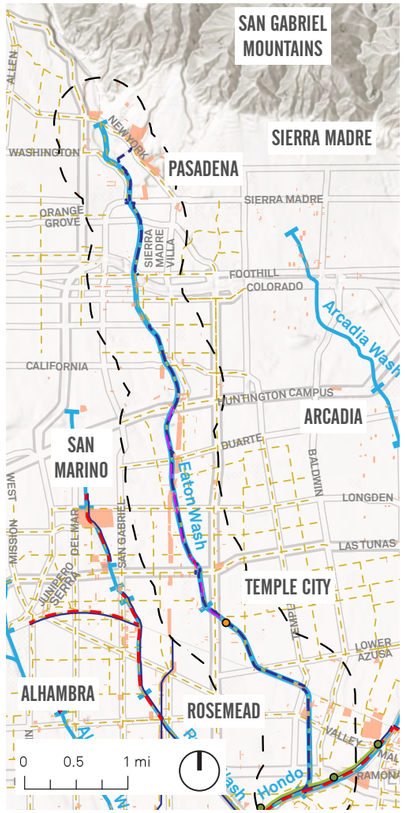
MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Synergy Opportunities

Eaton Wash is a popular tributary and has been identified by many studies and planning efforts in the past:

- The LA County Bicycle Master Plan 2012 identified a greenway alignment along this reach.
- The San Gabriel Valley Council Of Governments' (SGVCOG) Greenways Study ranked Eaton Wash among its "top 50 miles".
- A 1.3 mile greenway along the southern portion of Eaton Wash is currently in design between Rosemead Ave and Longden Ave.
- Phase 2 will continue North from Longden Ave to Huntington Drive (Currently in planning phase).
- Additionally, "constructing a park in the vicinity of Eaton Wash" was identified by the community as a high priority project during the 2016 Parks Needs Assessment.

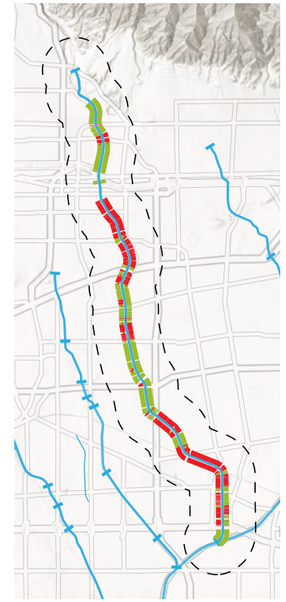


- EMERALD NECKLACE 2017
- PARK NEEDS 2016
- LA CTY BIKE MASTERPLAN 2012
- GREENWAY NETWORK
- REGIONAL TRANSIT 2012
- REGIONAL TRANSIT 2012
- METRO ACTIVE PLN 2016
- LA CTY PROPOSED BIKEWAYS
- EARLY IMPLEMENTATION
- VACANT GOV PARCELS

RIGHT-OF-WAY OWNERSHIP COMPLEXITY

Eaton Canyon parcels are mostly fee property, with a few marginal quitclaims and easements along the channel. "Fee" parcels would require the least amount of regulatory approvals. Some easement agreements may need to be updated to allow for uses other than flood control.

A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.



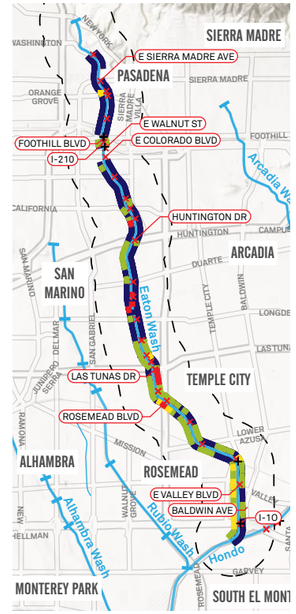
OWNERSHIP AGREEMENT

- EASEMENT
- OTHER
- FEE

EXISTING CONDITION CONSTRAINTS

Generally, Eaton Wash has over 10 feet of ROW available outside of the flood control channel.

Potentially challenging crossings along Eaton Wash may include East Sierra Madre Ave, I-210 Freeway, Between East Walnut St and East Colorado Blvd, Huntington Dr, Las Tunas Dr, Rosemead Blvd, East Valley Blvd, I-10 Freeway.



INTERSECTIONS & CROSSINGS

- STREET INTERSECTIONS
- RAILROAD CROSSINGS

ROW WIDTH

- < 8 FT
- 8-13 FT
- 13-26 FT
- > 26 FT

2.8.5 Little Dalton Wash

Overview

- Little Dalton Wash is a 6.7 mile tributary connecting the Angeles National Forest to the San Gabriel River via Big Dalton Wash.
- Little Dalton Wash passes through Glendora, Azusa, Irwindale, as well as unincorporated Los Angeles County.
- The area is primarily residential with few commercial/retail areas. There are several schools in the area including Citrus Community College, Asuza University, Paramount Elementary, Merwin Elementary, and others.
- Towards the center of the tributary, the Azusa Gold Line station provides potential connection to high quality transit.
- The areas around Little Dalton Wash generally rank low in terms of the level of socioeconomic and environmental burden faced by the community.
- There are very few previously planned projects along Little Dalton Wash; the Wash was identified as a top project by the San Gabriel Valley Council of Governments' Greenways Study.
- Physically, Little Dalton Wash presents lots of opportunities, with available right-of-way along most of the tributary.
- This area has limited tree canopy.

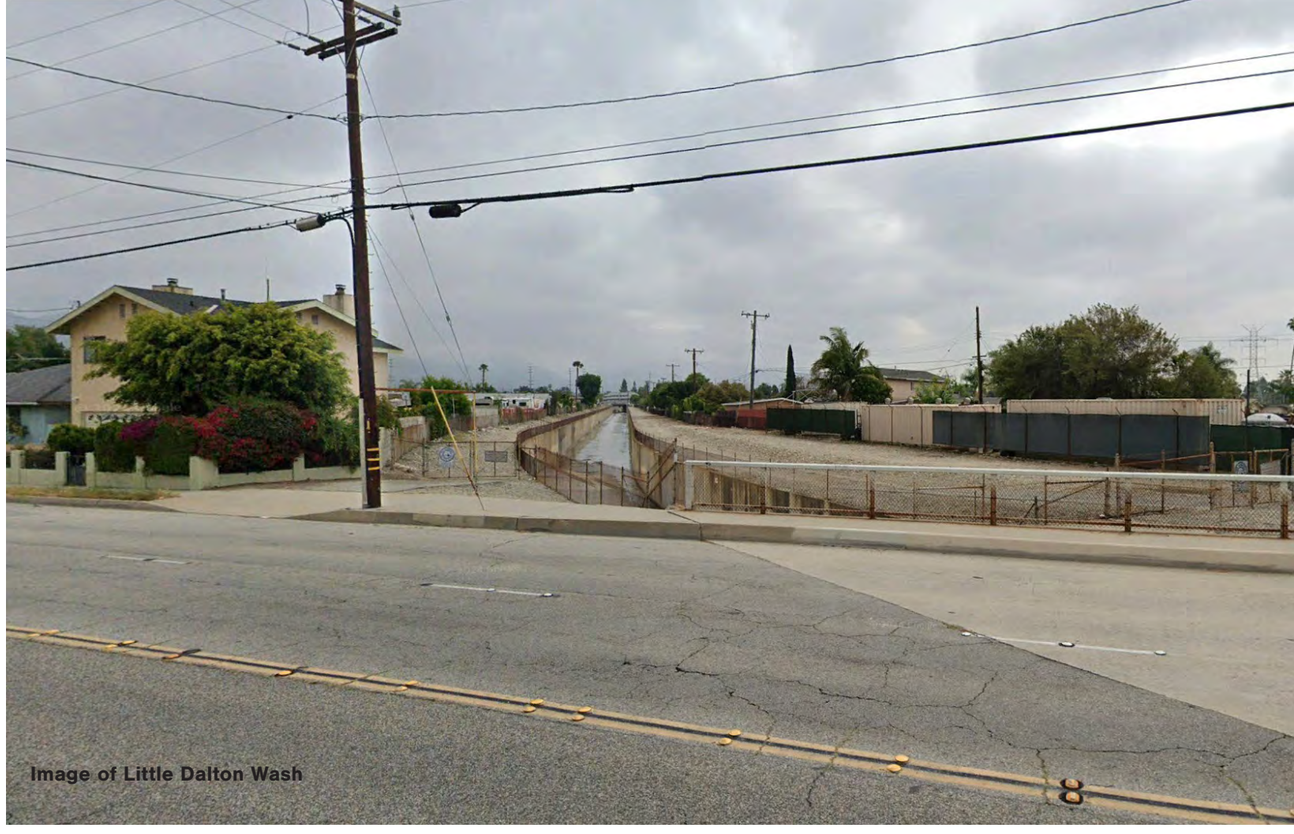
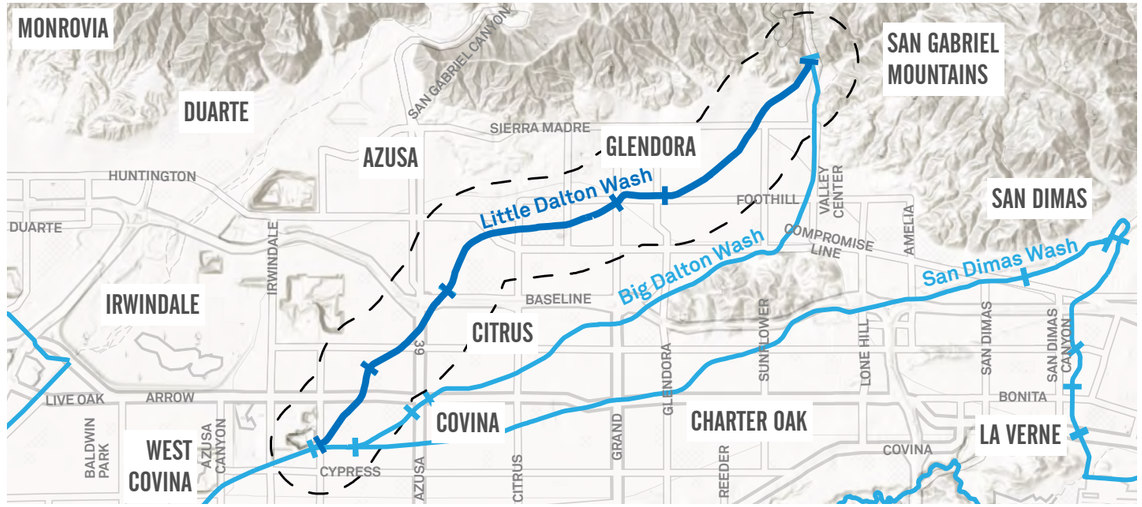


Image of Little Dalton Wash



Circulation

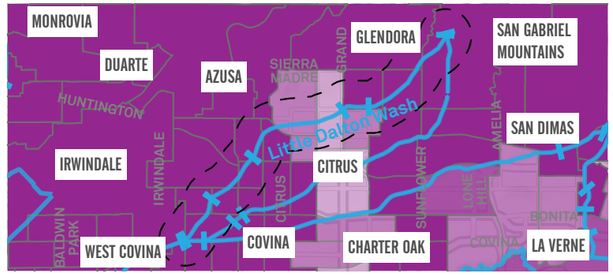
VEHICLE/TRANSIT ACCESS

Generally, the households adjacent to Little Dalton Wash have access to a vehicle. Some areas south of Azusa report lower rates of vehicle access. There are very few areas within walking distance of the tributary that have access to high quality transit.

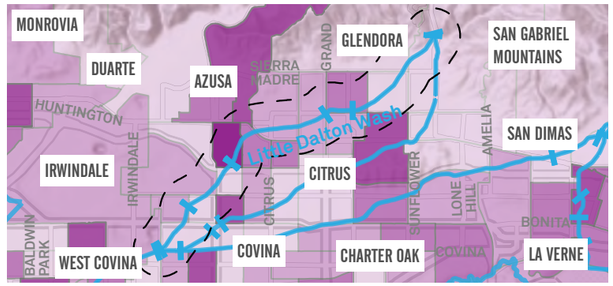
EXISTING BIKEWAYS

Existing on-street bikeways in the area are generally concentrated to the east in Glendora, with some crossing the upper reach of Little Dalton.

NO VEHICLE ACCESS



NO TRANSIT ACCESS

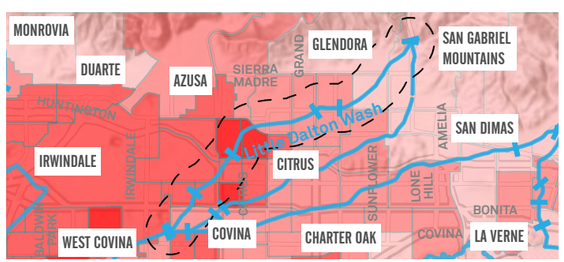


Environment

Tree canopy in this area is very limited. Aside from the furthest northeast segment of the wash, we see low tree canopy and pockets of severe heat index vulnerability, especially in the area just south of Azusa. Permeability seems to be less of an issue along Little Dalton, with most areas registering in the average level. Closer to the confluence with Big Dalton, and Live Oak, the area is less permeable which can affect water quality and flood risk.

HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

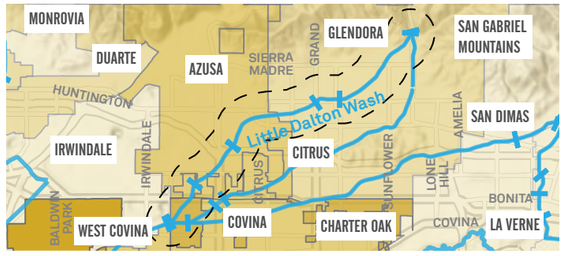


Community

As a primarily residential area, there are a limited number of gathering spaces in the area. There are only a few commercial/retail areas within walking distance of Little Dalton Wash, and there is very little park space. However, the proximity to the Angeles National Forest to the east, and the Santa Fe Dam recreation area to the west produces an average to low score for this area in terms of “Park Need.”

PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

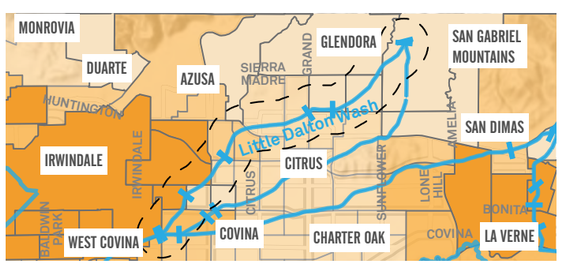


Equity

Environmental burden and Socioeconomic/sensitivity factors in the areas surrounding Little Dalton Wash are generally low. However, some areas near the western part of the tributary near Irwindale and Azusa are highly impacted. Similar to most of the San Gabriel Valley, the most commonly reported environmental sensitivity issue in the area is asthma.

ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Community

INCOME

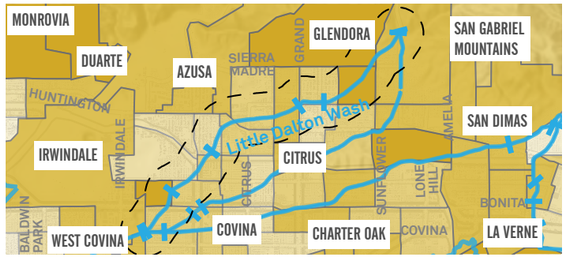
Median household incomes in the area surrounding Little Dalton Wash are generally average to high, with some households near the eastern portion of the tributary in the County’s highest 10% income bracket.

POPULATION

Towards the western portion of the tributary in Irwindale, Azusa, and Citrus, there is a strong Hispanic population.

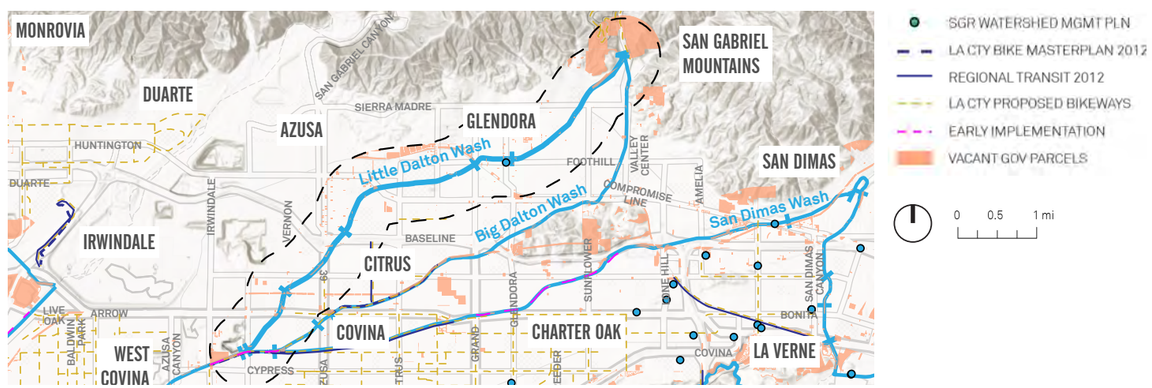
MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Synergy Opportunities

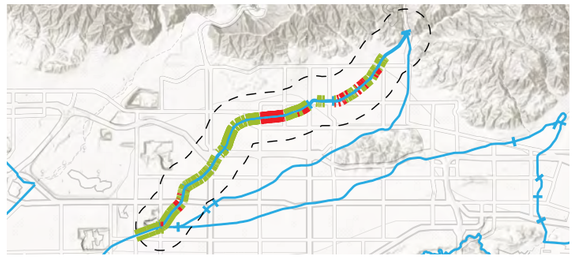
- There are no current planned or proposed green-ways along the tributary.
- With the Metro Gold Line making it’s way further east, Little Dalton could potentially provide a key connection to transit for communities south of that railway. Additionally, as mentioned in previous maps, Little Dalton is a direct connection to recreation in the Angeles National Forest and could build synergy with efforts to bring people to recreation destinations in the San Gabriel Mountains.
- A moderate amount of vacant governement-owned parcels exist along the tributary which could be potential future park spaces.



RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of Little Dalton Wash are mostly owned by the County Flood Control District, enabling potential greenway implementation. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. Little Dalton Wash is operated and maintained entirely by the County Flood Control District.

A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

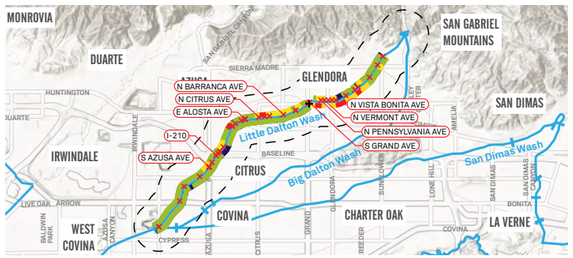


OWNERSHIP AGREEMENT

- EASEMENT
- FEE
- OTHER

EXISTING CONDITION CONSTRAINTS

The available right-of-way along Little Dalton Wash is generally promising, with few constrained areas southwest of Citrus Ave and the Citrus Community College. Through Glendora, the tributary becomes more constrained with portions of narrow right-of-way as well as portions that are underground. Major crossings include the Foothill Freeway (210) and various heavy rail lines.



INTERSECTIONS & CROSSINGS

- × STREET INTERSECTIONS
- + RAILROAD CROSSINGS

ROW WIDTH

- < 8 FT
- 8-13 FT
- 13-26 FT
- > 26 FT

2.8.6 San Dimas Wash

Overview

- This study area is comprised of San Dimas Wash, Puddingstone Channel, and Live Oak Wash.
- San Dimas Wash, including Puddingstone Channel, and Live Oak Wash pass through Claremont, La Verne, San Dimas, Glendora, Covina, as well as unincorporated Los Angeles County.
- The area is primarily residential, with several schools, as well as connections to some major parks and recreational areas including Boneli Regional Park, South Hills Recreational Area, Horsethief Canyon Park, and others.
- Environmental and Socioeconomic burden in the area is average.
- Average household income is average to high for the County.
- There are a number of projects in development along these tributaries. The area was identified as a top project in the San Gabriel Council of Governments' Greenways Study. Additionally, there is a 3-phase project in development along San Dimas Wash within Glendora.
- There are many opportunities for greenways along these tributaries with sufficient right-of-way available in many areas.
- Environmentally, the area ranks average in terms of tree canopy, heat vulnerability, and permeability.


Drone Image of San Dimas Wash

Circulation

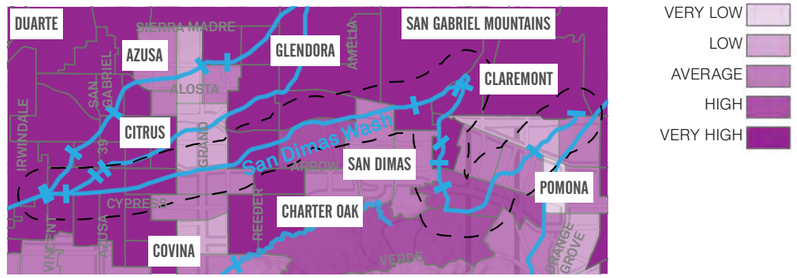
VEHICLE/TRANSIT ACCESS

Generally, the households adjacent to this tributary have access to a vehicle. There are very few areas within walking distance of the tributary that have access to high quality transit.

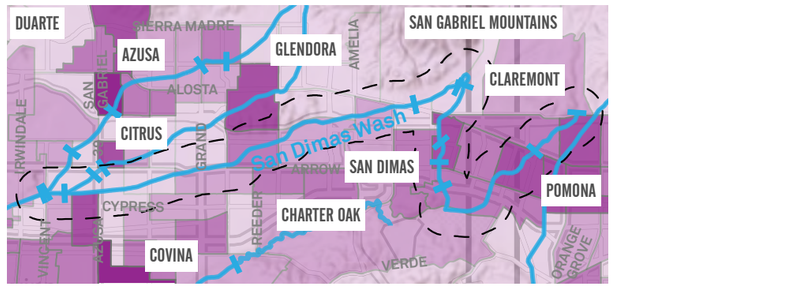
EXISTING BIKEWAYS

Existing bikeways in the area are concentrated in San Dimas, just south of the tributary. The Marshall Canyon Trail connects to this tributary near Brackett field, potentially connecting to the foothills. The City of Glendora recently completed a 1 mile bike trail along the San Dimas Wash from Sunflower Ave. to Forbes Spreading Grounds.

NO VEHICLE ACCESS



NO TRANSIT ACCESS

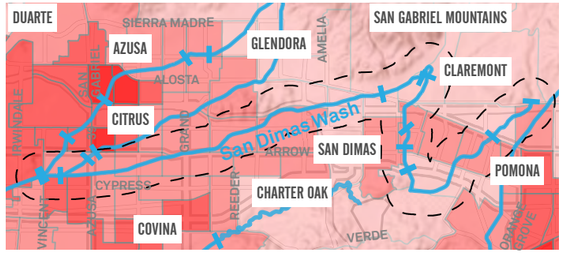


Environment

Environmentally, we see a healthy tree canopy in the communities to the east, and limited tree canopy to the west. Despite the limited amount of trees, heat index vulnerability remains average for the western areas of this tributary. Permeability is also average in the area, with the most impermeable areas near the confluence of Big Dalton Wash. This could cause water quality and flood risk issues.

HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

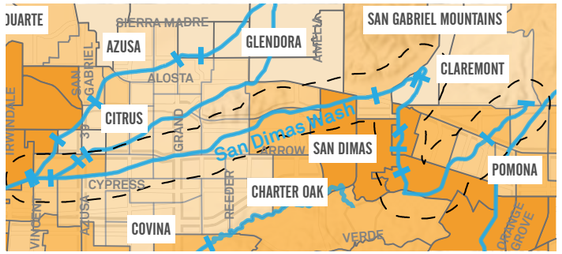


Equity

Environmental burden and socioeconomic factors in the areas surrounding this tributary are generally low. However, some areas of the tributary near Pomona are highly impacted. Similar to much of the San Gabriel Valley, the most commonly reported environmental sensitivity issue in the area is asthma.

ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Community

As a primarily residential area, there are limited activity generators in the area from retail, commercial, or industrial land uses. There are some major park spaces such as the South Hills Wilderness Area, Frank G Bonelli Regional Park, and Horsethief Canyon Park.

To the west however, near Covina, we do see some areas that have high park need.

PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Community

INCOME

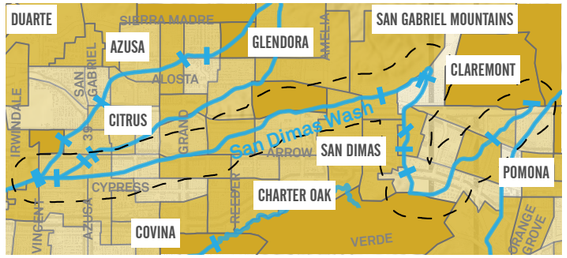
Median household incomes in the area surrounding this tributary are generally average to high, with some households near the middle and eastern portions of the tributary in the County's highest 10% income bracket.

POPULATION

Towards the western portion of the tributary in Irwindale and Vincent, there is a strong Hispanic population.

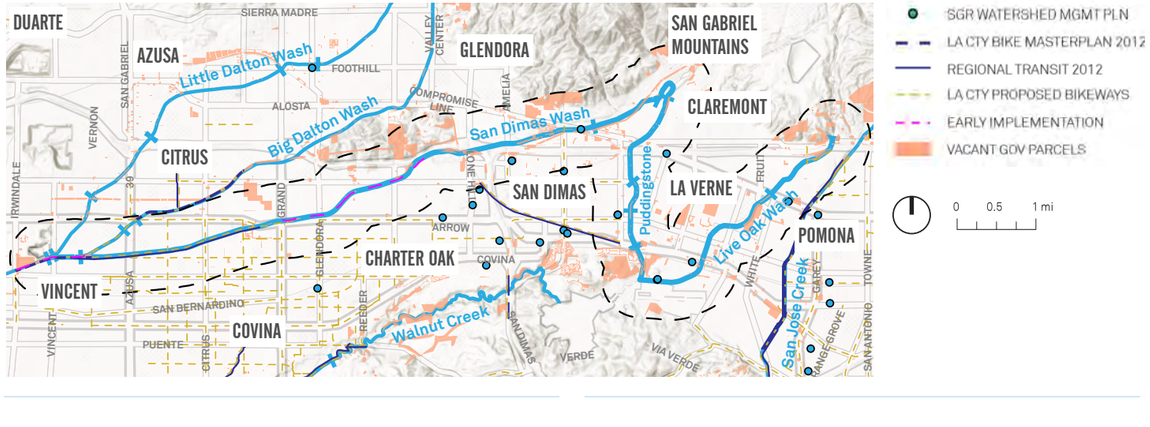
MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Synergy Opportunities

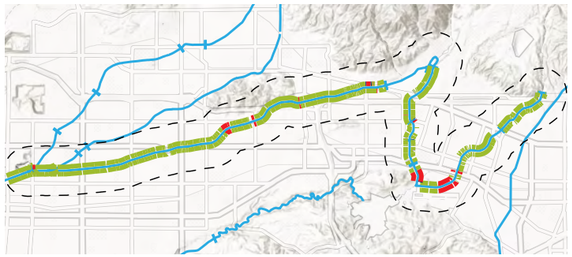
- San Dimas Wash, the western portion of this tributary, has been studied in various regional plans and a greenway was proposed along certain sections. Both the LA County Bicycle Master Plan and the Regional Transportation Plan proposed a bikeway along this segment from Grand Ave. to the confluence at Big Dalton Wash. Other portions of San Dimas Wash have been proposed for greenways as part of the Glendora Master Plan.
- A 1 mile greenway was recently completed on San Dimas Wash from Sunflower Ave. to Forbes Spreading Grounds.
- A 1.75 mile greenway is currently in design on San Dimas Wash between Grand Ave. and Gladstone St.
- The Puddingstone and Live Oak sections of this tributary remain largely unstudied. This area does appear to have ample opportunities for park space that can potentially be developed in adjacent vacant government-owned land.



RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of this tributary are mostly owned by the County Flood Control District through various fee and easement agreements. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. Additionally, these channels are operated and maintained entirely by the County Flood Control District.

A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

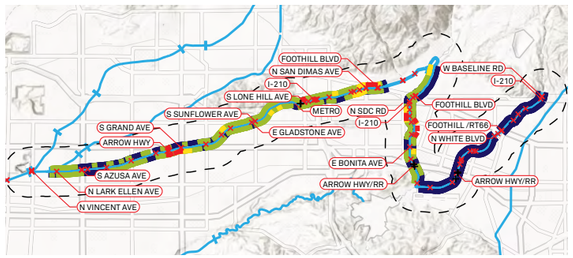


OWNERSHIP AGREEMENT

EASEMENT FEE OTHER

EXISTING CONDITION CONSTRAINTS

The available right-of-way along this tributary is generally promising, with few constrained areas. The area at the intersection of San Dimas and Puddingstone channel is not channelized, however there still may be opportunities available to incorporate a connected greenway.



INTERSECTIONS & CROSSINGS

× STREET INTERSECTIONS
\+ RAILROAD CROSSINGS

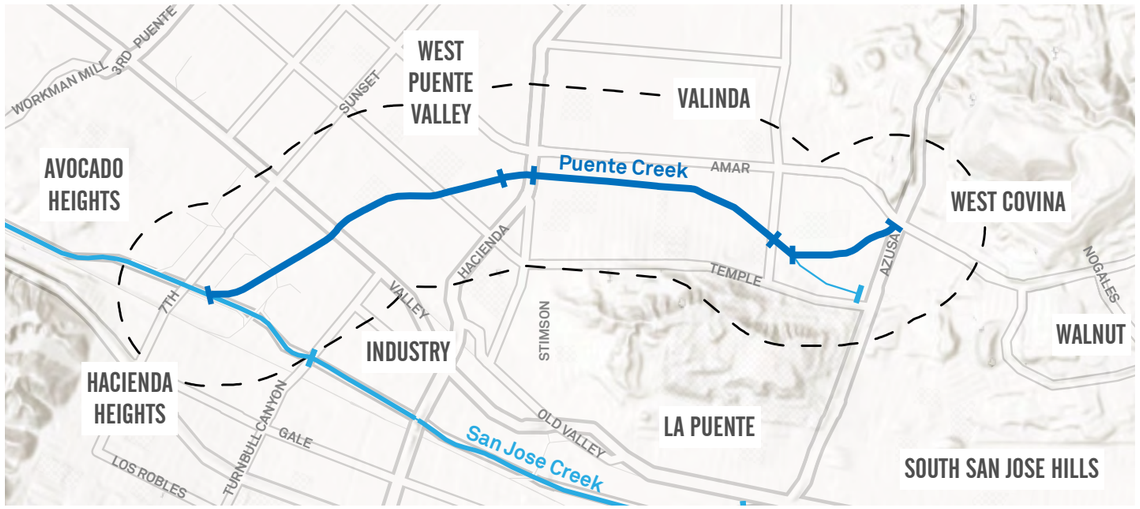
ROW WIDTH

< 8 FT
8-13 FT
13-26 FT
> 26 FT

2.8.7 Puente Creek

Overview

- Puente Creek is a short 4 mile tributary to the north of San Jose Creek.
- Puente Creek passes through City of Industry, La Puente, as well as unincorporated Los Angeles County.
- Puente Creek has some pockets of commercial/retail areas that may generate activity, including several schools in the vicinity; Wing Lane Elementary, Workman High, Del Valle School, Sierra Vista Middle, Sparks Elementary, and others.
- Puente Creek is near some existing major on-street bikeways that could serve as important connections.
- The Puente Creek area is generally heavily impacted by socioeconomic and environmental burdens.
- Puente Creek has been recommended for a bikeway in many previous planning studies and a portion of the tributary is currently in design between Rimgrove Drive and Hacienda Blvd.
- Right-of-way is available along much of the tributary and most of the property adgacent to the channel is owned in fee by the County.
- Tree canopy is lacking in this area.




Drone Image of Puente Creek

Circulation

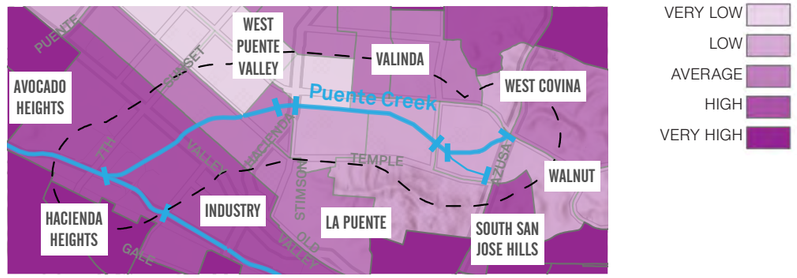
VEHICLE/TRANSIT ACCESS

Generally, the households adjacent to Puente Creek have access to a vehicle. Additionally, there are very few areas within walking distance of the tributary that have access to high quality transit.

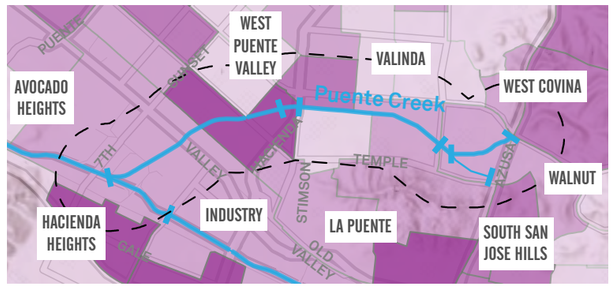
EXISTING BIKEWAYS

There are a few major on-street bikeways near Puente Creek that could serve as valuable future connections including Temple Ave, Valinda Ave, and the existing bikeway along San Jose Creek.

NO VEHICLE ACCESS



NO TRANSIT ACCESS

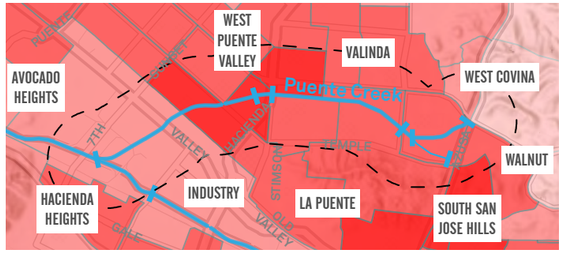


Environment

Tree canopy in this area is very much lacking. Aside from the furthest east segment of the wash, we see low tree canopy and pockets of severe and above average heat index vulnerability, especially in the area of West Puente Valley. Permeability seems to be less of an issue along Puente Creek, with most areas registering in the average level. In West Puente Valley and South San Jose Hills, the area is less permeable which may affect water quality and flood risk.

HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



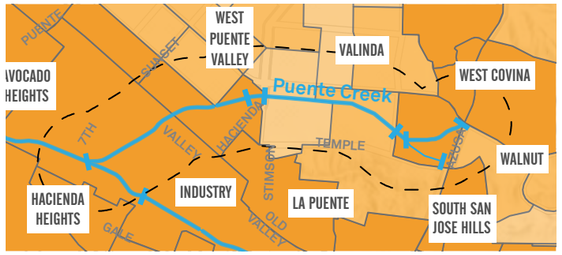
Equity

Puente Creek is adjacent to many communities that are heavily impacted by environmental burden and socioeconomic factors including Industry, Hacienda Heights, Avocado Heights, and others.

Environmental burden is highest in the areas west of Stimson Ave, while sensitivity factors are more concentrated east of Stimson.

ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

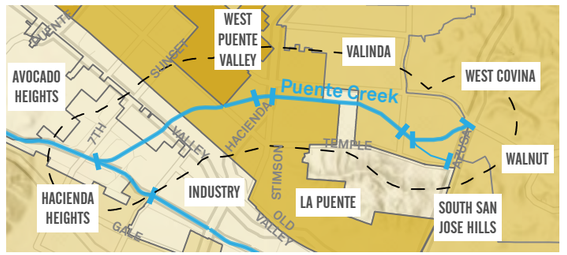


Community

Puente Creek does have small areas of retail/commercial development, however, lacks park space. The largest open space in the area is a golf course, leading to some areas having a designation of “high” to “very high” park need in the latest Department of Parks and Recreation (DPR) analysis.

PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Community

INCOME

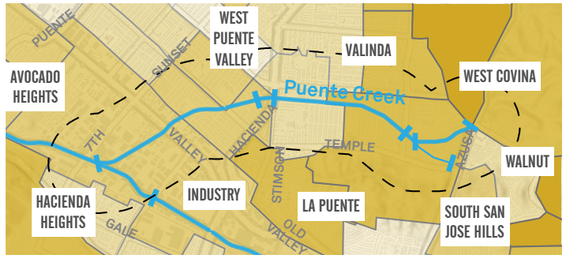
Much of the community adjacent to Puente Creek is in average income brackets for the County. Parts of the eastern end of the wash, near West Covina are higher income.

POPULATION

There is a large Hispanic population in most of the area adjacent to Puente Creek.

MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Synergy Opportunities

- Puente Creek has been recommended for a bikeway by multiple previous efforts and studies including the LA County Bicycle Master Plan, the Southern California Association of Governments’ (SCAG) Regional Transportation Plan, and the San Gabriel Valley Council of Governments’ (SGVCOG) Greenway Study.
- A 1.9 mile “early implementation” bikeway project is in a design phase between Rimgrove Drive and Hacienda Boulevard.

RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of this tributary are mostly owned by the County Flood Control District, enabling potential greenway implementation. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. Additionally, these channels are operated and maintained entirely by the County Flood Control District.

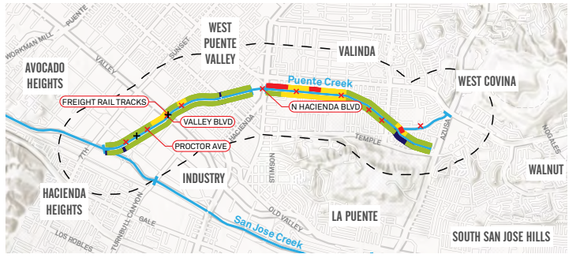
A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

OWNERSHIP AGREEMENT

EASEMENT FEE OTHER

EXISTING CONDITION CONSTRAINTS

The available right-of-way along Puente Creek is generally promising, with few constrained areas. Major physical constraints include the crossing at Hacienda Blvd, as well as the narrow right-of-way between Hacienda Blvd and North Echelon Ave.



INTERSECTIONS & CROSSINGS STREET INTERSECTIONS; RAILROAD CROSSINGS

ROW WIDTH < 8 FT; 8-13 FT; 13-26 FT; > 26 FT

2.8.8 Rubio Wash

Overview

- Rubio Wash is a 5 mile tributary which weaves through diverse urban and suburban communities.
- Rubio Wash passes through San Marino, San Gabriel, Rosemead, and El Monte.
- Rubio Wash is rich with potential destinations including commercial corridors along Valley Blvd, the Southern Pacific Railway, and Las Tunas Blvd.
- Schools in the area include Emma Shuey Elementary and Mildred Janson Elementary.
- The communities in the northern portion of the wash lack access to reliable transit.
- The majority of the community within walking distance of Rubio Wash is at or above the County's average for Household Income.
- A greenway has been proposed along Rubio Wash by many previous planning documents including the Southern California Association of Governments' Regional Transportation Plan, the San Gabriel Valley Council of Governments' Greenway Study, as well as in the 2012 LA County Bicycle Plan.
- Rubio Wash presents complex physical challenges to implementation with a constrained right-of-ways along much of its banks.
- Environmentally, the southern part of Rubio Wash is lacking tree canopy, is high in concentrations of impervious surfaces, and a has a highly vulnerable heat index.
- The southern end of the tributary provides the most opportunity for improving environmental conditions


Drone Image of Rubio Wash

Circulation

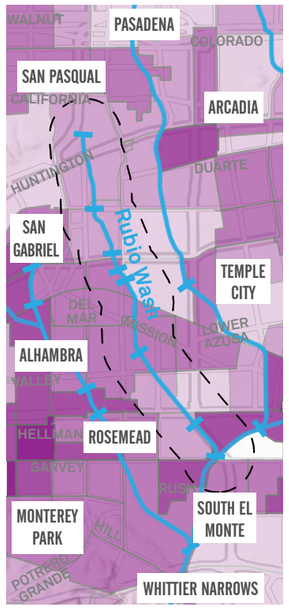
VEHICLE/TRANSIT ACCESS

Focused to the west of Rubio Wash, the communities of Monterey Park, Rosemead, and Alhambra show concentrations of households with "No Vehicle." The northern section of Rubio Wash above Mission Road, as well as the very southern area near Rio Hondo, show high concentrations of households that do not have access to high quality transit.

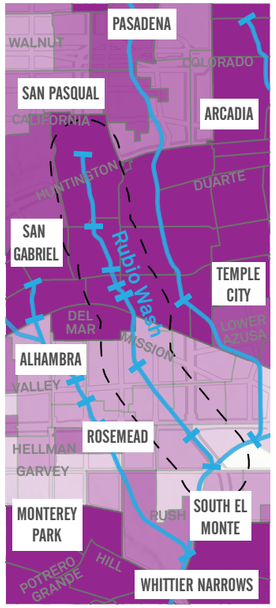
EXISTING BIKEWAYS

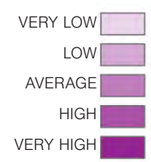
Few existing bikeways exist in the area, aside from the Rio Hondo bike path and further north in Pasadena.

NO VEHICLE ACCESS



NO TRANSIT ACCESS

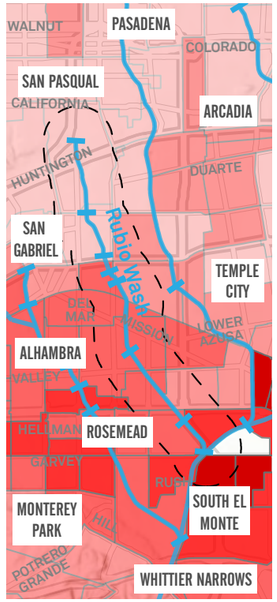




Environment

Tree canopy along Rubio Wash is sparse, aside from a few small areas to the north.

Impervious surfaces are most concentrated in South San Gabriel, El Monte, and Rosemead. The heat vulnerability index and impervious surface concentration is highest in the southern communities of South El Monte, South San Gabriel, and Rosemead.



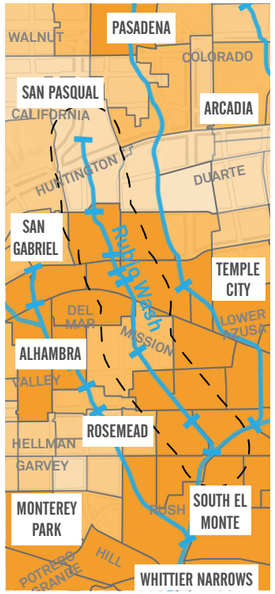
HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Equity

The most environmentally burdened communities of Rubio Wash are concentrated towards the south of this tributary through San Gabriel and El Monte. The most impacted tract in this area is near Rosemead with a CalEnviroScreen percentile score of 83%.

We also see pockets of Environmental Burden, Housing Burden, and Linguistic Isolation in the central areas of Rubio Wash.



ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

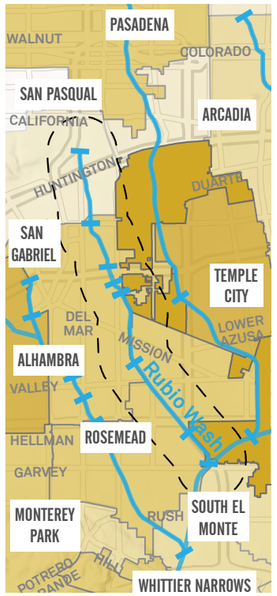
Community

ACTIVITY GENERATORS

Gathering spaces are concentrated along Las Tunas, Valley, and Huntington Blvds. There are very few parks and open spaces in the area adjacent to Rubio Wash.

PARK NEED

Park Need is average to Very High throughout the tributary area. The highest concentration in park need is in the southern area near Rosemead, and also to the east in Temple City and southern Arcadia.



PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

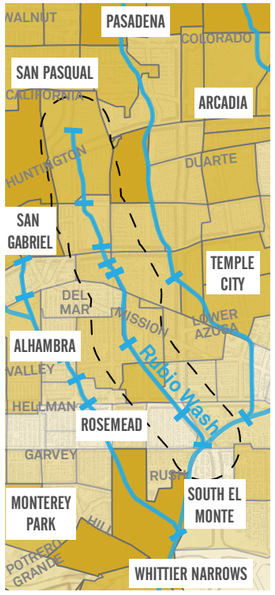
Community

INCOME

Median incomes in this area are generally Average to High in this area, however we see the highest incomes north near San Marino, East San Gabriel. The lowest average household incomes are in San Gabriel, Rosemead, and El Monte.

POPULATION

There is a strong Asian presence throughout the area. Hispanic communities are largest in El Monte.

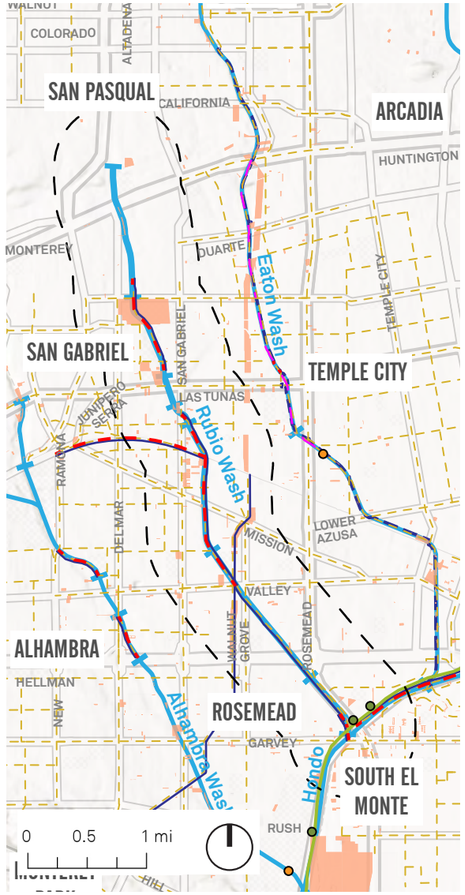


MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Synergy Opportunities

- There are many proposed on-street facilities in this area that may provide future connections.
- Rubio Wash has been identified for greenway development in the San Gabriel Valley Council Of Governments' (SGVCOG) Greenways Study, and some segments of it were identified in the Metro Active Transportation Strategic Plan; including a greenway along the Alhambra subdivision railway.
- The 2012 LA County Bicycle Master Plan, as well as the San Gabriel Valley Regional Bicycle Plan 2014, and the Southern California Association of Governments' (SCAG) Regional Transportation Plan 2014 also identified Rubio Wash for future greenway development.



RIGHT-OF-WAY OWNERSHIP COMPLEXITY

Rubio Wash is completely within the Los Angeles County Flood Control District maintenance jurisdiction. The channel is operated through various Fee and Easement agreements with underlying property owners. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened.

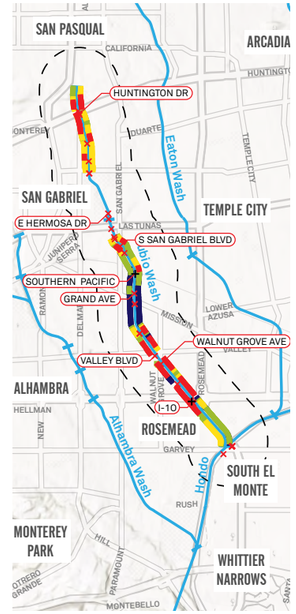
US Army Corp of Engineers permits may be needed for work impacting flood control.

OWNERSHIP AGREEMENT

- EASEMENT
- OTHER
- FEE

EXISTING CONDITION CONSTRAINTS

Rubio Wash has a highly constrained Right-of-ways on either side of the channel. Most of the tributary does not have an adjacent access road, with less than 8 feet of available space. There is a short segment of available space near Mission Road, and another to the south, near the Rio Hondo. Exploring a greenway along Rubio Wash would likely include more complex solutions such as cantilever decks, or an incised channel.



INTERSECTIONS & CROSSINGS

- STREET INTERSECTIONS
- RAILROAD CROSSINGS

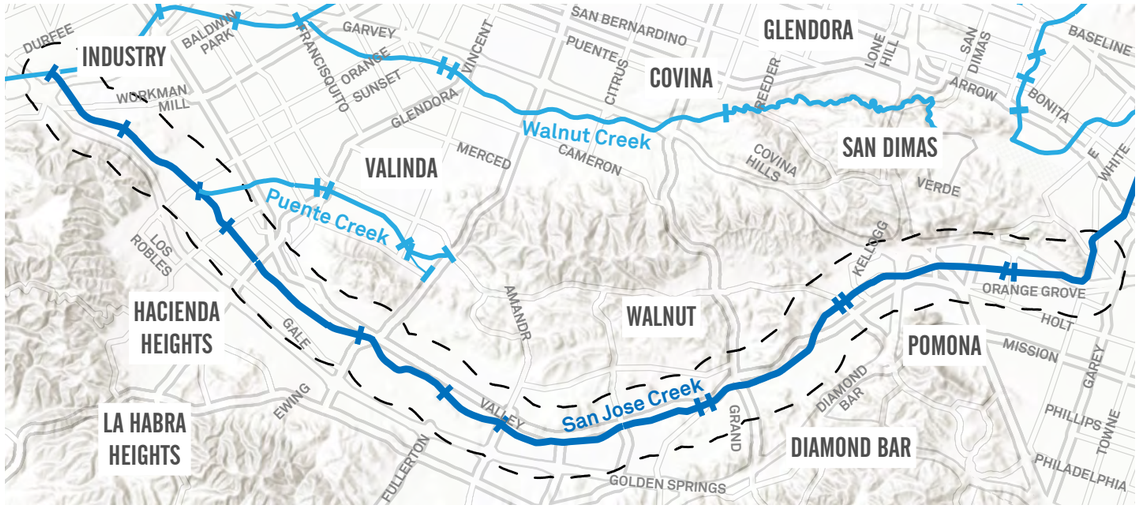
ROW WIDTH

- < 8 FT
- 8-13 FT
- 13-26 FT
- > 26 FT

2.8.9 San Jose Creek

Overview

- At 24 miles, San Jose Creek is one of the largest tributaries in the study area. The tributary stretches from the San Gabriel River to the Mountains via Thompson Creek.
- San Jose Creek passes through Pomona, City of Industry, as well as unincorporated Los Angeles County.
- San Jose Creek is a popular equestrian destination and is adjacent to the Avocado Heights equestrian community.
- There is an existing multi-use trail along the San Jose Creek between 7th Avenue, that connects to the San Gabriel River Regional Trail. - The existing trails provides multi-use circulation between the Equestrian Districts of Avocado Heights and Pellissier Village, and along the the eastern bank leading to the River Park. - The community surrounding San Jose Creek has a high level of equestrian usage.
- There are many opportunities for Greenway development along the banks of San Jose Creek, with only minor segments of constrained ROW.
- The area does not have many retail or commercial corridors, but there are some light industrial job centers, and important connections to transit.
- Many of the San Jose Creek communities are heavily burdened environmentally and socioeconomically.
- San Jose Creek Overlook can serve as a potential destination for users of the San Jose Creek greenway.
- Many of the San Jose Creek communities are “park poor.”
- A short bikeway exists on the western end of San Jose Creek. San Jose Creek has been identified for greenway development in multiple plans and a 3-mile greenway within Pomona is currently in development.
- This area lacks tree canopy.




Drone Image of San Jose Creek

Circulation

VEHICLE/TRANSIT ACCESS

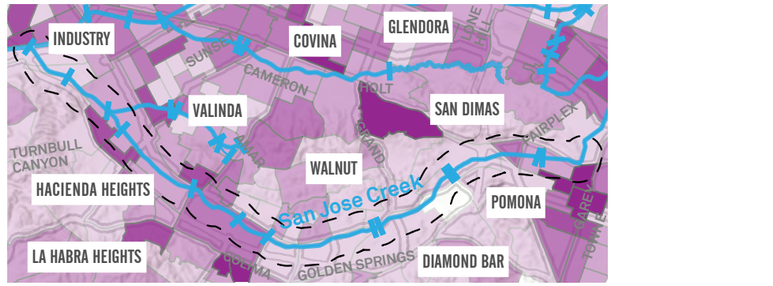
Generally, the households adjacent to San Jose Creek have access to a vehicle. Additionally, there are very few areas within walking distance of San jose Creek that have access to high quality transit, especially on the western side of the tributary.

EXISTING BIKEWAYS

San Jose Creek has existing multi-use circulation from two Equestrian Districts: Avocado Heights and Pellissier Village. There are a few major on-street bikeways near San Jose Creek that could serve as valuable future connections. Namely, North Grand Avenue and Colima Road. Additionally Metrolink runs just south of San Jose Creek and two nearby stations could serve as vital transit connections.

NO VEHICLE ACCESS

NO TRANSIT ACCESS

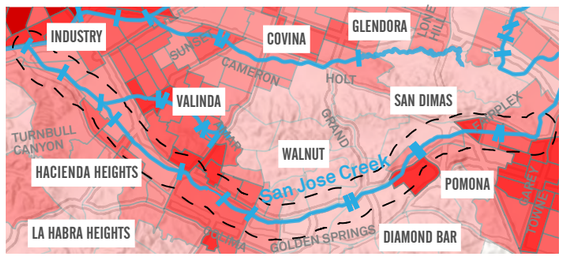


Environment

Environmentally, we see a healthy tree canopy in the communities to the east, and limited tree canopy to the west. Despite the limited amount of trees, heat index vulnerability remains average for the western areas of this tributary. Permeability is also average in the area, with the most impermeable areas near the confluence of Big Dalton Wash. This could cause water quality and flood risk issues.

HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

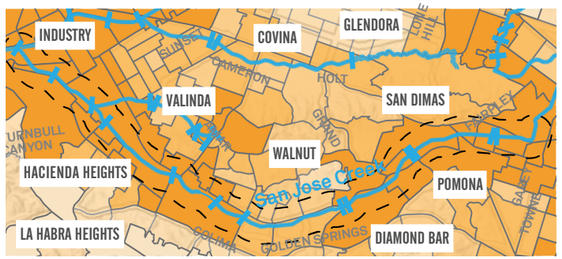


Equity

The communities of San Jose Creek are heavily impacted by environmental burden as well as socioeconomic factors. Industrial pollution and other factors have resulted in a largely disadvantaged community. Socioeconomic factors and environmental burden range from high to very high in most of this area.

ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Community

There are large park spaces to the north and south of San Jose Creek that relieve some of the area's "park pressure," however most of them fall outside of walking distance from San Jose Creek and thus many of the residents who live near the creek. Many of the areas near San Jose Creek are in the High to Very High Park Need categories. The community surrounding San Jose Creek has a high level of equestrian usage, which includes the following equestrian Districts: Avocado Heights and Pellissier Village. Aside from some light industrial use to the east, there are few commercial or retail areas along San Jose Creek.

PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Community

INCOME

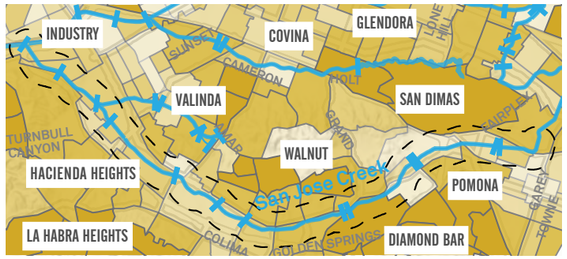
Median incomes in this area are mixed, with many areas in the Lowest 20% income bracket, yet a few areas to the far east of the tributary in the Top 10% bracket for the County.

POPULATION

Demographics in the area are mixed as well, with a large Asian population throughout the area, as well as Hispanic areas in the western part of the tributary.

MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

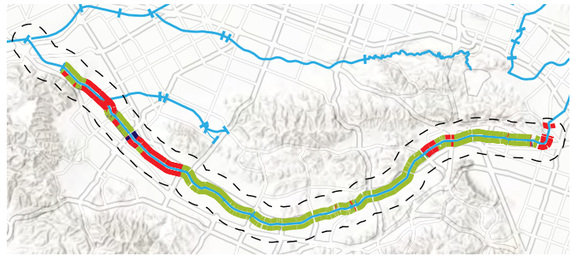


Synergy Opportunities

- San Jose Creek has been identified by both the LA County Bicycle Master Plan as well as the Southern California Association of Governments' (SCAG) Regional Transportation Plan for greenway development.
- A 3.3-mile bicycle path is currently being designed within City of Pomona limits between W Temple Avenue and Murchison Avenue.
- There is an existing bikeway along a short section of the Creek near the San Gabriel River between Workman Mill and 7th, however it does not connect to the River bikeway itself. Plans to connect this portion of greenway to the San Gabriel River Path are in development.

RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of this tributary are mostly owned by the County Flood Control District, enabling potential greenway implementation. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. There is a portion of San Jose Creek, towards the San Gabriel River confluence that is operated by the US Army Corps of Engineers; this could present legal/regulatory challenges to implementation in that area. A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

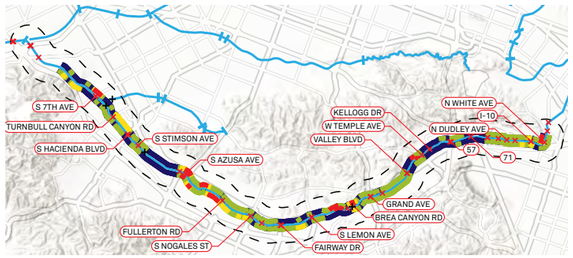


OWNERSHIP AGREEMENT

EASEMENT FEE OTHER

EXISTING CONDITION CONSTRAINTS

The available right-of-way along San Jose Creek is generally promising, however there are a few constrained widths between Azusa Way and Nogales St. Some arterial crossings as well as the Orange Freeway present major crossing challenges.



INTERSECTIONS & CROSSINGS

× STREET INTERSECTIONS
+ RAILROAD CROSSINGS

ROW WIDTH

< 8 FT 13-26 FT
8-13 FT > 26 FT

2.8.10 Santa Anita Wash

Overview

- Santa Anita Wash stretches 6.3 miles from the San Gabriel Mountains in the City of Arcadia downstream to the Rio Hondo.
- Santa Anita Wash passes through Monrovia, Arcadia, as well as unincorporated Los Angeles County.
- Santa Anita Wash presents many opportunities for greenway development, with wide ROW available along most of its banks.
- There are a number of schools very close to Santa Anita Wash including Foothills Junior High, Rancho High, Camino Grove Elementary, and Rio Hondo Elementary.
- The area is mainly residential, with little access to high quality transit, and has high rates of vehicle ownership.
- The Santa Anita Wash community has low to average rates of environmental and socioeconomic burden.
- Average Household Income in the area varies with higher average income in the northern areas of the wash.
- There is an existing Santa Anita Wash Trail that runs along the Santa Anita Wash and can connect the greenway to the Peck Road Water Conservation Park and north into the Los Angeles National Forest.
- Santa Anita Wash has an existing multi-use trail that runs from Foothill Boulevard to Peck Road Water Conservation Park and the Rio Hondo River multi-use trail.
- Connected to regional parks and wilderness areas, park pressure is low.
- Santa Anita Wash was identified by the SGVCOG Greenways Study as a Top Project. There is a short greenway planned in the unincorporated area between Live Oak Ave and Longden Ave, identified in both the LA County Bicycle Master Plan and the SCAG Regional Transportation Plan. Additionally, the Monrovia's City Profile within the LA County Department of Parks and Recreation Parks Needs Assessment identified "Multipurpose Trail in Flood Control Wash" as a top priority for the community.
- Currently Santa Anita Wash Bike Path gets inundated across the Rio Hondo Spillway at Peck Park for months at a time. Completing a bike path loop around Peck Park and connecting Santa Anita Wash to Sawpit Wash and Peck Road is a high priority.
- This area has a healthy tree canopy.


Drone Image of Santa Anita Wash

Circulation

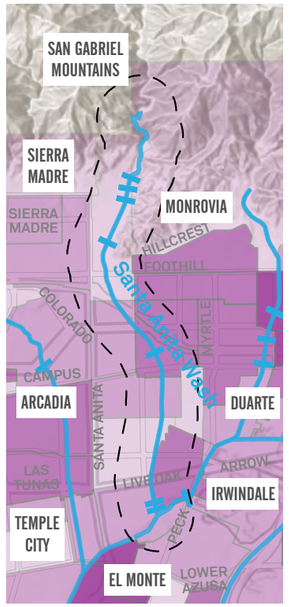
VEHICLE/TRANSIT ACCESS

The communities of Santa Anita Wash generally have high rates of vehicle ownership, and very little access to high quality transit.

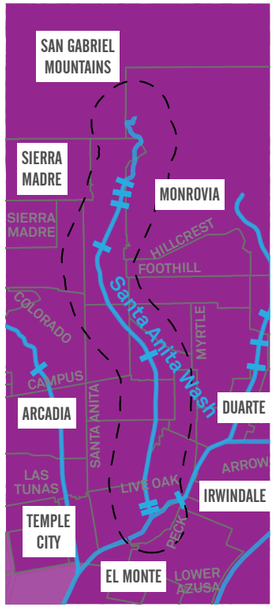
EXISTING BIKEWAYS

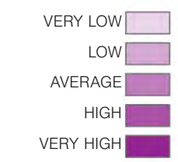
There are few existing on-street bikeways in this area aside from an east-west route along Colorado Blvd and Olive Ave. However there is a multi-use trail along the Wash itself.

NO VEHICLE ACCESS



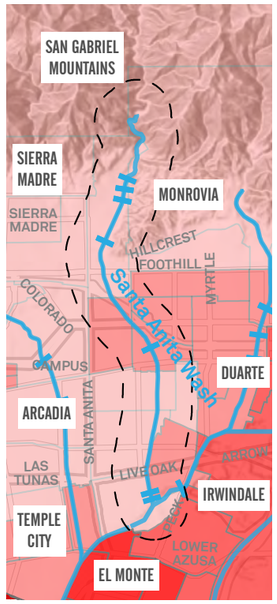
NO TRANSIT ACCESS





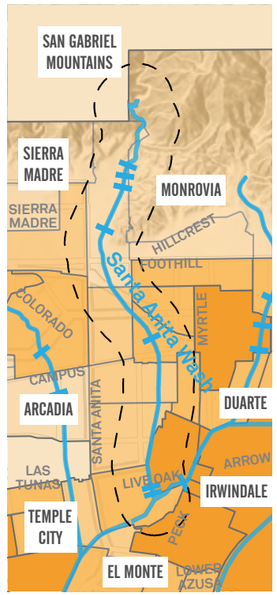
Environment

This area has a healthy tree canopy throughout much of the area, likely contributing to low heat vulnerability. Much of the adjacent area has good permeability, especially to the north; however, there are some small pockets of impervious surfaces that may contribute to water quality and flood risk issues.



Equity

Environmental burden and socioeconomic factors are low to average in the communities surrounding Santa Anita Wash. Similar to the rest of the San Gabriel Valley, asthma rates are high. The most environmentally burdened areas are near the south end of the tributary.



Community

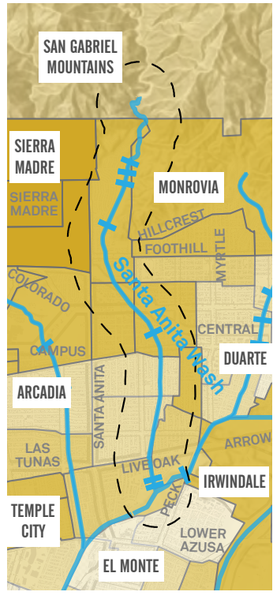
The Santa Anita Wash area is mainly residential with few retail, office, or industrial districts.

Arcadia Wilderness Park and the Angeles National Forest to the north, as well as the Los Angeles County Arboretum and Botanic Garden toward the middle of the tributary, are relieving park pressure in this area, giving it a low to average rating in terms of park need.

Community

Demographically, this area has a strong Asian population, and median household income is in the average to high range.

There is also a large Hispanic population in the southeast area adjacent to this tributary in Irwindale and Duarte.



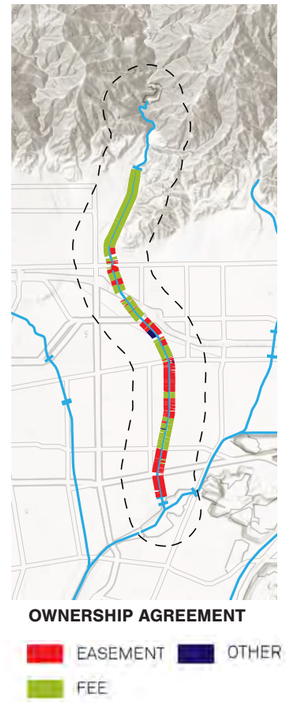
Synergy Opportunities

- Santa Anita Wash was identified by the San Gabriel Valley Council of Governments (SGVCOG) Greenways Study as a top scoring project.
- There is a short greenway planned in the Unincorporated area between Live Oak Ave and Longden Ave to the south, identified in both th LA County Bicycle Master Plan and the SCAG Regional Transportation Plan.
- Additionally, the Monrovia's City Profile within the Department of Parks and Recreation Park Needs Assessment identified "Multipurpose Trail in Flood Control Wash" as a top priority for the community.
- Vacant, government-owned parcels along the tributary could provide opportunities for adjacent pocket parks and amenities in this area.

RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of this tributary are mostly owned by the Los Angeles County Flood Control District (LACFCD), enabling potential greenway implementation. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. Additionally, these channels are operated and maintained entirely by the LACFCD.

A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.



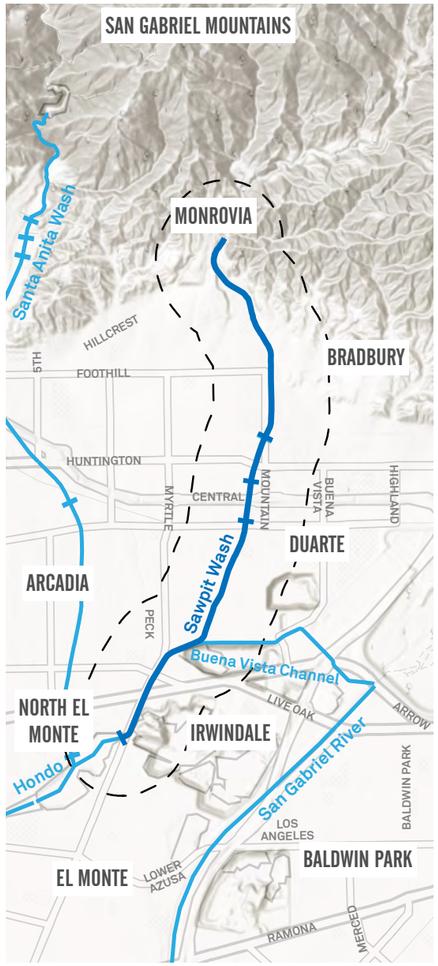
EXISTING CONDITION CONSTRAINTS

Santa Anita Wash presents excellent opportunities for greenway development with greater than 20 feet of right-of-way width available along most of its banks. However, major arterials and freeway crossings add to implementation complexity.

2.8.11 Sawpit Wash

Overview

- Sawpit Wash stretches 4.9 miles from the base of the San Gabriel Mountains in Monrovia to the Rio Hondo confluence in North El Monte.
- Sawpit Wash passes through Monrovia, as well as unincorporated Los Angeles County.
- Sawpit Wash shows many areas of opportunities for greenways with few constrained areas along its ROW.
- The Sawpit Wash area is mostly residential with a handful of schools and industrial centers. Schools include Immaculate Conception School, Plymouth Elementary, and Annunciation School.
- Pamela County Park and Peck Road Water Conservation Park can serve as potential destinations for users of this greenway.
- The Metro Gold Line crosses Sawpit Wash which is adjacent to two stations: Monrovia and Duarte.
- Sawpit Wash was identified within the SGVCOG Greenway Study as a “top project.” Additionally, as part of the LA County Department of Parks and Recreation’s Parks Need Assessment, developing a greenway along Sawpit Wash was an identified priority for the community.
- The area is mixed demographically, with Hispanic and Asian populations, and average to high incomes.
- There is mostly healthy tree canopy in this area, with communities to the east showing less canopy and higher heat vulnerability.




Drone Image of Sawpit Wash

Circulation

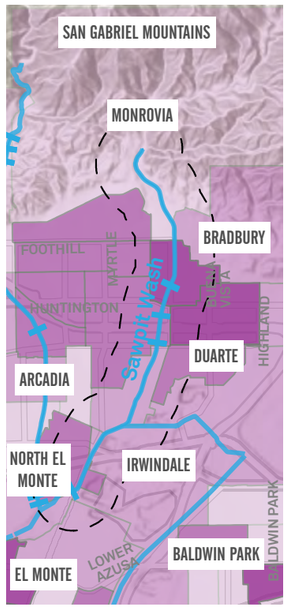
VEHICLE/TRANSIT ACCESS

Most of the Sawpit Wash community has access to vehicles, aside from pockets in the Duarte region. Despite crossing the Gold Line, most of this area shows little to no access to high quality transit according to census data.

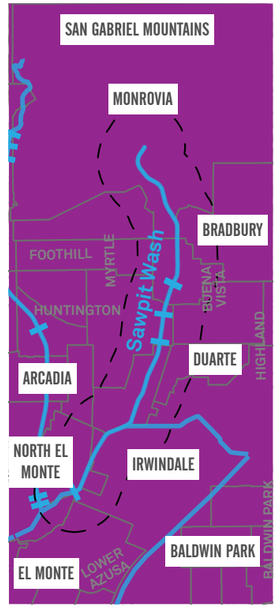
EXISTING BIKEWAYS

A few existing on-street facilities exist to the north, however, there are generally few connections.

NO VEHICLE ACCESS

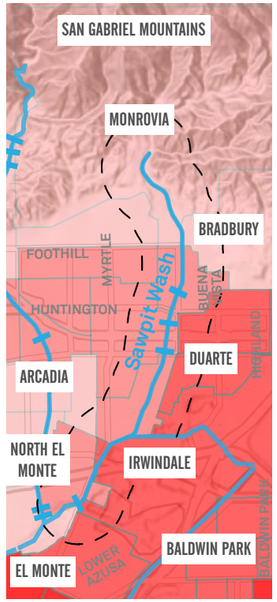


NO TRANSIT ACCESS



Environment

This area has a healthy tree canopy and a low heat vulnerability index. Generally, the communities to the southeast near Duarte and Irwindale are most affected by environmental factors, showing greater heat vulnerability, less tree canopy, and less permeable surfaces.

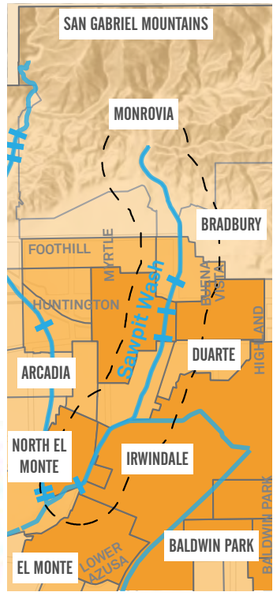


HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Equity

Socioeconomic factors and environmental burden are average to high in this area. Similar to the rest of the San Gabriel Valley, asthma is a pervasive issue. Environmental burden is high while socioeconomic burden is low to average.

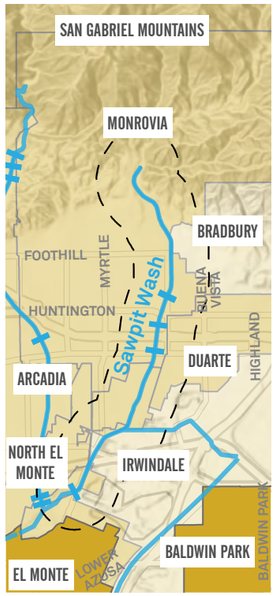


ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Community

Aside from a few small commercial areas, not many community gathering spaces in this area exist that would lead to increased circulation. However, the massive recreation and wilderness area to the north (Angeles National Forest) is a regional destination which also relieves park pressure. Most of the area around Sawpit Wash indicates low Park Need. There are some areas at the very south end of the tributary in El Monte with Very High park need.



PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

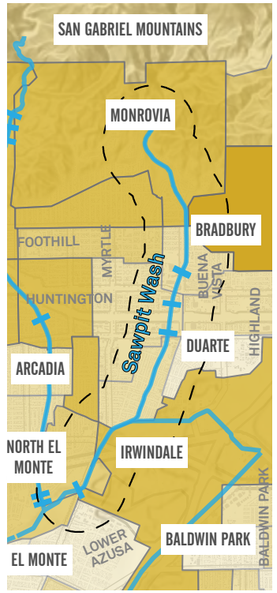
Community

INCOME

Household median income in this area generally is average to high.

POPULATION

The southeastern area of the tributary is largely Hispanic, while there are Asian communities to the west of Sawpit Wash.

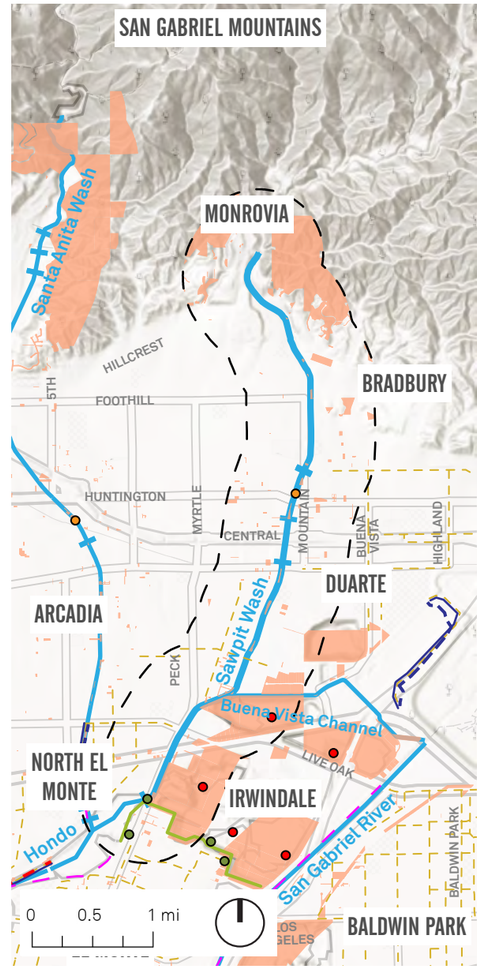


MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

Synergy Opportunities

- Sawpit Wash was identified within the San Gabriel Valley Council of Governments' (SGVCOG) Greenways Study as a top-project. Additionally, as part of the Department of Parks and Recreation's Parks Need Assessment, developing a greenway along Sawpit Wash was an identified priority for the community.
- Vacant, government-owned parcels along the tributary could provide opportunities for adjacent pocket parks and amenities in this area as well.

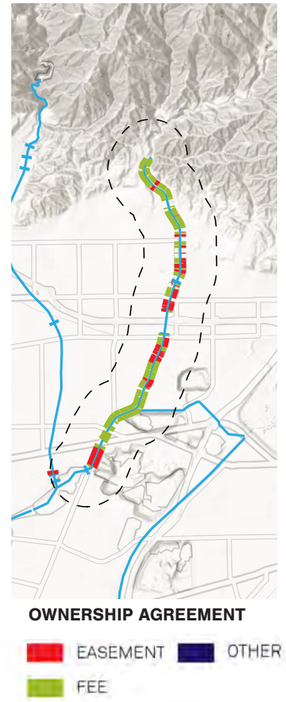


RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of this tributary are mostly owned by the Los Angeles County Flood Control District (LACFCD), enabling potential greenway implementation. Fee parcels would require the least amount of regulatory approvals.

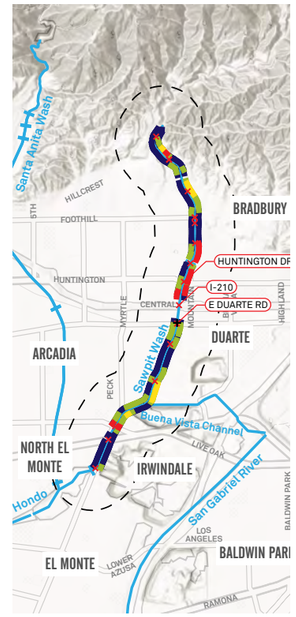
Some Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. Additionally, these channels are operated and maintained entirely by the County Flood Control District.

A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.



EXISTING CONDITION CONSTRAINTS

The right-of-way adjacent to Sawpit Wash presents many opportunities for greenway development with very few constrained areas. The Metro Gold Line as well as the I-210 freeway present major crossing challenges. The tributary is largely underground in this area.



INTERSECTIONS & CROSSINGS

- STREET INTERSECTIONS
- RAILROAD CROSSINGS

ROW WIDTH

- < 8 FT
- 8-13 FT
- 13-26 FT
- > 26 FT

2.8.12 Thompson Creek

Overview

- Thompson Creek is a 7.5-mile connection from the canyons above Claremont to San Jose Creek.
- Thompson Creek Passes through Claremont, Pomona, as well as unincorporated Los Angeles County.
- Thompson Creek presents excellent opportunities for greenway development with greater than 20 ft of ROW width available along most of its banks.
- There are a handful of schools and colleges in the area, as well as a Metrolink line and several on-street bikeways.
- Areas to the south of Thompson Creek are the most burdened environmentally and socioeconomically.
- Several parks in the area serve as gathering places and relieve park pressure. Generally, this area shows average park need.
- Bonelli Regional Park and Bonelli Equestrian Center can serve as destinations to the extensive trail system in the area.
- Most of the area lacks tree canopy.


Drone Image of Thompson Creek

Circulation

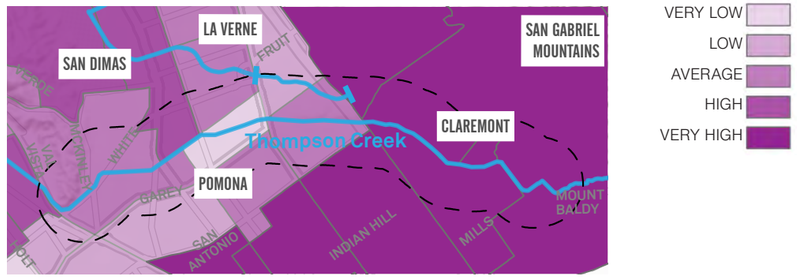
VEHICLE/TRANSIT ACCESS

Thompson Creek is near the Metrolink and shows mixed levels of car-ownership/transit access. Near the middle of the tributary we see lower vehicle ownership rates while to the north through Claremont we see higher rates.`

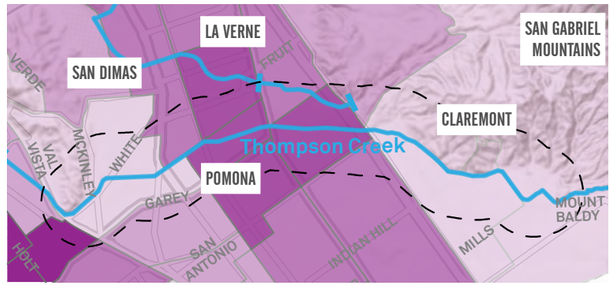
BIKEWAY CONNECTIONS

Generally, this area is served by on-street bikeway facilities with major connections on Baseline Road, as well as a bikeway along a portion of the Creek itself.

NO VEHICLE ACCESS



NO TRANSIT ACCESS

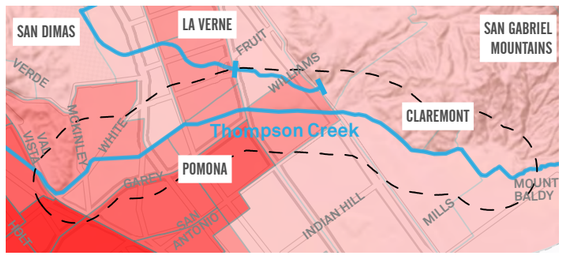


Environment

This area suffers from a lack of tree canopy to the south, adding to higher heat vulnerability in the Pomona area. This area near Pomona is also showing an average to high percent of impervious surfaces.

HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

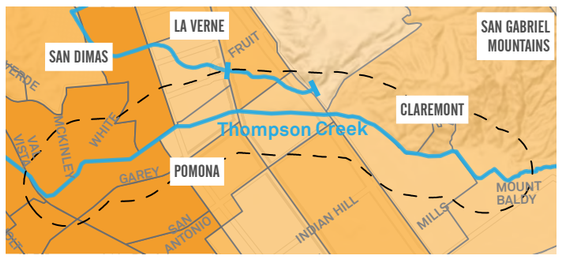


Equity

The communities of Thompson Creek are most impacted by environmental burden as well as socioeconomic factors in the southern communities in and around Pomona. Industrial pollution and other factors have resulted in environmental pollution as well as communities sensitive to these pollutants.

ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

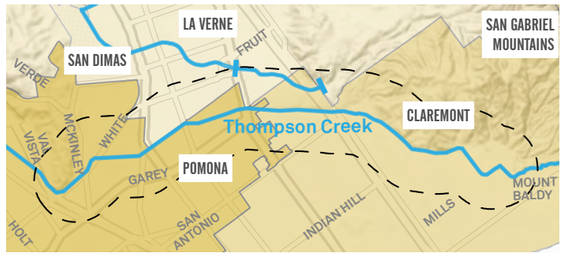


Community

Community gathering spaces are sparse along Thompson Creek, however the tributary provides a valuable connection between adjacent communities and the Claremont Hills Wilderness Park, a 2500 acre recreation area popular for hiking. To the south, Ganesha Park in Pomona provides a public pool and other amenities.

PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

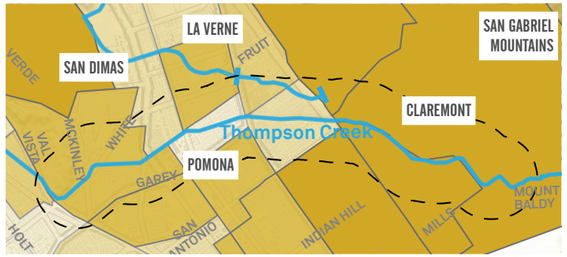


Community

Thompson Creek passes through diverse communities from Claremont in the north to Pomona in the south. The Hispanic population in the south is high for the County's average. In the north, we see income's in the top 10% for the County.

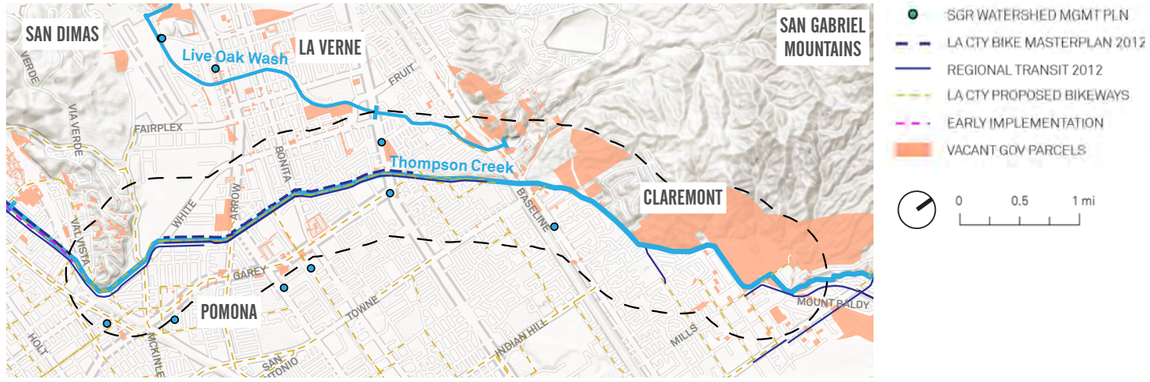
MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Synergy Opportunities

- Both the LA County Bicycle Master Plan as well as the Southern California Association of Governments' (SCAG) Regional Transportation Plan propose a bikeway along the lower half of Thompson Creek. Vacant, government-owned parcels along the tributary could provide opportunities for adjacent pocket parks and amenities in this area.



RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of this tributary are mostly owned by the County Flood Control District, enabling potential greenway implementation. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. The channel is operated and maintained entirely by the County Flood Control District.

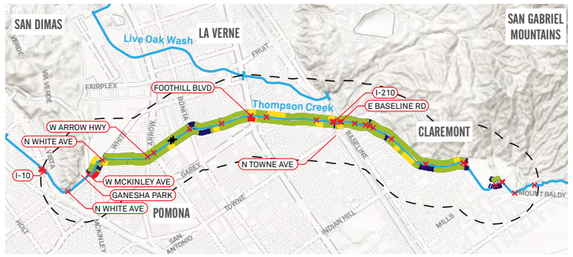
A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

OWNERSHIP AGREEMENT

EASEMENT FEE OTHER

EXISTING CONDITION CONSTRAINTS

Thompson Creek presents excellent opportunities for greenway development with greater than 20 feet of right-of-way width available along most of its banks. Major arterials and freeway crossings however add to implementation complexity. Thompson Creek north of about Mills Ave is a natural channel.



INTERSECTIONS & CROSSINGS

× STREET INTERSECTIONS
\+ RAILROAD CROSSINGS

ROW WIDTH

< 8 FT
8-13 FT
13-26 FT
> 26 FT

2.8.13 Walnut Creek

Overview

- Walnut Creek stretches 11.5 miles from a confluence with Big Dalton Wash to hills above Pomona and the Puddingstone Reservoir.
- Walnut Creek passes through San Dimas, Covina, West Covina, Baldwin Park, as well as unincorporated Los Angeles County.
- The ROW along Walnut Creek is generally 13 to 24 ft wide, presenting major opportunity for greenway development.
- Walnut Creek is a naturalized channel east of Covina Hill Road.
- Walnut Creek weaves through diverse suburban areas and has potential to connect with several on-street bikeways.
- Walnut Creek Regional Park can serve as a potential destination for the users of the greenway. There are also Antonovich Trail and Schabarum-Skyline Trails in the area that connect to the regional trail systems.
- Walnut Creek and the Antonovich trail run alongside each other for most of DPR's multi-use trail which connects to Bonelli Regional Park.
- Environmental and socioeconomic burden in this area is average to high.
- Demographics are diverse with Asian, Hispanic, and African American communities all nearby.
- There are currently no planned bikeways along Walnut Creek.
- Tree canopy and other environmental factors are healthier to the south, while north of the tributary one sees limited tree canopy, higher heat vulnerability, and low permeability.

Circulation

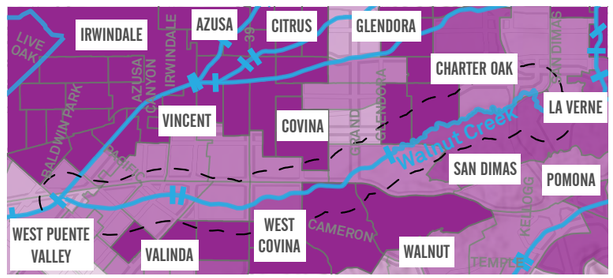
VEHICLE/TRANSIT ACCESS

Most of the Walnut Creek community has access to a vehicle aside from pockets of Covina and Walnut showing low access. The areas to the north and south show lack of access to transit, while the area directly adjacent to the tributary has greater access to transit.

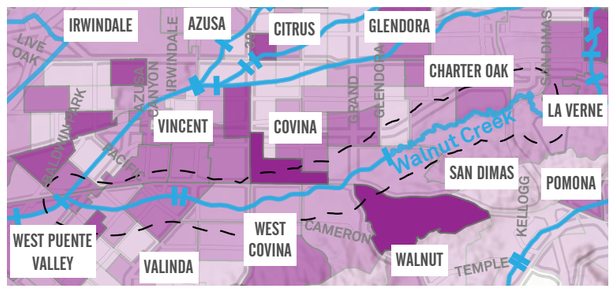
EXISTING BIKEWAYS

Existing bikeways are concentrated in the eastern areas near La Verne, with a few other on-street facilities near West Covina.

NO VEHICLE ACCESS



NO TRANSIT ACCESS

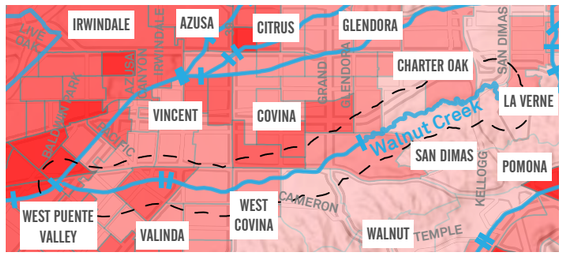


Environment

Environmentally, we see a healthy tree canopy in the communities to the east, and limited tree canopy to the west. Despite the limited amount of trees, heat index vulnerability remains average for the western areas of this tributary. Permeability is also average in the area, with the most impermeable areas near the confluence of Big Dalton Wash. This could cause water quality and flood risk issues.

HEAT VULNERABILITY

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH

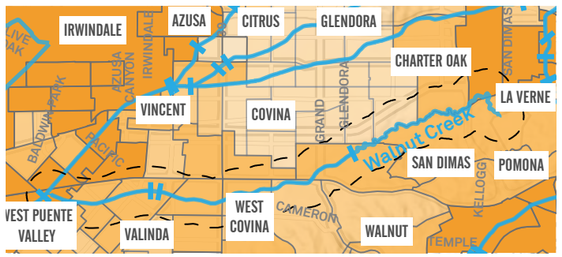


Equity

The communities of San Jose Creek are impacted by environmental burden as well as by sensitivity and socioeconomic factors. The highest burden is seen in the western area of the tributary near West Puente Valley and to the east near Charter Oak.

ENVIRONMENTAL BURDEN

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Community

PARK NEED

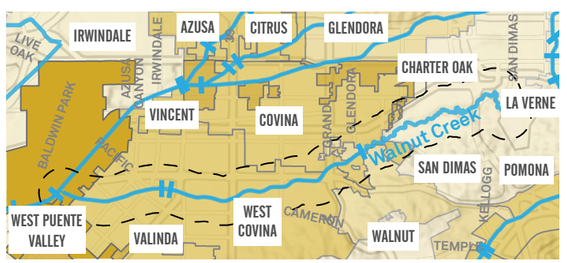
The Frank Bonelli Regional Park is located on the eastern end of this tributary. This area has a very high park need, especially in the western part of the tributary.

GATHERING SPACES

There are a number of commercial and retail areas along the tributary that may drive activity and serve as gathering places.

PARK NEED

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Community

INCOME

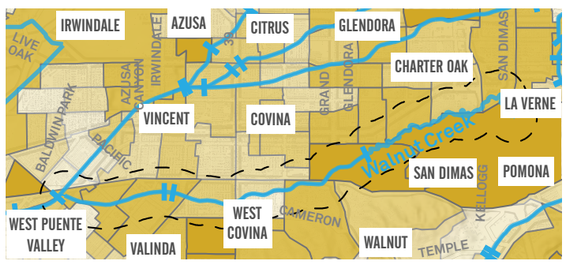
Median household income varies in this area, with areas to the south of Walnut Creek showing average income in the lowest 20%, and areas in the far eastern end of the tributary in the highest 10% for the County.

POPULATION

The area is diverse ethnicity with strong Asian, Hispanic, and Afican-American communities all neighboring this tributary.

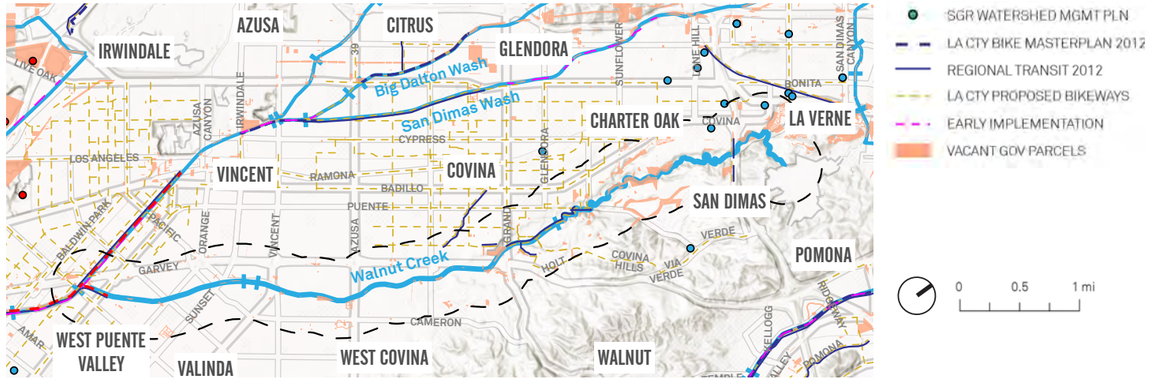
MEDIAN HOUSEHOLD INCOME

- VERY LOW
- LOW
- AVERAGE
- HIGH
- VERY HIGH



Synergy Opportunities

- A 2.2 mile bicycle path from Ramona Blvd to Baldwin Ave along the San Gabriel River and continuing along Walnut Creek at Baldwin Park Boulevard is currently being permitted.
- Vacant, government-owned parcels along the tributary could provide opportunities for adjacent pocket parks and amenities in this area.



RIGHT-OF-WAY OWNERSHIP COMPLEXITY

The underlying parcels of this tributary are mostly owned by the County Flood Control District, enabling potential greenway implementation. Some of these Easement agreements only allow for flood control operation and would need to be modified for a greenway to be opened. Additionally, these channels are operated and maintained entirely by the County Flood Control District.

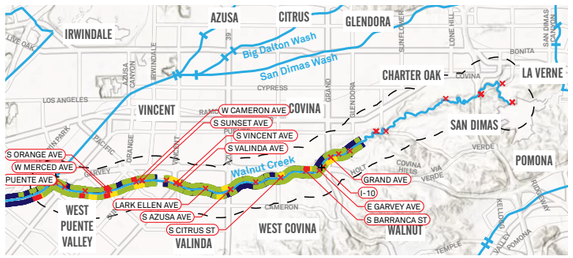
A permit from the Army Corps of Engineers may be needed for any work that impacts flood control.

EXISTING CONDITION CONSTRAINTS

Walnut Creek presents excellent opportunities for greenway development with greater than 20 feet of right-of-way width available along most of its banks. Major arterials and freeway crossings however add to implementation complexity. Walnut Creek east of about Covina Hill Road is a natural channel. There may still be opportunities here for greenway development however further study and engineering is needed.

OWNERSHIP AGREEMENT

EASEMENT FEE OTHER



INTERSECTIONS & CROSSINGS × STREET INTERSECTIONS + RAILROAD CROSSINGS

ROW WIDTH < 8 FT 8-13 FT 13-26 FT > 26 FT

SECTION 3

ENGAGEMENT STRATEGY AND RESULTS

SECTION 3. ENGAGEMENT STRATEGY AND RESULTS

A COMMUNITY DRIVEN FRAMEWORK

This section describes the Community Engagement Strategy and Results including engagement with the Steering Committee, municipalities, stakeholders, and the community. Engagement with all stakeholders was the cornerstone of plan development. This section also outlines how public comments were incorporated into the planning process.

From the outset of the SGV Greenway Network Plan development, community engagement has been a priority for LA County. The Plan Team understood that the community needed to provide preferences, give feedback, and ask questions at all stages of development to ensure the final plan would serve the community's needs. Through a variety of communication methods provided in three languages across the entire SGV and greater LA County area, a two-way means of contact and connection was maintained during the entire Plan development.

3.1 Community Engagement Plan

The SGV Greenway Network passes through 31 different municipalities and unincorporated communities. In 2020, the Community Engagement Plan (Appendix E) was developed with the approval of the Steering Committee to represent the needs of the SGV cities and communities, the multi-jurisdictional agencies which serve the area, the stakeholders with an interest in the SGV Greenway Network. Key stakeholder groups included environmental justice and health advocates, youth, alternative mobility groups, area residents, and businesses.

The Community Engagement Plan served to inform, empower, and build capacity among local and regional community-based organizations and stakeholders to increase awareness, cultural competency, and inclusion of community needs along the greenways. It included descriptions of the proposed communication materials, the types of engagement platforms, social and digital media activities, and descriptions of the workshops, presentations, and other public-facing activities. It also presented an equity strategy which focused on engagement activities for historically underserved communities to ensure their inclusion in the SGV Greenway Network process and outcomes, and adaptive measures to track its effectiveness.

3.1.1 Audience and Messaging

Plan engagement included residents within LA County and the SGV but focused on those living and working near or within the plan area. Community members were able to provide the desired location of priority greenway projects, project elements, and broad plan implementation outcomes.

3.1.2 Engagement Objectives

Engagement activities were facilitated by the Plan Team using materials, engagement platforms, social and digital media platforms, workshops, presentations, and other public-facing activities with adaptive measures that tracked effectiveness. The equity strategy focused on the following goals to address historically underserved communities and ensure their inclusion in the SGV Greenway Network Plan development process:

- Build awareness and capacity among residents, communities, and other stakeholders about the SGV Greenway Network planning process, opportunities, and potential projects.
- Ensure key stakeholders understand and participate in the planning process and that all stakeholders have equitable access to the resources they need.
- Create an accessible process with a variety of engagement options and platforms (e.g., time, location, language, and non-digital options) to encourage participation in the SGV Greenway Network planning and use, including capacity building when necessary to ensure equitable participation.
- Develop vision and priorities with input from a cross-section of audiences and stakeholders throughout the SGV Greenway Network, focusing attention on historically underserved communities in the region.
- Demonstrate transparency through open and ongoing interaction with the community throughout the plan development process and clear communication about how community input will be incorporated in development of the SGV Greenway Network Plan.

- Ensure outcomes from the SGV Greenway Network Plan reflect the needs of and prioritize benefits to historically underserved groups.
- Identify community needs for the future SGV Greenway Network.

3.1.3 Engagement Materials and Activities

To reach the diverse stakeholders in the SGV Greenway Network, the Community Engagement Plan included promotional materials, multiple types of engagement platforms, social and digital media, online and paper-based surveys, Steering Committee presentations, local community meeting presentations, stakeholder interviews, laminated posters at District facilities, and other community-facing initiatives.

In 2020, all meetings and engagement activities were moved online to adhere to LA County guidelines during the COVID-19 pandemic. The team was able to successfully conduct staff meetings, Steering Committee meetings, community engagement, and workshops online utilizing Zoom and Microsoft Teams applications.

In 2022, once COVID-19 restrictions were lifted, in-person pop-up events, community workshops, structured activities, local community group presentations, and question-and-answer (Q&A) sessions were held at various sites within the SGV area. Engagement materials included the development of SGV Greenway Network brand, logos, website, promotional materials, and social media materials.

3.1.3.1 Website

A public-facing SGV Greenway Network website was created to make information related to the plan development available to the community. Via the link, any member of the public could access the website with the most current events, documents, presentations, and meeting notes. The website provided details on the goals of the SGV Greenway Network Plan, upcoming community events, workshops, and meetings, and as a platform to solicit input and provide feedback, as shown on Figure 3-1.

A special feature of the website was the “Share Comments” button located at the bottom of the homepage. Upon clicking on the button, a user was redirected to another page with a form to insert their Name, Email, Organization, Subject, and Comment. Approximately 25 comments were submitted through the website form for the Plan Team to access and provide responses. These website comments are available in Appendix E: Community Engagement Plan and Report.

3.1.3.2 Promotional Materials

Promotional materials were developed to spread awareness about the SGV Greenway Network Plan, encourage community members to take the survey, and to increase attendance at workshops. Printed material was shared with the hope that individuals would take materials home, research the plan on their own, take the survey, and share the plan with family and friends.

Promotional materials included factsheets, social media imagery, workshop flyers, and survey flyers. Factsheets contained background information, key goals, community benefits, and resources for the SGV Greenway Network Plan.

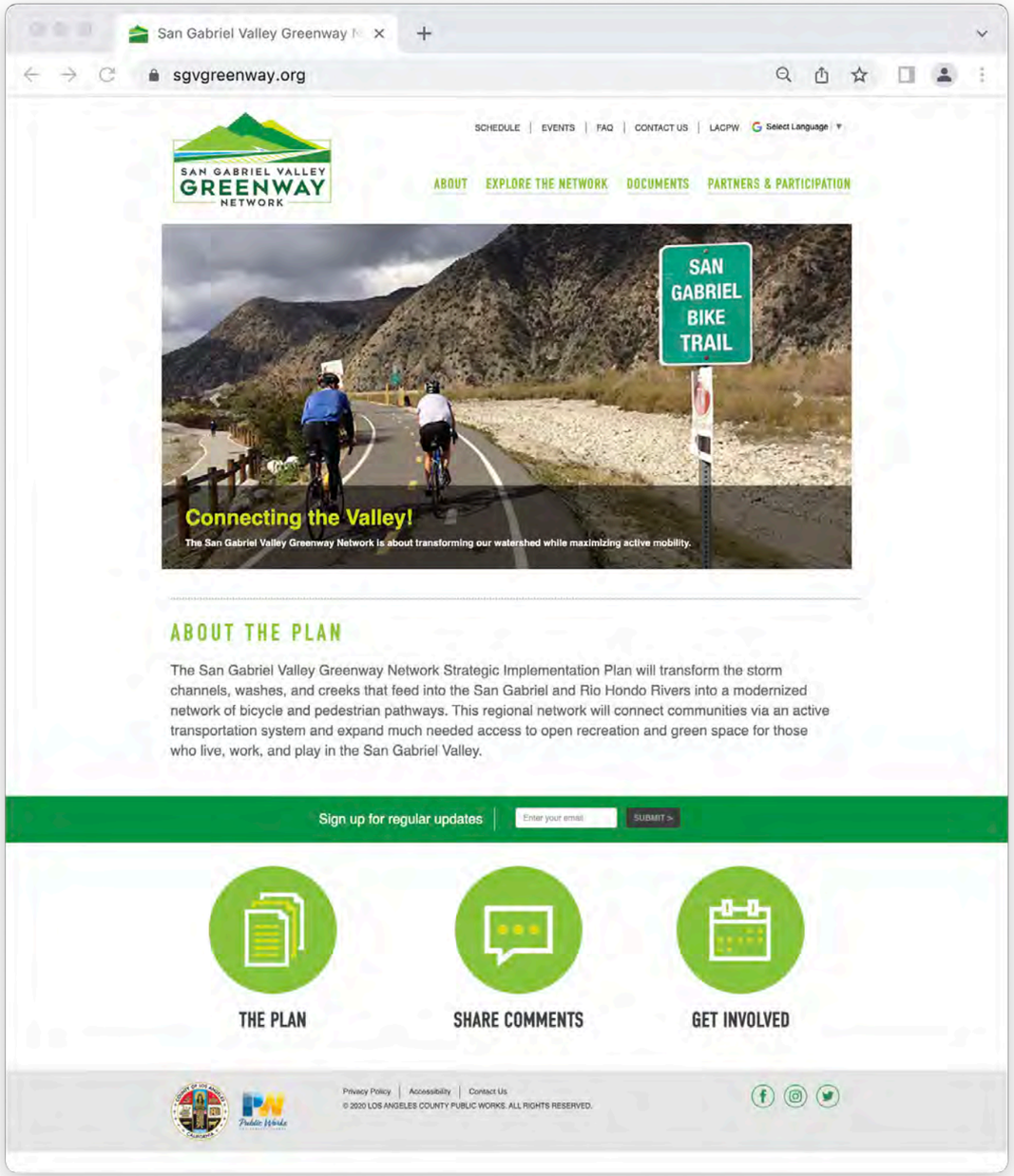


Figure 3-1. Official SGV Greenway Network website homepage

They were printed in English, Spanish, and Chinese, as shown on Figure 3-2 and posted at regional parks and community centers as well as handed out during pop-up events and in-person workshops. Materials were posted on the website and emailed to community members who had signed up to receive updates through the website, survey, and meeting sign-ups. Digital materials, including social media posts, were developed for each community workshop, and promoted on various social media platforms.

3.1.3.3 Online Map-based Survey

An online map-based survey was developed to collect information from local residents and potential greenway users and to gain insight on their desired activities, destinations, and services along the SGV greenways.

A paper version of the survey was developed to accommodate respondents who may have technological barriers. Questions were optional, and some allowed participants to select two or more answers. This resulted in a larger number of responses received versus the number of respondents. The survey was available in Chinese, Spanish, and English formats. A total of 1,546 community members completed the survey, resulting in 826 paper survey responses and 1,039 online survey responses. The survey was available to the public from October 14, 2021, through July 30, 2022.

The maps shown on Figures 3-3 and 3-4 display all the answers submitted from local community members. A more detailed analysis of the survey can be found in the Community Engagement Report (Appendix E).

Figure 3-2. Factsheets printed in Chinese, Spanish, and English

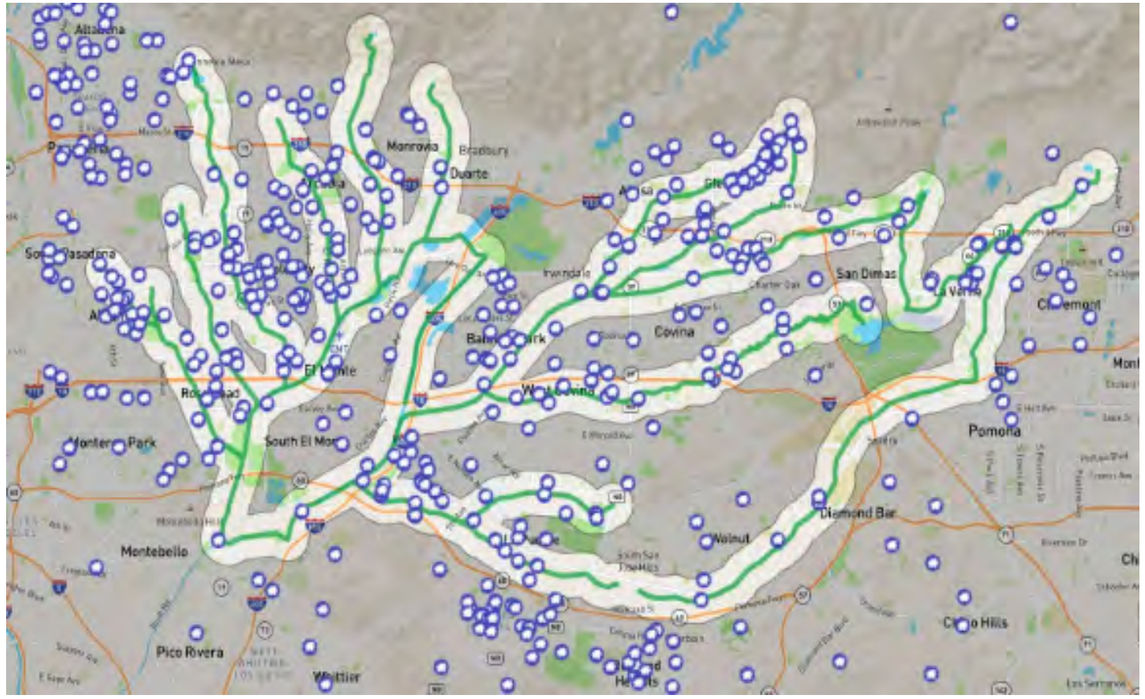


Figure 3-3. Map-based Survey Responses to "Approximately, where is your home?"

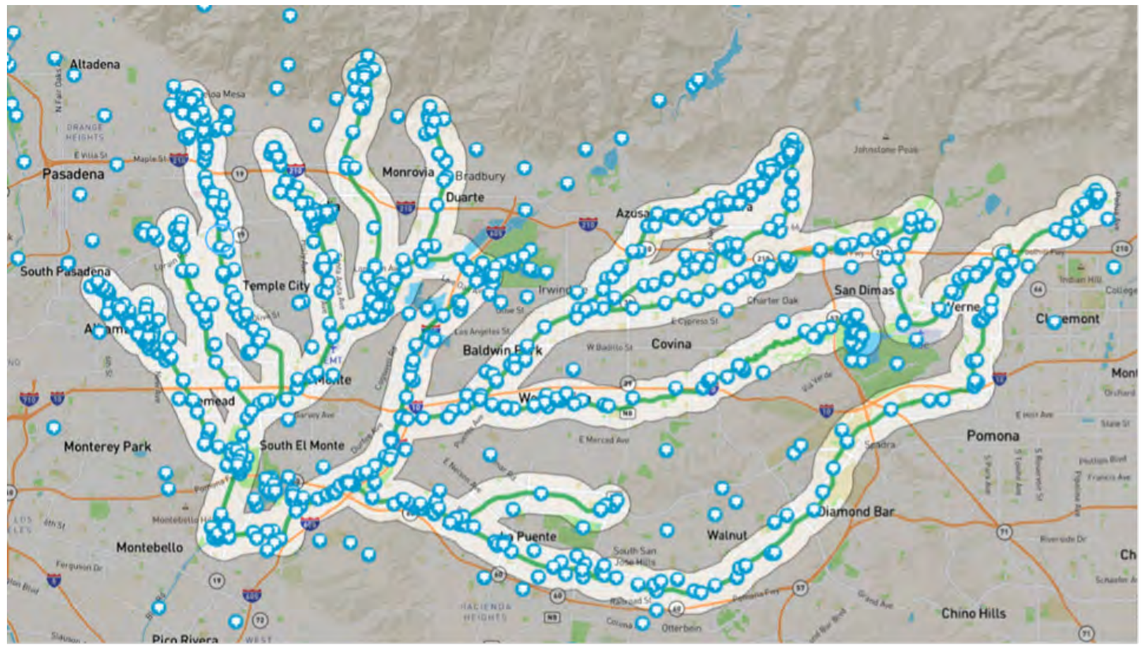


Figure 3-4. Map-based Survey Responses to "What areas of the SGV Greenway would you likely use and how?"

3.1.3.4 Laminated Posters

Laminated posters were printed and posted in strategic locations within the Tier 1 tributary areas. Team members researched using Google Maps to identify residential areas to display the posters for pedestrians, bike riders, and other walking community members. The 11 by 17-inch posters contained information about the SGV Greenway Network Plan, the website address, and a link to the online map-based survey.

A total of 75 laminated posters were installed on fences along the channels owned by the District, as seen on Figure 3-5. In some instances, a location identified online as a feasible place for potential posting was not accessible or appropriate for posting once accessed in person. Alternate locations were selected in these cases.

Figure 3-5. Laminated poster along the San Dimas Wash in Glendora

A key goal of these laminated posters was to motivate community members to participate in the online survey. A QR code and a specific link to the laminated posters were added to the flyers to track the effectiveness of co-locating the flyers within the plan area. Within a five-month period (April 2022 through August 2022), the Plan Team received a total of 87 survey responses that originated solely from the laminated posters.

3.1.3.5 Community Workshops

The Plan Team hosted three series of community workshops to collect essential community input for incorporation into the SGV Greenway Network Plan. Each series covered a different stage of the plan development to give the community a chance to respond and to provide feedback at various stages of the plan development. The first series was intended to educate the community about the purpose and goals of the plan; build an understanding of the planning process; gather feedback on amenities, uses, and potential concerns; and promote the plan. The second series updated community members on the engagement efforts and shared potential bike path alignments and project subcomponents. Finally, the third series recalled key findings from prior community engagement activities, described the Design Guidelines and Standards, and presented ten example Conceptual Designs for which poster stations were situated around the room for staff and participants to engage with directly.

Figure 3-6. The audience of the community workshop at the San Gabriel Library

Due to the pandemic, the first two series of community workshops were held virtually on Zoom to comply with Los Angeles County Department of Public Health (DPH) guidelines and safety precautions. The third series, however, was held in person at the San Gabriel Library and the Baldwin Park Community Center. The first series was conducted in November 2021, the second series in February 2022, and the third series in June 2022.

Participants were invited through social media, email blasts, and phone calls made to various organizations and agencies based on research from the pop-up event coordination and contacts provided by the Steering Committee members. Community members were asked to register prior to the workshops to gauge the number of workshop participants. For each series of workshops, two to four workshops were held at varying times and days of the week with the goal of being accessible to diverse audiences.

Every workshop presentation had Spanish interpretation available and began with a welcome from the team, the Tribal Land Acknowledgement, and an overview of the workshop agenda. Open discussion periods encouraged community members to ask questions and provide comments. LA County Public Works staff answered questions and prompted participants to be aspirational with their ideas and open with their concerns. Workshops closed with an overview of key themes discussed during the workshop and the SGV Greenway Network Plan's next steps. The community workshops garnered participation from 134 community members throughout the nine workshops. Figure 3-6 depicts the audience from the in-person community workshop at the San Gabriel Library on June 16, 2022.

3.1.3.6 Watershed Conservation Authority Engagement Efforts

In 2020, WCA developed its own Engagement Plan in support of the SGV Greenway Network Plan. WCA facilitated collaborative community engagement efforts with Nature for All, ActiveSGV, Amigos de los Rios, and the Rowland Heights Women's Club. The priority was to engage with historically underserved communities and diverse populations that might not be reached by conventional methods. The goal was to develop awareness and source constructive feedback representative of local communities and potential users of an expanded network.

Engagement initiatives included direct presentations of the SGV Greenway Network Plan with cities and municipalities, Q&A sessions with local community groups, unstructured pop-up events, structured activities such as bike rides and service events (as shown in Figures 3-7 and 3-8), stakeholder interviews, and walkthroughs of surveys and plan objectives. Engagement efforts included mapping priority areas and converting the digital survey questions into paper survey format to reach a broader audience through translations, interpretation, and dissemination across a broad network of experts and diverse populations. A more detailed report of WCA's community engagement efforts can be found in the Community Engagement Report (Appendix E).

Figure 3-7. San Dimas Wash Bike Ride in the City of Glendora hosted by ActiveSGV, 2022

Figure 3-8. San Jose Creek Bike Ride in the City of Pomona hosted by ActiveSGV, 2022

3.1.3.7 Community Pop-up Events

Eighty-nine community pop-up events were hosted at a broad range of locations in the SGV. Primary goals of the pop-up events were to build project awareness and gather feedback for the SGV Greenway Network Plan. Pop-up events were planned to intercept community members while they were at existing recreational facilities or community events, as shown on Figures 3-9, 3-10, and 3-12. The pop-up events were held during a transitional period of the COVID-19 pandemic, between December 2021 to July 2022. While attending these events, the Plan Team members followed COVID-19 guidelines and safety precautions per DPH. Participants were able to attend pop-up events freely and attend as many as they wanted.

Pop-up events had similar layouts and materials and were conducted in the same manner to ensure participants had comparable experiences. A series of display posters were used summarizing the SGV Greenway Network Plan overview, potential features, and greenway opportunities. Materials passed out to participants included a factsheet and a survey flyer, available in English, Spanish, and Chinese, and SGV Greenway Network branded promotional items including reusable fabric bags, reusable aluminum water bottles, reusable plastic bike water bottles, and pens.

Discussions that took place during these events were informal and informative. Staff shared an overview of the plan and described a vision of the potential uses, features, and configurations. Staff encouraged and incentivized community members to take the online map-based survey and collected verbal comments and feedback. Nearly 800 community m embers stopped by and participated across all 89 pop-up events.

Figure 3-9. Community members discuss the SGV Greenway Network Plan at Covina Farmers Market pop-pup event

Figure 3-10. Cyclists at the Santa Fe Dam Pop-Up event pause for a picture while learning about the SGV Greenway Network Plan

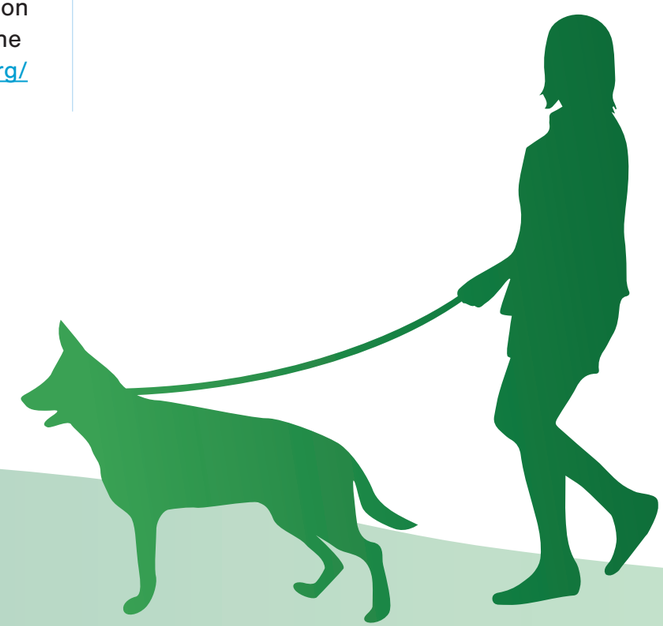
Community bike ride along the Ballona Creek Bike Path in Culver City

3.2 Engagement with Steering Committee

The Steering Committee included the District, LA County Supervisorial Districts 1 and 5 (LACSD), Southern California Association of Governments (SCAG), San Gabriel Valley Council of Governments (SGVCOG), Active San Gabriel Valley (ActiveSGV), San Gabriel Valley Conservation Corps (SGVCC), Trust for Public Land (TPL), San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC), Nature for All, and the Los Angeles City/County Native American Indian Commission (NAIC). The group met regularly with the Plan Team to provide feedback and perspectives throughout the entirety of the plan development process. A total of 20 meetings were held with the Steering Committee and Plan Team. Meeting materials for the Steering Committee meetings can be found in Appendix D: Steering Committee Meeting Materials or on the SGV Greenway Network website under the Documents Tab: https://www.sgvgreenway.org/project-documents.

LA County Supervisorial District 4 was included and participated in the Steering Committee from the start of the SGV Greenway Network Plan development process. However, due to the 2021 redistricting of the LACSD boundaries, the SGV Greenway Network Plan area no longer includes LACSD District 4 jurisdiction.

The Steering Committee contributed to the engagement efforts as active, vocal participants and by promoting community engagement events. Steering Committee members also provided valuable feedback on all promotional and informational materials used throughout the engagement process. They also supported by providing a list of contacts and community groups to engage with.



3.3 Engagement with Municipal Stakeholders

A total of 30 cities are found with the SGV Plan area. Various cities throughout SGV participated in municipal stakeholder meetings over the course of the plan development to provide input on the alignments and goals of the document. These meetings were held by the Plan Team and included at least one representative from each participating city. Meeting materials for the municipal stakeholder meetings can be found in the Community Engagement Plan and Report (Appendix E).

3.3.1 Round 1 Municipal Stakeholder Meetings

In February 2021, the Plan Team invited all municipal stakeholders in the SGV Plan area to attend virtual meetings. The Plan Team met with the municipal stakeholders who responded to the invitations. Meetings took place with stakeholders from Pomona, West Covina, Industry, La Puente, Glendora, San Gabriel, Monrovia, Claremont, Temple City, Arcadia, and South El Monte. The meeting presentation introduced the plan development and status, with a focus on the prioritization methodology and results, and solicited input and feedback from the municipal stakeholders. This was followed by a group discussion of any questions or concerns with the items presented. The feedback provided during the meetings was generally supportive of the plan efforts. The goal of this engagement effort was to provide the cities with the opportunity to work with the Plan Team throughout the process and keep dialogue open for potential collaboration on projects in the plan area.

3.3.2 Round 2 Municipal Stakeholder Meetings

In August 2022, the Plan Team took initiative to reach out to 13 municipal stakeholders (cities) that overlapped with the ten example Conceptual Designs. The Plan Team met with the municipal stakeholders from Baldwin Park, Pomona, Industry, Glendora, San Gabriel, Claremont, Pasadena, and Covina. The intent was to engage with each City Manager regarding the proposed Conceptual Designs within their jurisdiction. Each meeting consisted of an overview of the plan, with a focus on the Conceptual Designs, followed by a group discussion of any concerns and recommended changes for the Conceptual Designs presented. The overall feedback provided during the meetings was very positive towards the plan efforts. A few of the city stakeholders expressed minor recommended changes to the opportunities proposed in the Example Conceptual Designs which the Plan Team addressed. The goal was to collaborate on the proposed Example Conceptual Designs through these engagement meetings to provide an opportunity for discussion on potential future greenway projects in their jurisdictions.

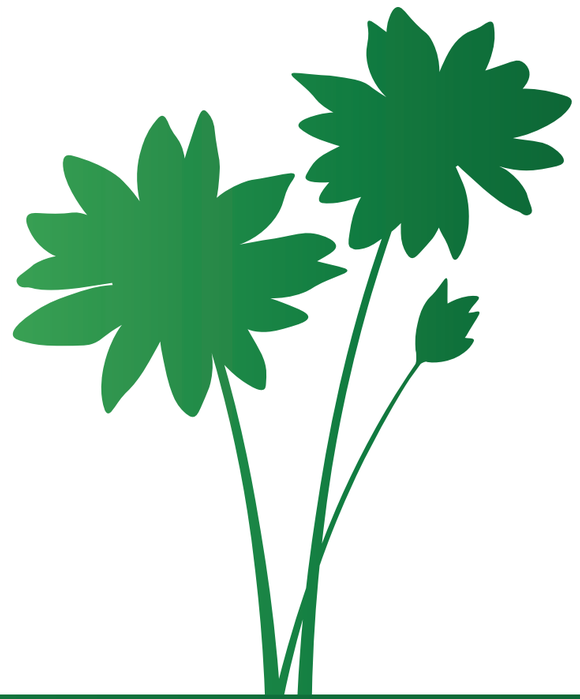
3.4 County Collaboration

Updates throughout development of the SGV Greenway Network Plan were given at various meetings with committees and County departments with shared interests and goals. One of the committees, the Healthy Design Workgroup (HDW) was a collaboration between County departments to develop policies and practices for planning, designing, and building healthy community environments with the goal of constantly improving interdepartmental coordination. In 2012, the BOS approved a motion stating it was the policy of the County to design public and private facilities in a manner that encourages pedestrian activity, bicycling, use of public transit, and outdoor physical activities, thereby creating an interdepartmental workgroup to further these goals.

The HDW was developed to increase levels of physical activity and access to healthy foods in LA County unincorporated areas. The goals of this committee included the identification of potential collaborative grant opportunities for healthy design-related projects or planning, coordinating to maximize co-benefits, accomplishing multiple departments' priorities/ work plans, and sharing information to leverage each department's past or current efforts. The HDW also focused on reviewing best practices, determining which practices should be mandated or encouraged by the County, developing an implementation program, and identifying potential funding mechanisms.

The members of the HDW included the following teams from LA County Public Works: Traffic and Safety Mobility (TSM), SWPD, Community and Government Relations Group (CGRG), and TPP. The HDW committee also included the following teams from other County departments: DPH, Department of Regional Planning (DRP), DPR, Fire Department (LACoFD), Chief Executive Office (CEO), Arts Commission (LACAC), Beaches & Harbors (BH), Community Development Commission (CDC), and Housing Authority of the County of Los Angeles (HACOLA).

Members of the Plan Team attended meetings on February 28, 2018; October 28, 2020; August 25, 2021; and February 23, 2022, to provide updates on plan development and to note other past or current efforts and grant opportunities.



3.5 Community Engagement Report and Incorporation

After gathering input from the community, stakeholders, and the Steering Committee, a summary of all engagement activities, key takeaways, and feedback on the plan development was documented in the Community Engagement Report (Appendix E). The report summarized major themes from community feedback, what uses were important to the community, preferences for access to the SGV Greenway Network, prioritization along bike path alignments, and potential concerns.

In addition to general feedback on the plan development process, an evaluation on the Design Guidelines and Standards and potential project Conceptual Designs was requested. The results were included as part of the Community Engagement Report. A detailed summary of the engagement materials, approaches, and activities employed to involve the community was also included. Figure 3-11 provides a quick overview of the major accomplishments of the community engagement efforts.

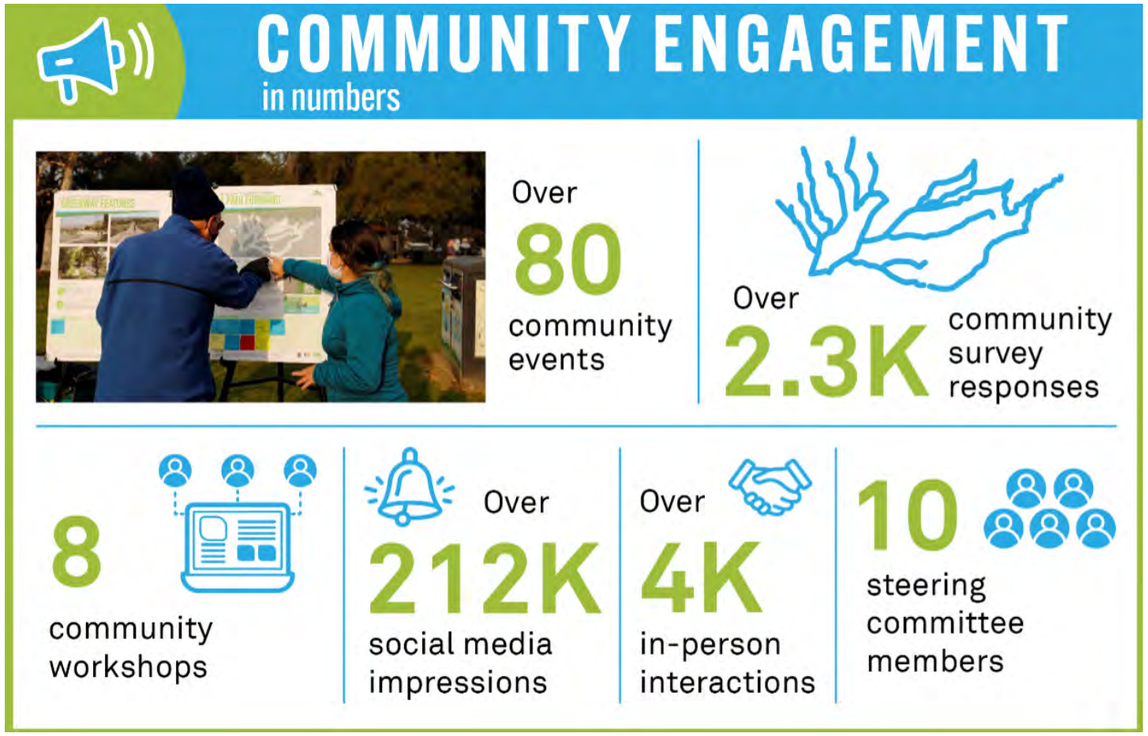


Figure 3-11. Community Engagement in Numbers

3.5.1 Feedback on Plan Goals

Across the different engagement events and approaches (i.e., workshops, pop-up events, surveys), there were consistent themes to the community feedback, specifically connectivity, amenities, safety and security, environmental justice, and maintenance.

3.5.1.1 Connectivity

Overall response to the SGV Greenway Network was positive, with participants emphasizing that the SGV Greenway Network should be useful and highlighted accessibility to all populations within the SGV as a top priority, including the youth, seniors, people with disabilities, families, and to the future generations of LA County. The community called out specific needs related to ease of use:

- **Multi-Use Paths** – Accessibility and safe paths for community members of all ages and abilities to travel via varied modes of transportation including walking, biking, running, rollerblading, and skateboarding.
- **Resting Spaces** – Opportunities for rest and relaxation by integrating seating, water fountains and refilling stations, and restrooms.
- **Gateway Spaces** – Transitional, recreational spaces with seating, shade, lighting, picnic tables, water fountains, and event spaces near the streets to make the Greenway visible, easily accessible, and active for the adjacent community.
- **Commuting Connection** – Routes for commuting to schools, work, shopping, and services, as well as existing transit networks.
- **Active Transportation** – Bike paths and greenways to align with existing infrastructure to create a continuous and seamless network of routes for pedestrians and cyclists.
- **Seamless Gateway Points** – Existing parks, trailheads, schools, vacant lots, transit centers, and LA County Public Works land along the tributaries to be utilized as gateway entry points to the network.
- **Continuous Paths** – Network paths that are continuous and in good condition to provide safe and consistent experiences while considering the heights and widths of the paths and surrounding roads and bridges that may obstruct views and use of the space.
- **Equestrian Trails** – Facilities and trails that incorporate more opportunities for equestrian use and access, especially in areas with existing equestrian facilities and trails.
- **Public Transit** – Bike paths and greenways that provide connections with routes, stops, and transit centers for buses, light rails, and trains that service the SGV.

3.5.1.2 Amenities

Participants noted the preference to use the SGV Greenway Network for recreational purposes and access to nature, in addition to travel purposes. The non-transportation amenities highlighted during community engagement include:

- **Bicycle Features** – Bike amenities like racks, repair stations, lockers, protected paths, and skills parks, at various locations to promote bike use and visibility to users.

- **Dog Amenities** –Dedicated park space for dogs to give pet owners more recreational options.
- **Natural Spaces** – Drought-resistant native vegetation for shade to cool the area, improve environmental health, and restore natural habitat for wildlife.
- **Wayfinding** – Signage installed in the form of maps and mile, destination, and transit markers to improve navigation to SGV Greenway Network adjacent destinations.
- **Cultural Resources** – Cultural, informational, and historical signage installed along the SGV Greenway Network to improve knowledge of community history, context, and education.
- **Equestrian Features** – Staging areas, hitches, and water tanks installed to provide more features to equestrians.
- **Recreation Equipment** – Weatherproof, tamperproof, low power, and biomechanically correct outdoor fitness equipment and exercise spaces to be installed.
- **Light Fixtures** – Energy efficient lighting along the greenway paths included to enhance visibility.
- **Safety Signage** – Safety and restriction signage to protect the users, surrounding community, wildlife, and the environment.
- **Online Resources** – Dedicated map app, existing maps, or website for trip planning apps (Apple Maps, Google Maps, Waze, etc.) to potentially be utilized for access to local resources, businesses, and events.

3.5.1.3 Maintenance

A need for maintenance of the plan area was a theme from the feedback received. The importance of maintaining a clean, safe, and maintained greenway was noted. Refer to the Design Guidelines and Standards in Appendix H for more information.

- **Waste** – Landfill, recycling, and compost waste receptacles to be maintained throughout Greenway to encourage cleanliness along paths.
- **Greenway Damage** – Features and amenities of the Greenway to be weatherproof and tamperproof to prevent graffiti and damage to equipment, natural features, and facilities.
- **Reporting** – Maintenance reporting programs for neighbors and users to report dumping and suspicious activity.

3.5.1.4 Safety and Security

Participants identified the need to prioritize the safety of users, neighbors, and amenities of the SGV Greenway Network. They expressed concerns that since the SGV Greenway Network lies in the middle of various municipalities and residential areas, implementing the plan would make neighbors and businesses that back into the washes more vulnerable to security issues:

- **Users and Privacy** – Alleviate vulnerabilities with light fixtures, noise buffers, and by limiting physical access of uses with the adjacent landowners and recharge facilities where encampments are likely to establish.
- **Persons Experiencing Homelessness (PEH)** – PEH were identified as concerns for users and nearby property owners. The SGV Greenway Network Plan would address via exclusionary design techniques, transition services, and outreach to discourage and alleviate the pressures of PEH.

3.5.1.5 Environmental Issues

Environmental issues were identified as concerns for communities and users of the SGV Greenway Network. Equity, maintenance, and environmental and human protection were highlighted as specific needs:

- **Environmental Justice** – Maintenance of the SGV Greenway Network in underserved communities to be implemented and maintained in an equitable fashion and not contribute to displacement vulnerable landowners through green gentrification.
- **Environmental Impact** – Potential contact with hazardous places, plants, and animals was discussed to protect users and the natural environment.

3.5.2 Incorporation of Feedback into Plan Components

Community and stakeholder feedback on the plan goals and specific greenway project priorities were incorporated into the Design Guidelines and Standards and the example Conceptual Designs. The impact of this feedback on the plan components includes:

- **Safety.** Of paramount importance is that all SGV Greenway Network projects are safe for all users and that the feeling of safety is noticeable. This includes the personal safety of visitors of the commons, as well as protecting life and property throughout the entire greenway network. SGV Greenways shall be designed, constructed, and maintained in such a way that provides a safe and accessible user experience. Safety must be addressed with each greenway component. Emergency and maintenance vehicle access, fall protection fencing/ barriers, proper lighting, safety call boxes, vegetation and structure placement and clear lines of sight, posting guidance on avoiding flood and storm hazards, and proper operation and long-term maintenance are some of the essential elements. Rest stations with shading and water on or immediately adjacent to the greenway should be provided at least every half mile.

  In the interest of user safety, the SGV Greenway Network should also be designed to highly resist vandalism and deter crime through environmental design and material selection. Designers should incorporate natural surveillance along greenways through the use of lighting and open, visible spaces, control access to the SGV Greenway Network and greenway amenities through defined points of entry and locate signs and amenities in highly visible areas. Regular maintenance may also discourage vandalism and tampering along the greenways. Specific recommendations for design and maintenance are incorporated in the later sections of this document.
- **Vector Control.** It is critical to review minimization measures with the vector control district of the jurisdiction early in the design process. The project should be designed to facilitate necessary surveillance as well as physical and chemical mosquito control efforts by the vector control agency. Minimization measures include implementing a comprehensive O&M plan with vegetation management.
- **Comfort.** The SGV Greenway Network should be a welcoming and inclusive space for all residents and visitors. Amenities such as shading, seating, water stations, restrooms, kiosks, and other services enhance the usability and comfort of the SGV Greenway Network.

- **Community Engagement.** As specific greenway projects are conceptualized and developed, the project sponsor should actively engage the community to obtain input on preferences and creativity to be incorporated into project design and implementation. Amenities should reflect community character and enhance aesthetics.
- **Connectivity.** The greenways should provide connectivity within and among the communities in the San Gabriel Valley. Key elements include connectivity to parks, schools, other destinations, adjacent greenways, and various forms of transportation (e.g., vehicle parking and connection to transit).
- **Connection to the Environment.** The greenways should incorporate and demonstrate responsible stormwater management. Additional amenity greenspace, vegetation, and habitat should be provided for the benefit of wildlife, in addition to the greenway network's human users.

Figure 3-12. Community Engagement at one of the many pop-up events

3.6 Engagement for the Public Release of the Plan

LA County Public Works is projected to release the Draft and Final SGV Greenway Network Plan to the general public in February 2025 and September 2025, respectively. With the aim of promoting awareness within the SGV community, the Plan Team intends to organize various engagement activities. A more detailed summary of the engagement efforts can be found in the Community Engagement Outline for Draft and Final Public Releases (Appendix E).

3.6.1 Engagement for the Public Release of the Draft Plan

For the Draft SGV Greenway Network Plan Release to the Public, the Plan Team will execute the following engagement activities from February 2025 through April 2025.

- **Social Media and Email Communications.** Estimated 170,000 impressions.
- **Flyer Postings within SGV Plan area.** Minimum of 50 locations.
- **Presentations to Local Community Groups.** Minimum of 15 meetings.
- **Community Bike Rides.** Minimum of 3 community bike rides.
- **Presentation to City Stakeholders within Plan Area.** Maximum of 15 meetings.
- **Pop-up Events/Tabling Events.** Minimum of 30 events.
- **Public Project Website Updates.** On-going updates.
- **Community Meetings for Q&A.** Estimated 2 meetings.
- **Frequently Asked Questions Handout.** Available in English and Spanish.
- **Optional Community Survey**

3.6.2 Engagement for the Public Release of the Final Plan

During the Final Release of the SGV Greenway Network Plan, the Plan Team will promote the release to the public by using the following methods listed below from July 2025 through September 2025.

- **Social Media and Email Communications.** Estimated 170,000 impressions.
- **Public Project Website Updates.** On-going updates.
- **Optional Community Meetings for Q&A.** Estimated 2 meetings.

SECTION 4

PROJECT OPPORTUNITIES ANALYSIS

SECTION 4. PROJECT OPPORTUNITIES ANALYSIS

FINDING GREENWAY NETWORK OPPORTUNITIES IN THE SAN GABRIEL VALLEY

This section includes the development and application of a prioritization framework for the SGV Greenway Network including identifying Tiers 1, 2, and 3 tributary reaches, evaluating Tier 1 tributary opportunities and constraints and developing figures for both, and developing crossing treatments. Identification of project opportunities and constraints, as well as gaps, are vital for future project development.

To prepare needed resources for developing greenway projects throughout the 130-mile SGV Greenway Network, the Plan Team developed a "Prioritization Framework" as described in this section. The framework allowed the Plan Team to focus on a smaller subset of the plan area for more detailed analyses and the development of example Conceptual Designs with potential project opportunities.

Through an extensive data-driven process, tributary reaches were grouped into three tiers, with Tier 1 scoring the highest. Tier 1 reaches were studied further as a starting point to identify opportunities and constraints and develop greenway alignments and examples of Conceptual Designs. Tier 2 and Tier 3 reaches have similar greenway opportunities and remain an integral part of the plan and future greenway network. The resources developed during this prioritization process are valuable and are meant to aid in future project implementation throughout the SGV.

4.1 Tributary Prioritization

Starting with the original study area consisting of 130 miles of waterways and surrounding buffer areas, the Plan Team, along with Steering Committee and community feedback, created a prioritization process to rank segments of the plan area into three tiers. This scoping process allowed for additional planning resources to be applied to focus "Tier 1" areas. The goals of the tributary prioritization framework are to:

- Evaluate the entire SGV plan area through a regional and data-driven process based on original Plan goals and directives.
- Find reaches within the plan area where greenway projects potentially meet plan goals and focus further analysis on those areas.

How the prioritization framework is used:

- The 108 miles of SGV tributaries studied were segmented into three tiers (San Gabriel River and Rio Hondo segments were not scored due to their existing greenway facilities).
- Approximately 60 miles (56 percent) were identified as "Tier 1" segments. 38 miles (35 percent) were identified as "Tier 2", and 10 miles (9 percent) were identified as "Tier 3."
- "Tier 1" areas are reaches which scored higher based on the prioritization framework. These areas do not necessarily include the most feasible opportunities, or easy to implement greenways.
- "Tier 1" areas were used as a focus point for the Plan Team to collect further data, develop potential greenway alignments, and as a starting point for defining Conceptual Design areas.

4.1.1 Scoring Methodology

Using selected datasets, the Plan Team ranked each tributary relative to each category and to each other. To give the ranking process more granularity, each tributary was divided into smaller segments before being scored. Segmentation was based on factors that affect greenway feasibility, including ROW width conditions, flood capacity analysis of the adjacent channel, and jurisdictional boundaries.

As shown in this example (Figure 4-1), San Jose Creek was divided into nine segments. Each tributary segment was then given a 0.5-mile buffer, based on the area that would be within a short walk of the potential greenway. Scoring was based on data collected within the buffer area of each segment.

The Plan Team, along with community and Steering Committee feedback, determined the most relevant datasets from the Existing Conditions database to include in the scoring matrix. The five final data categories included in the scoring matrix were:

Figure 4-1. Example San Jose Creek overall segmentation with 0.5-mile buffer (line colors represent different tributary segments)

Community

This score measures potential community benefit. Segments with the greatest ability to serve the most people in areas lacking parks and open space were scored highly.

Datasets used:

- Population Density (2020 Census)
- Park Need (DPR Parks Needs Assessment)

Equity

Equity scores were determined using CalEnviroScreen (CES) 3.0 data. CES is a statewide dataset managed by the California Office of Environmental Health Hazard Assessment. These scores measure many factors related to environmental and socioeconomic burden. Each potential Greenway segment was given a score based on the CES score of surrounding census tracts. This data gives insight into the project's potential to serve disadvantaged communities and contribute to overall environmental health. CES scores often inform funding from various state-level grant programs and therefore were kept in their original format, and not translated into comparative scores.

Datasets used:

- CES Raw Percentile Scores

Circulation

The Circulation scores represent the segment's potential to serve as a functional and well-used active transportation facility. Segments with activity generators in the vicinity were given higher scores. Activity generators are destinations which tend to generate more users of the greenway such as schools and community centers. Additionally, segments with the potential to connect to existing bikeways or multi-use trails were given higher scores. As rail-crossings are a major impediment to greenway implementation, segments with many rail crossings had their circulation score lowered. The SGV is a large area and greenways which connect to transit allow users to travel further without a car. The circulation score also factored in the segment's ability to connect with Bus and Rail transit systems in the area.

Datasets used:

- Activity Generators – total
- Community Centers
- Number of Schools
- Existing Bikeways (miles) within the Buffer
- Existing Bikeways (along) segment
- Trails (miles) in the Buffer
- Railway Lines Intersection
- Bus Stops
- Rail Stations

Environment

Greenways have significant potential to contribute to overall environmental health. Specifically, trees and other landscaping added along greenways can have many benefits including shade/urban cooling, carbon sequestration, and additional habitat for many species. Areas lacking tree canopy were given higher Environment scores as well as those areas connecting to "Significant Ecological Areas (DPR)".

Datasets used:

- Tree Canopy Coverage
- Significant Ecological Area

Synergy

The "Synergy" scores evaluate which segments can potentially align with other projects and opportunities in the area. Greenways which connect to other projects will have a greater impact and utility. Greenway projects as well as "other" stormwater management projects were evaluated as these can combine into multi-benefit opportunities and be a potential for funding coordination.

Vacant publicly owned parcels were also evaluated along each segment as these parcels could add further potential for adjacent pocket parks and gateways.

Datasets used:

- "Other" projects within segment buffer
- Vacant Publicly Owned Parcels
- "Early Implementation Projects" along segment

These data sets were used to generate raw scores for each tributary segment. Raw scores in each category were then normalized, before being converted to a comparative score between 1 and 10. These comparative scores gave each segment a ranking in relationship to all other segments within the plan area.

Additionally, it was determined that not all categories are equal when it comes to prioritization. Each category was given a weight to adjust its impact on the final score.

Many weighting scenarios were considered by the Plan Team and Steering Committee. The final weighting scenario was meant to best reflect the original goals of the SGV Greenway Network Plan, and the community feedback gathered. The final weighting scenario is shown in Table 4-1.

Table 4-1. Final Weighting Scenario

Category	Weighting
Circulation	40
Equity	28
Community	16
Synergy	8
Environment	8
Total	100

4.1.2 Tributary Segment Scoring Results

The top 25 scoring segments became Tier 1 focus areas with some adjustments for gap closures. As shown on Figure 4-2, approximately 60 miles (56 percent) were identified as “Tier 1” segments. 38 miles (35 percent) were identified as “Tier 2”, and 10 miles (9 percent) were identified as “Tier 3.”

“Tier 1” segments became the basis for further study by the Plan Team. The following additional analysis was done along Tier 1 segments:

- ROW conditions at the top banks of the channels were field checked and adjusted based on fence line and encroachment conditions.
- Preliminary greenway alignments were developed.
- Greenway/street safe crossing alternatives were developed.
- Potential channel adjacent subcomponent opportunities and beneficial project elements were evaluated and some of these were included in the ten example Conceptual Designs.

Community Bike Ride along a multi-use path in the SGV.

4.2 Tier 1 Tributary Opportunities and Constraints

Each Tier 1 tributary area was analyzed further for potential greenway project opportunities and constraints. These opportunities and constraints were diagrammed into maps which were reviewed by the Plan Team and Steering Committee. These diagrams display available ROW and adjacent public parcels for potential greenway projects, identify greenway segments for example Conceptual Design, and were used for community engagement. Resulting opportunities and constraints diagrams are a valuable resource for future project proponents and community members.

4.2.1 Identification of Opportunities and Constraints

Diagramming the constraints and opportunities along all 60 miles of “Tier 1” areas provides a valuable lens for future planning and design in these areas and which can be applied throughout the SGV Greenway Network. Opportunity diagrams include the alignments, safe crossing summaries, and identification of adjacent parcels, which are aimed to assist project proponents to identify and clarify future projects with most potential. Additionally, the Plan Team used some of this information to elevate certain areas to be included in the example Conceptual Designs. The ten example Conceptual Designs include a greenway path, project subcomponents, and beneficial elements.

Opportunities diagrammed include:

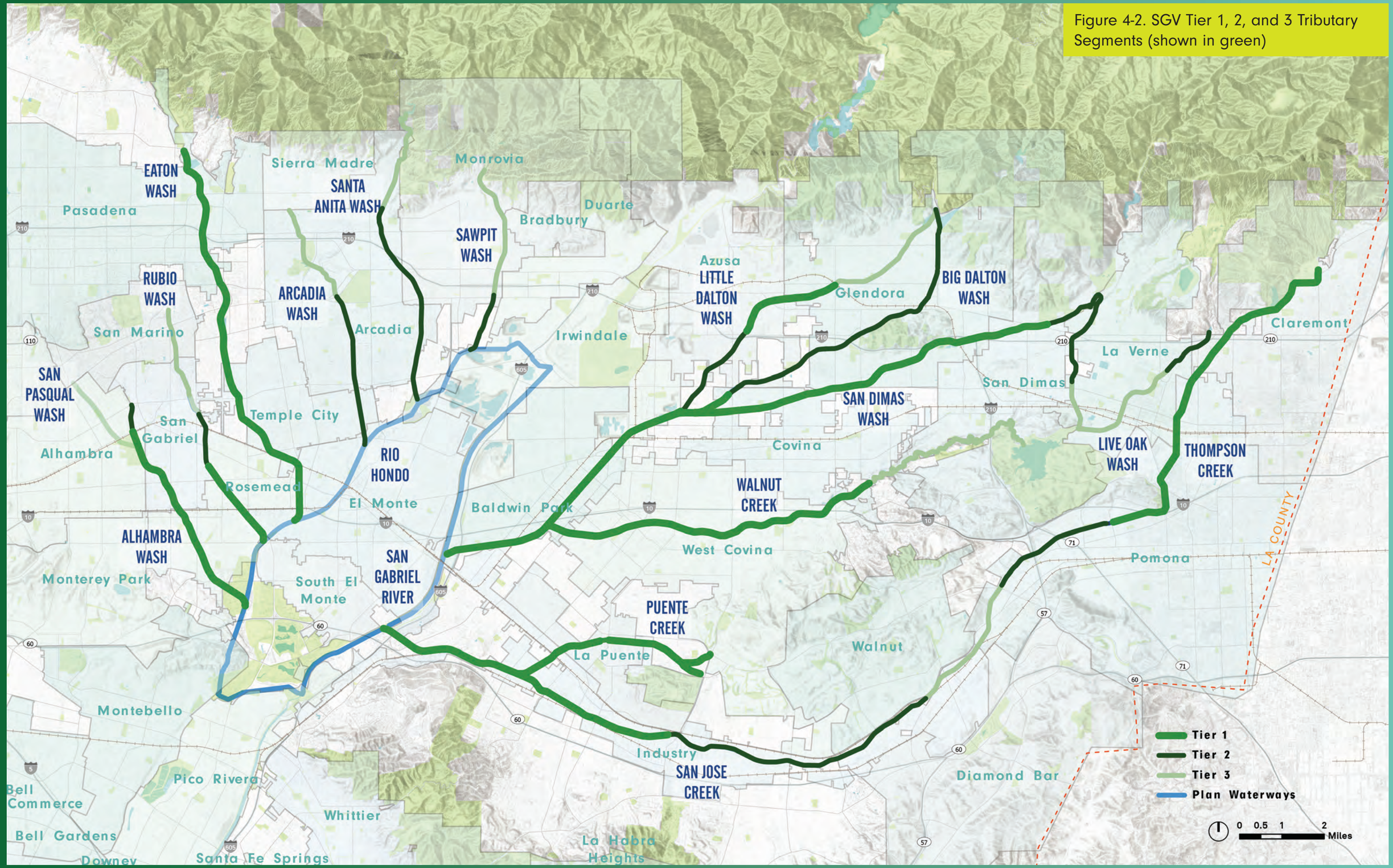
- Bikeway alignment alternatives based on available ROW (left and/or right channel bank):
  - Including off-channel/on-street connections.
- Safe Crossing treatments (Appendix F):
  - Major road, street, and railway crossings.
  - Channel crossings.
- Potential project parcels:
  - Vacant and publicly owned parcels adjacent to the greenway that could provide subcomponents and beneficial elements.
- Connections to existing Bikeways and Bikeway EIP.
- Connections to existing parks/trails.

Constraints diagrammed include:

- Available ROW adjacent to the tributary channels, both sides:
  - As measured from as-built drawings as well as aerial analysis and field checks for encroachments and existing fence lines.
  - ROW width categories were determined by the width requirements for different greenway configurations/cross sections and amenities.
- Other physical features within the ROW adjacent to the channel that could prohibit the implementation of a greenway (e.g., existing parking or utility structure in the ROW).
- Jurisdictional boundaries:
  - Areas maintained by USACE are noted for additional permitting coordination.
- Major road, street, and railway crossings (number of lanes provided for roads and streets).

Constraint diagrams for all Tier 1 reaches are provided on Figures 4-3 through 4-12. Opportunity diagrams and corresponding crossing treatments for all Tier 1 reaches are provided on Figures 4-13 through 4-32.

Figure 4-2. SGV Tier 1, 2, and 3 Tributary Segments (shown in green)



Constraints

Alhambra Wash

ROAD CROSSINGS

- 1 1 LANE
- 2 2 LANES
- 4 4 LANES
- 5 5 LANES
- 12 12 LANES - HIGHWAY
- NON-VEHICULAR

ROW WIDTH

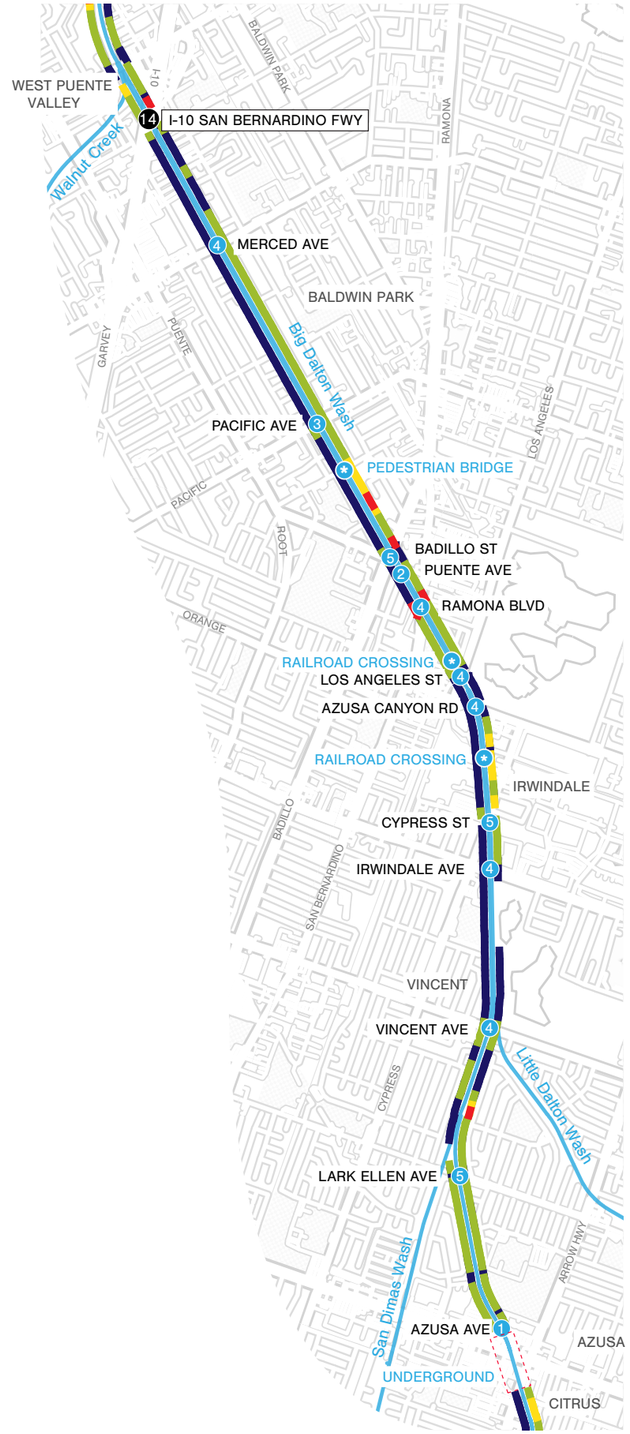
- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.3 0.5 mi

Figure 4-3. Alhambra Wash constraints

Constraints

Big Dalton Wash



INTERSECTION LANES

- 1 1 LANE
- 4 4 LANES
- 5 5 LANES
- 14 14 LANES - HIGHWAY
- NON-VEHICULAR

CONSTRAINTS

- UNDERGROUND CHANNEL

ROW WIDTH

- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.3 0.5 mi

Figure 4-4. Big Dalton Wash constraints

Eaton Wash

INTERSECTION LANES

- 2 LANES
- 4 LANES
- 5 LANES
- 6 LANES
- 7 LANES
- 8 LANES
- 12 LANES - HIGHWAY
- 14 LANES - HIGHWAY
- NON-VEHICULAR

CONSTRAINTS

- UNDERGROUND CHANNEL

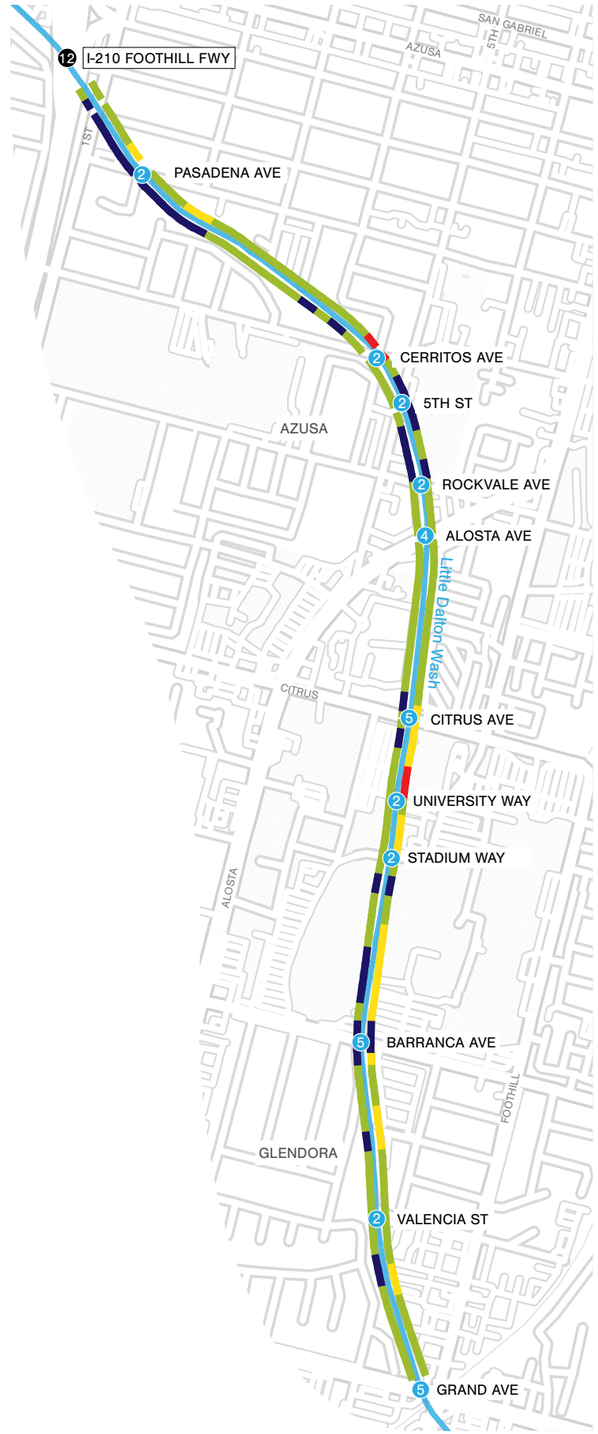
ROW WIDTH

- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.3 0.7 mi

Figure 4-5. Eaton Wash constraints

Little Dalton Wash



INTERSECTION LANES

- 2 LANES
- 4 LANES
- 5 LANES
- 12 LANES - HIGHWAY

ROW WIDTH

- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.1 0.2 mi

Figure 4-6. Little Dalton Wash constraints

Constraints

Puente Creek

INTERSECTION LANES

- 2 LANES
- 3 LANES
- 4 LANES
- 5 LANES
- 7 LANES
- NON-VEHICULAR

CONSTRAINTS

- UNDERGROUND CHANNEL

ROW WIDTH

- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.3 0.5 mi

Figure 4-7. Puente Creek constraints

Constraints

Rubio Wash

INTERSECTION LANES

- 2 LANES
- 4 LANES
- 5 LANES
- 12 LANES - HIGHWAY
- NON-VEHICULAR

CONSTRAINTS

- UNDERGROUND CHANNEL

ROW WIDTH

- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.1 0.3 mi

Figure 4-8. Rubio Wash constraints

Constraints

San Dimas Wash

ROAD CROSSINGS

- 1 1 LANE
- 2 2 LANES
- 3 3 LANES
- 4 4 LANES
- 5 5 LANES
- 6 6 LANES
- 12 12 LANES - HIGHWAY
- * NON-VEHICULAR

ROW WIDTH

- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.5 0.9 mi

Figure 4-9. San Dimas Wash constraints

Constraints

San Jose Creek

INTERSECTION LANES

- 2 2 LANES
- 5 5 LANES
- 6 6 LANES
- 10 10 LANES - HIGHWAY
- * NON-VEHICULAR

ROW WIDTH

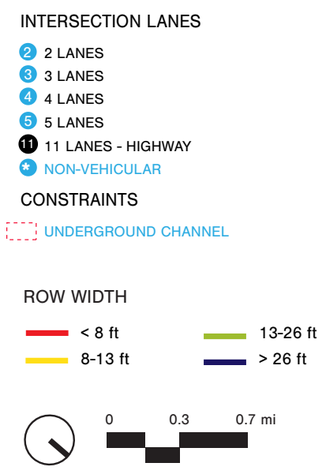
- < 8 ft
- 8-13 ft
- 13-26 ft
- > 26 ft

0 0.5 1 mi

Figure 4-10. San José constraints

Constraints

Thompson Creek



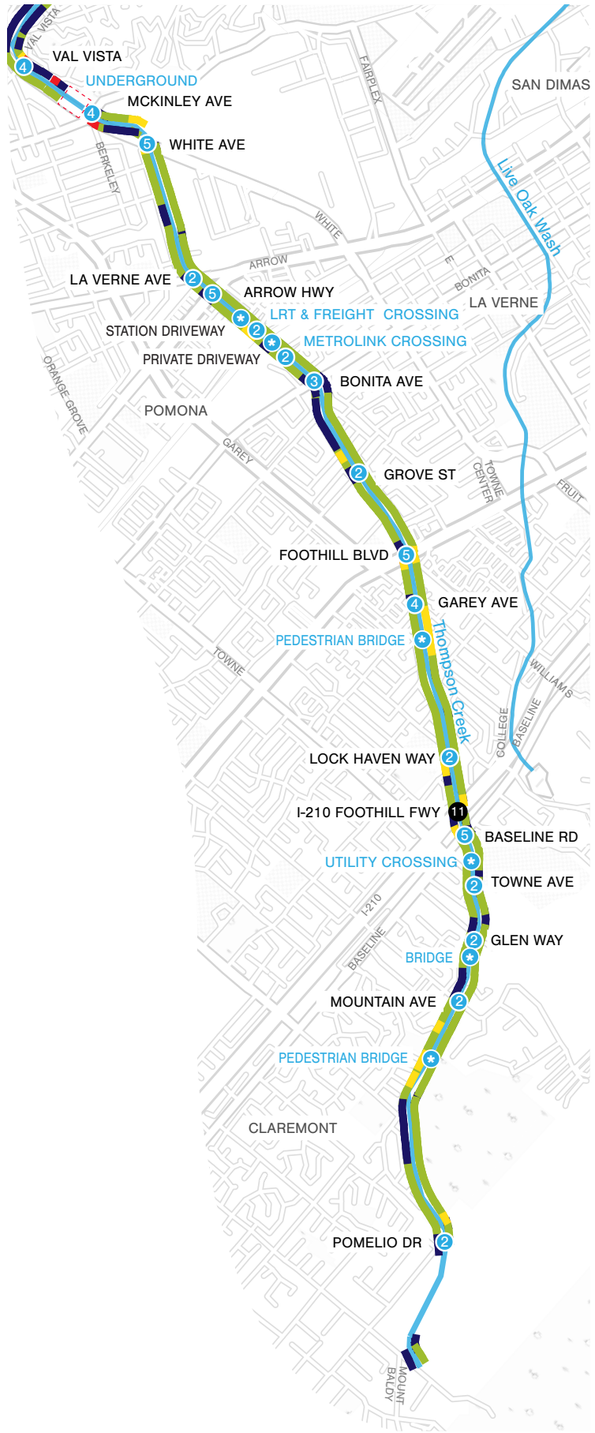
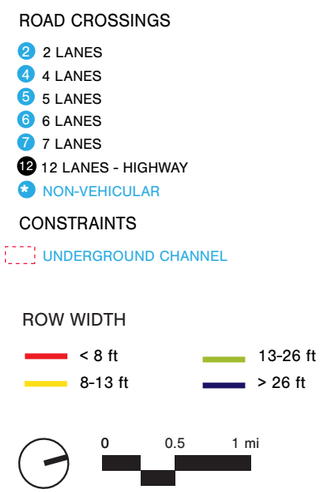


Figure 4-11. Thompson Creek constraints

Constraints

Walnut Creek



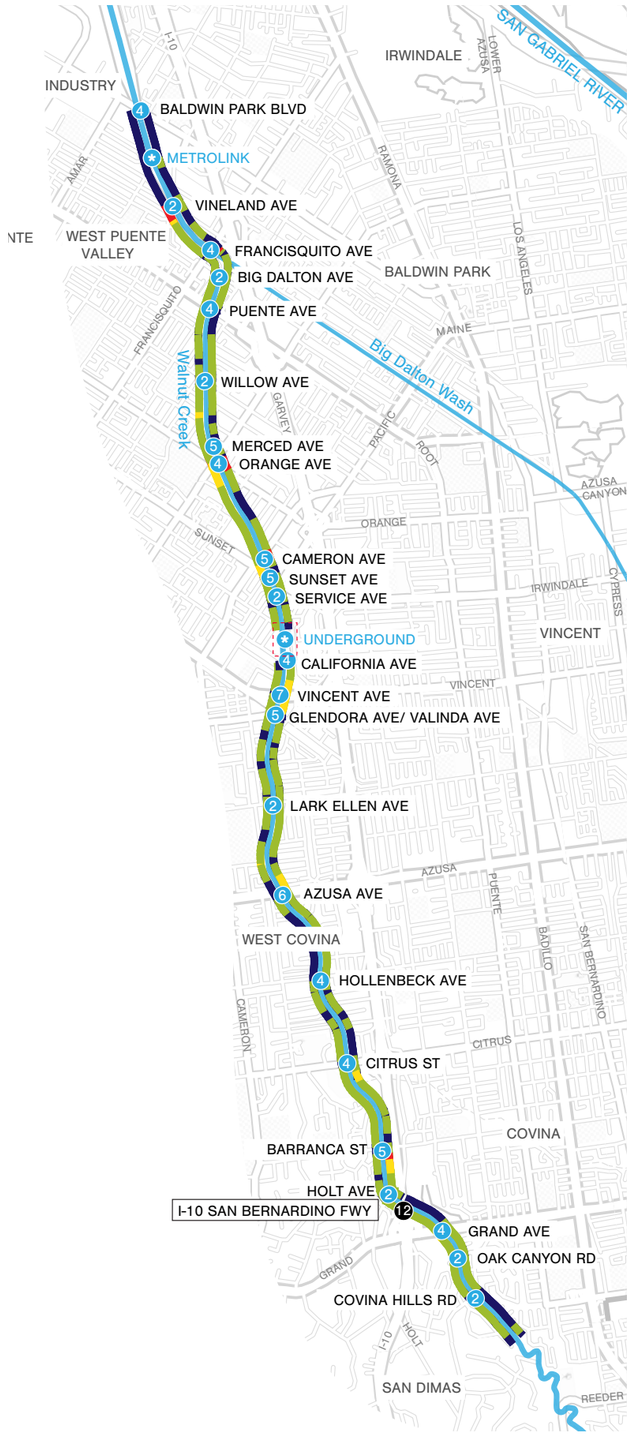


Figure 4-12. Walnut Creek constraints

Opportunities

Alhambra Wash

ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK

- BIKE PATH
- POTENTIAL CONNECTION TO EXISTING MULTI-USE TRAIL

PROPOSED CROSSING TREATMENTS

- # CROSSING
  Refer to table on next page for more information

CHANNEL CROSSING

- NON VEHICULAR CROSSING

0 0.3 0.5 mi

Figure 4-13. Alhambra Wash opportunities

Crossing treatments Alhambra Wash

Crossing #	Crossing	Treatment
1	UP Railroad and Mission Road	Construct an overcrossing above the railroad tracks and either an overcrossing or a crosswalk across Mission Road.
2	Channel crossing south of UP Railroad	Install an east-west cross-channel bridge south of the UP Railroad connecting the Alhambra Wash path to service roads for the golf course and the high school.
3	Alhambra Golf course service road to Corto St.	Install a Class III bike route on golf course service road along south edge of UPRR from Alhambra Wash to Corto Street.
4	San Gabriel High School service road to Ramona St.	Install a Class III bike route on service road along south edge of UPRR from Alhambra Wash to Ramona St.
5	Alhambra City Corporation Yard	Provide guide signage.
6	Ramona Street	Install crosswalk across Ramona Street and separated bike lanes on the Ramona Street bridge.
7	Newby Ave pedestrian bridge	Upgrade bridge to a new ped/bike bridge.
8	Hovey Avenue	Provide an access point at the Hovey Avenue cul-de-sac.
9	Jackson Ave. I-10 Freeway Overcrossing	Create a Class III bike route connecting the Jackson Avenue I-10 Freeway overcrossing to the Newby Avenue pedestrian bridge.
10	Valley Boulevard at Abbot Avenue	Install traffic signal at the northern leg of Abbot Avenue.
11	Walnut Grove Ave.	Install crosswalk, possibly with beacons or traffic signal.
12	Golf cart undercrossings	Modify golf cart bridges to accommodate widening of the Rio Hondo River Trail Walnut Grove Avenue connector to Class I bike path standards.
13	The "Oasis" spillway	Install ped/bike bridge over the Alhambra Wash spillway into the "Oasis" pond.

Figure 4-14. Alhambra Wash crossing treatments

Opportunities

Big Dalton Wash

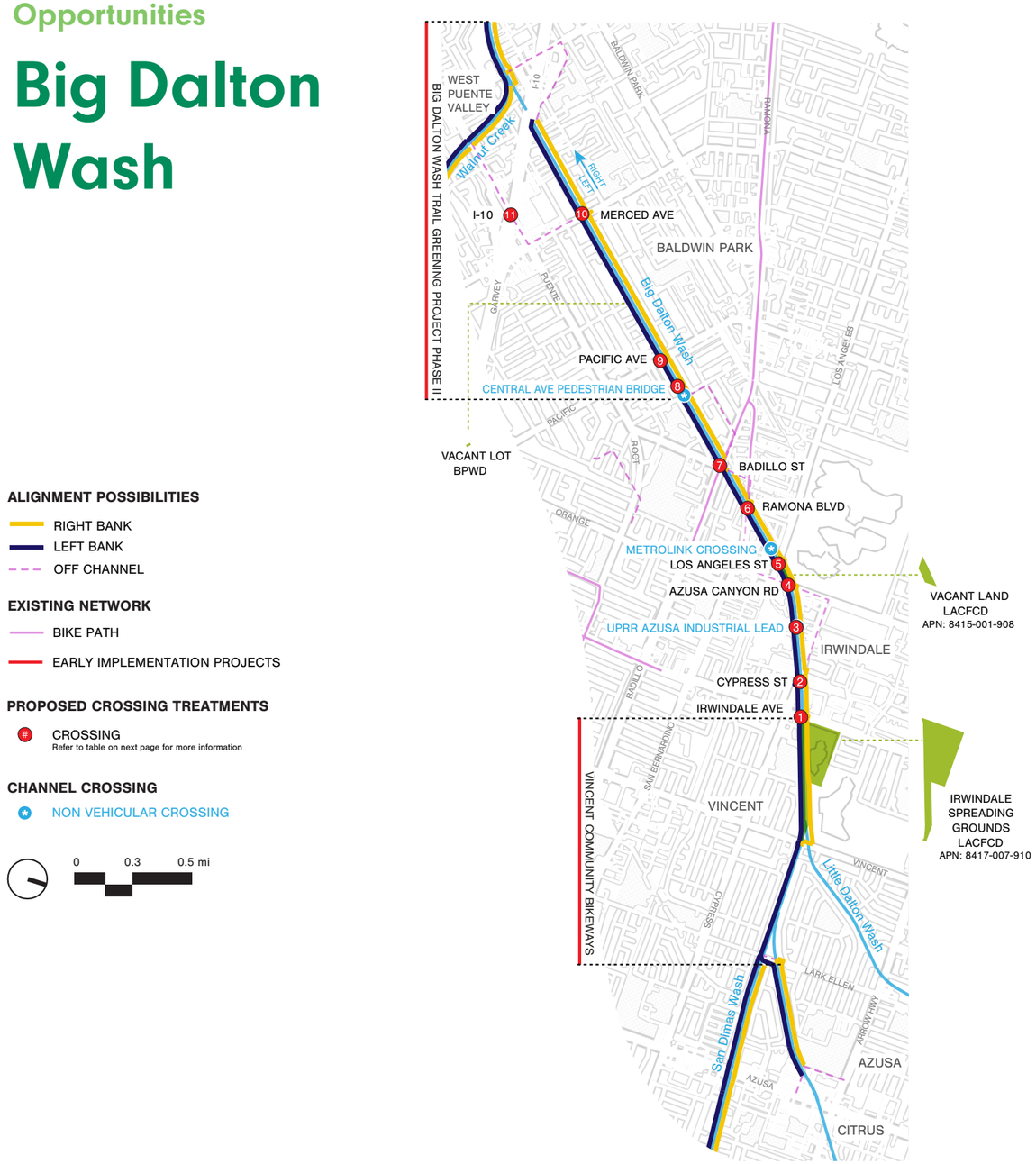


Figure 4-15. Big Dalton Wash opportunities

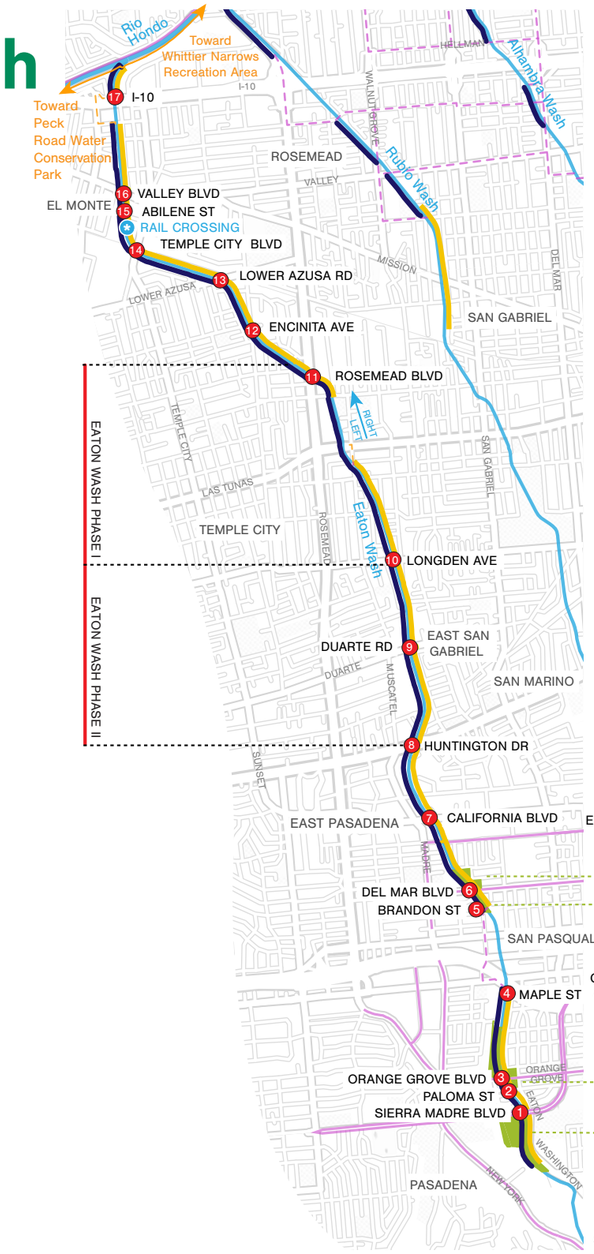
Crossing treatments Big Dalton Wash

Crossing #	Crossing	Description
1	Irwindale Ave.	Install crosswalk, possibly with beacons or traffic signal.
2	Cypress St.	Install crosswalk, possibly with beacons or traffic signal.
3	UPRR Azusa Industrial Lead	Provide an off-channel bike route on Cypress Street and Azusa Canyon Road to bypass this potential new grade crossing.
4	Azusa Canyon Road	Provide an off-channel bike route on Azusa Canyon Road to bypass a potential new grade crossing of the Metrolink tracks
5	Metrolink and Los Angeles St.	Provide an off-channel bike route on Azusa Canyon Road to bypass a potential new grade crossing of the Metrolink tracks
6	Ramona Blvd/San Bernardino Rd.	Provide an access point to a Big Dalton Wash greenway south of Ramona Boulevard/San Bernardino Road.
7	Puente Ave/Badillo St.	Acquire land on the northeast corner of the intersection to provide a bike path between Badillo Street and the Big Dalton Wash to the north.
8	Central Ave. Pedestrian Bridge	Replace ped bridge with bike/ped bridge.
9	Pacific Ave.	Install crosswalk, possibly with beacons or traffic signal.
10	Merced Ave.	Provide an off-channel bike route (Class II, III, or IV) on Merced Avenue.
11	Interstate 10	Provide an off-channel bike route (Class II, III, or IV) on Puente Avenue, providing a connection between greenways on Big Dalton Wash and Walnut Creek.

Figure 4-16. Big Dalton Wash crossing treatments

Opportunities

Eaton Wash



ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK

- BIKE PATH
- EARLY IMPLEMENTATION PROJECTS
- POTENTIAL CONNECTION TO EXISTING MULTI-USE TRAIL

PROPOSED CROSSING TREATMENTS

- CROSSING
  Refer to table on next page for more information

CHANNEL CROSSING

- NON VEHICULAR CROSSING

Figure 4-17. Eaton Wash opportunities

Crossing treatments Eaton Wash

Crossing #	Crossing	Description
1	Sierra Madre Blvd.	Add crosswalk across east leg of Washington Boulevard traffic signal.
2	Paloma St.	Install crosswalk.
3	Orange Grove Blvd.	Install crosswalk, possibly with beacons or traffic signal.
4	Maple St.	Install a contra-flow Class II eastbound bike lane on Maple Street between Sunnyslope Avenue and Foothill Boulvard.
5	Kinneloa Ave./Brandon St.	Provide guide signs at access point.
6	Del Mar Blvd.	Install a connector ramp to the south edge of Del Mar Boulevard.
7	California Blvd.	Install connector ramps to the north edge and south edge of California Boulevard. Install crosswalk, possibly with beacons or traffic signal.
8	Huntington Drive	Install connector ramps to the north edge and south edge of Huntington Drive. Install crosswalk, possibly with beacons or traffic signal.
9	Duarte Road	Install crosswalk, possibly with beacons or traffic signal.
10	Longden Ave.	Install crosswalk, possibly with beacons or traffic signal.
11	Rosemead Blvd	Install crosswalk, possibly with beacons or traffic signal.
12	Encinita Ave.	Install crosswalk.
13	Lower Azusa Rd.	Install crosswalk, possibly with beacons or traffic signal.
14	Temple City Blvd.	Provide a Class III bike route on Temple City Boulevard to Abilene Street.
15	Abilene St.	Provide a Class III bike route on Abilene Street between Temple City Boulevard and Eaton Wash.
16	Valley Blvd.	Install crosswalk, possibly with beacons or traffic signal.
17	I-10	Provide a Class III bike route on Loftus Street, Baldwin Avenue, and Flair Drive.

Figure 4-18. Eaton Wash crossing treatments

Opportunities

Little Dalton Wash

ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

PROPOSED CROSSING TREATMENTS

- # CROSSING
  Refer to table on next page for more information

0 0.1 0.2 mi

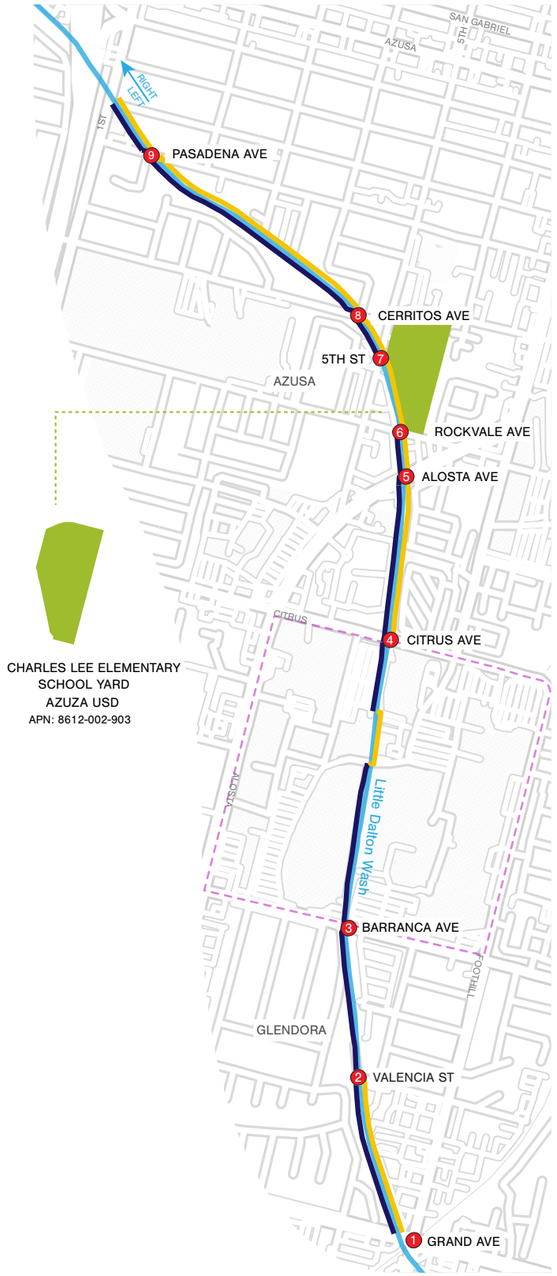


Figure 4-19. Little Dalton Wash opportunities

Crossing treatments Little Dalton Wash

Crossing #	Crossing	Treatment
1	Grand Ave.	Provide guide signs at the access point at the greenway terminus.
2	Valencia St.	Install guide signs.
3	Barranca Ave.	Install crosswalk, possibly with beacons or traffic signal, and off-channel bikeways (Class II, III, or IV) around the Citrus College and Azusa Pacific University campuses.
4	Citrus Ave.	Install crosswalk, possibly with beacons or traffic signal, and off-channel bikeways (Class II, III, or IV) around the Citrus College and Azusa Pacific University campuses.
5	Alosta Ave.	Install crosswalk, possibly with beacons or traffic signal.
6	Rockvale Ave.	Install crosswalk.
7	5th St.	Install crosswalk.
8	Cerritos Ave.	Install crosswalk, possibly with beacons or traffic signal.
9	Pasadena Ave.	Install crosswalk, possibly with beacons or traffic signal.

Figure 4-20. Little Dalton Wash crossing treatments

Opportunities

Puente Creek

ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK

- BIKE PATH
- EARLY IMPLEMENTATION PROJECTS

PROPOSED CROSSING TREATMENTS

- CROSSING
  Refer to table on next page for more information

CHANNEL CROSSING

- NON VEHICULAR CROSSING

0 0.3 0.5 mi

Figure 4-21. Puente Creek opportunities

Crossing treatments Puente Creek

Crossing #	Crossing	Treatment
1	Hacienda Blvd.	Install crosswalk, possibly with beacons or traffic signal, across Hacienda Boulevard and an off-channel Class 2 or Class 3 bikeway along Elliot Avenue, Amar Road, and Unruh Avenue.
2	Valley Blvd.	Install an off-channel Class 2 or Class 3 bikeway along Elliot Avenue, Amar Road, and Unruh Avenue.
3	Proctor Ave.	Install crosswalk, possibly with beacons or traffic signal.
4	UPRR Spur tracks	Request CPUC approval of a passive railroad grade crossing for a bike path.
5	Don Julian Road	Install crosswalk, possibly with beacons or traffic signal.

Figure 4-22. Puente Creek crossing treatments

Opportunities

Rubio Wash

ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK

- BIKE PATH
- POTENTIAL CONNECTION TO EXISTING MULTI-USE TRAIL

PROPOSED CROSSING TREATMENTS

- CROSSING
  Refer to table on next page for more information

0 0.1 0.3 mi

Figure 4-23. Rubio Wash opportunities

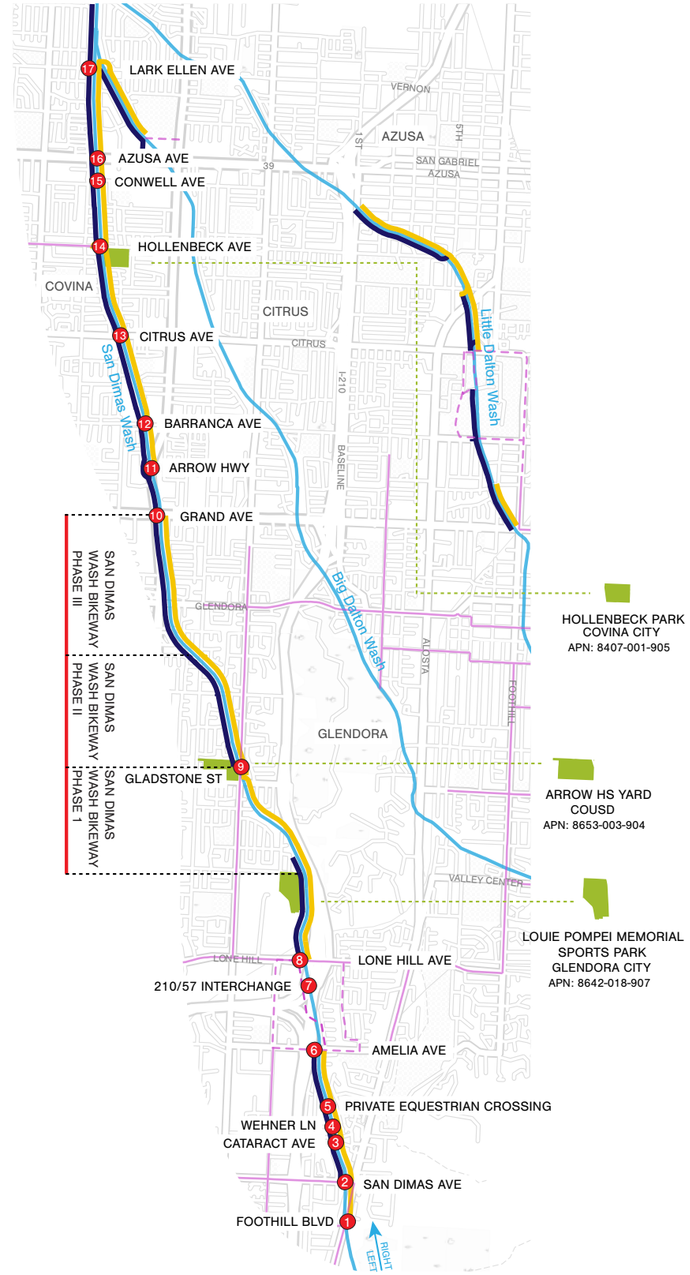
Crossing treatments Rubio Wash

Crossing #	Crossing	Description
1	Rosemead Boulevard and I-10 Freeway interchange	Upgrade the existing pedestrian undercrossing beneath the I-10 bridge to accommodate a Class I bike path.
2	Rio Hondo confluence	Upgrade the existing pedestrian bridge across Rubio Wash at the Rio Hondo confluence to accommodate a Class I bike path.
3	Garvey Avenue	Construct a ramp to connect the right bank (west side) Rio Hondo path to the south side of Garvey Avenue.

Figure 4-24. Rubio Wash crossing treatments

Opportunities

San Dimas Wash



ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK

- BIKE PATH
- EARLY IMPLEMENTATION PROJECTS

PROPOSED CROSSING TREATMENTS

- # CROSSING
  Refer to table on next page for more information

0 0.5 0.9 mi

Figure 4-25. San Dimas Wash opportunities

Crossing treatments San Dimas Wash

Crossing #	Crossing	Treatment
1	Foothill Blvd.	Install crosswalk, possibly with beacons or traffic signal.
2	San Dimas Ave.	Install crosswalk, possibly with beacons or traffic signal.
3	Cataract Ave.	Install crosswalk.
4	Wehner Lane	Install crosswalk.
5	Private equestrian crossing east of Wehner Lane	Provide guide signs.
6	Amelia Ave.	Install crosswalk, possibly with beacons or traffic signal.
7	210/57 Freeway Interchange	Install a new ped bike path through the interchange, possibly along the right shoulder of the eastbound-to-southbound connector road and along south shoulder of I-210 eastbound mainline.
8	Lone Hill Ave.	Install crosswalk, possibly with beacons or traffic signal.
9	Sunflower Ave and Gladstone Street	Extend west end of Glendora Urban Trail along east edge of Sunflower Avenue, within public ROW, to the northeast corner of Gladstone Street/ Sunflower Ave intersection. Extend east end of proposed San Dimas Wash Bikeway Phase II along south edge of Gladstone Street, by means of ROW acquisition from the Charter Oaks USD, to southwest corner of Gladstone Street/ Sunflower Ave intersection. Implement protected intersection treatment on the NE, NW, and SW corners to assist bicyclists across the north and west legs of the intersection.
10	Grand Ave.	Install crosswalk, possibly with beacons or traffic signal.
11	Arrow Hwy.	Install a cross-channel bridge 1,200 feet west of Grand Avenue to connect the right bank (north side) path to the north edge of Arrow Highway. Install a crosswalk across Arrow Highway, possibly with beacons or traffic signal.
12	Barranca Ave.	Install crosswalk, possibly with beacons or traffic signal.
13	Citrus Ave.	Install crosswalk, possibly with beacons or traffic signal.
14	Hollenbeck Ave.	Install crosswalk, possibly with beacons or traffic signal.
15	Conwell Ave.	Install crosswalk.
16	Azusa Ave.	Install crosswalk, possibly with beacons or traffic signal.
17	Lark Ellen Ave.	Install crosswalk. Modify as necessary the Class IV bikeway proposed to be installed on Lark Ellen Avenue by the County's Vincent Community Bikeways project.

Figure 4-26. San Dimas Wash crossing treatments

Opportunities

San Jose Creek

ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK

- BIKE PATH
- EARLY IMPLEMENTATION PROJECTS
- POTENTIAL CONNECTION TO EXISTING MULTI-USE TRAIL

PROPOSED CROSSING TREATMENTS

- CROSSING
  Refer to table on next page for more information

CHANNEL CROSSING

- NON VEHICULAR CROSSING

0 0.5 1 mi

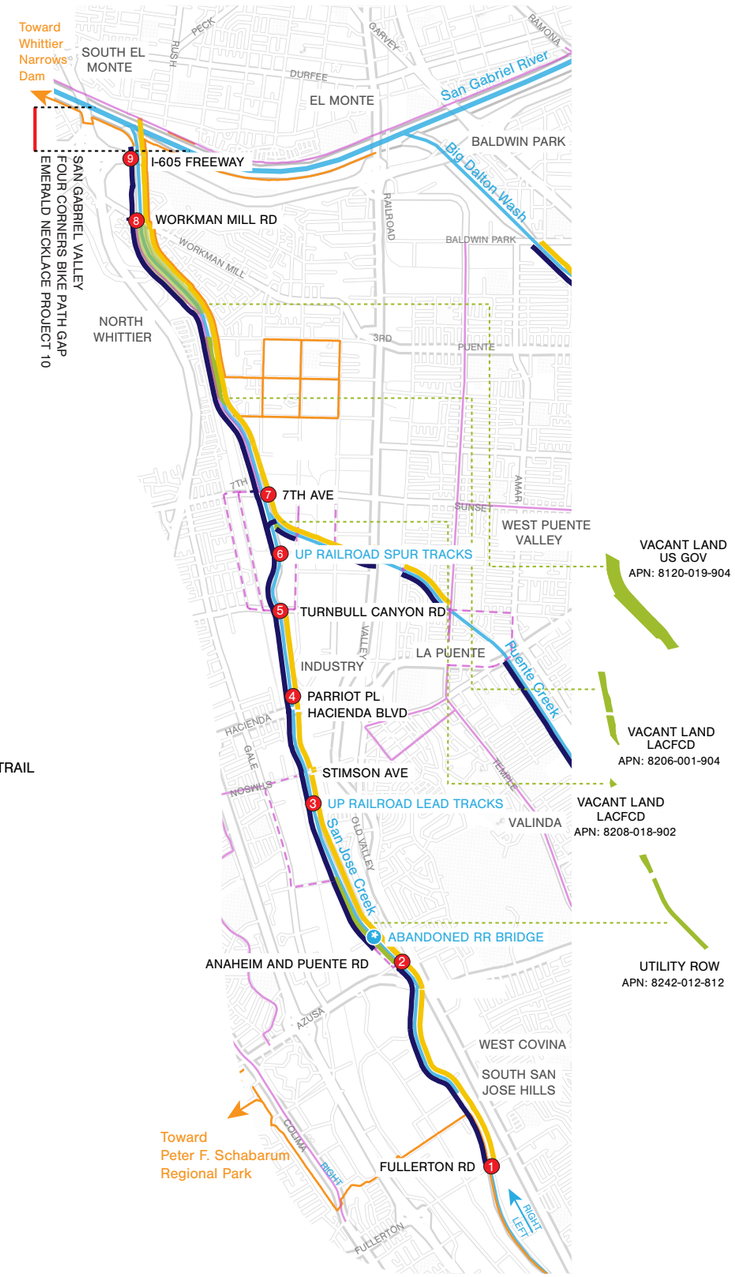


Figure 4-27. San José Creek opportunities

Crossing treatments San Jose Creek

Crossing #	Crossing	Treatment
1	Fullerton Road	Install guide signs at greenway terminus.
2	Anaheim and Puente Road	Install an off-channel Class II or III bikeway on Anaheim and Puente Road and on Chestnut Street.
3	UP Railroad yard lead tracks east of Stimson Avenue	Install an off-channel Class II or III bikeway on Bixby Drive, Gale Avenue, and Stimson Avenue.
4	Hacienda Boulevard and Parriot Place	Utilize the flood control service road undercrossings beneath Hacienda Boulevard. Install a crosswalk across Parriott Place, possibly with beacons or traffic signal.
5	Turnbull Canyon Rd	Install crosswalk, possibly with beacons or traffic signal.
6	UP Railroad spur tracks	Apply to CPUC for new bike path grade crossing across these lightly-used RR tracks. If denied, an off-channel Class III route should be provided on Don Julian Road between Turnbull Canyon Road and the Puente Creek channel.
7	7th Avenue	Install crosswalk, possibly with beacons or traffic signal.
8	Workman Mill Road	Utilize the flood control service road undercrossings beneath Workman Mill Road. Install a ramp connector between the San Jose Creek Overlook Park and the existing trail on the right bank (north side) of the channel.
9	I-605 Freeway	Install a path adjacent to the San Jose Creek Water Reclamation Plant service road along the left bank (south side) of the channel beneath the I-605 Freeway, on a cantilever over the channel if necessary.

Figure 4-28. San José Creek crossing treatments

Opportunities

Thompson Creek

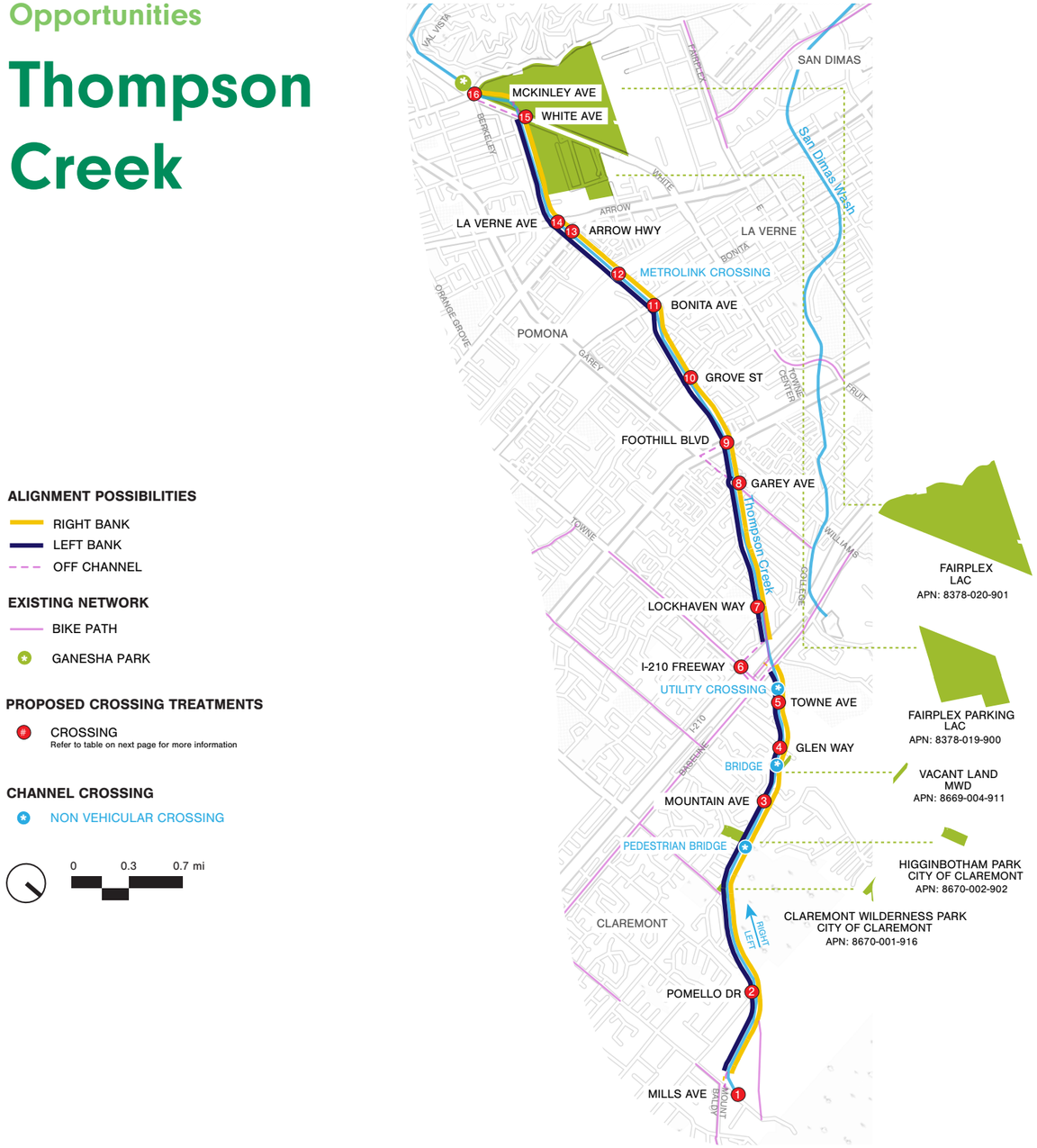


Figure 4-29. Thompson Creek opportunities

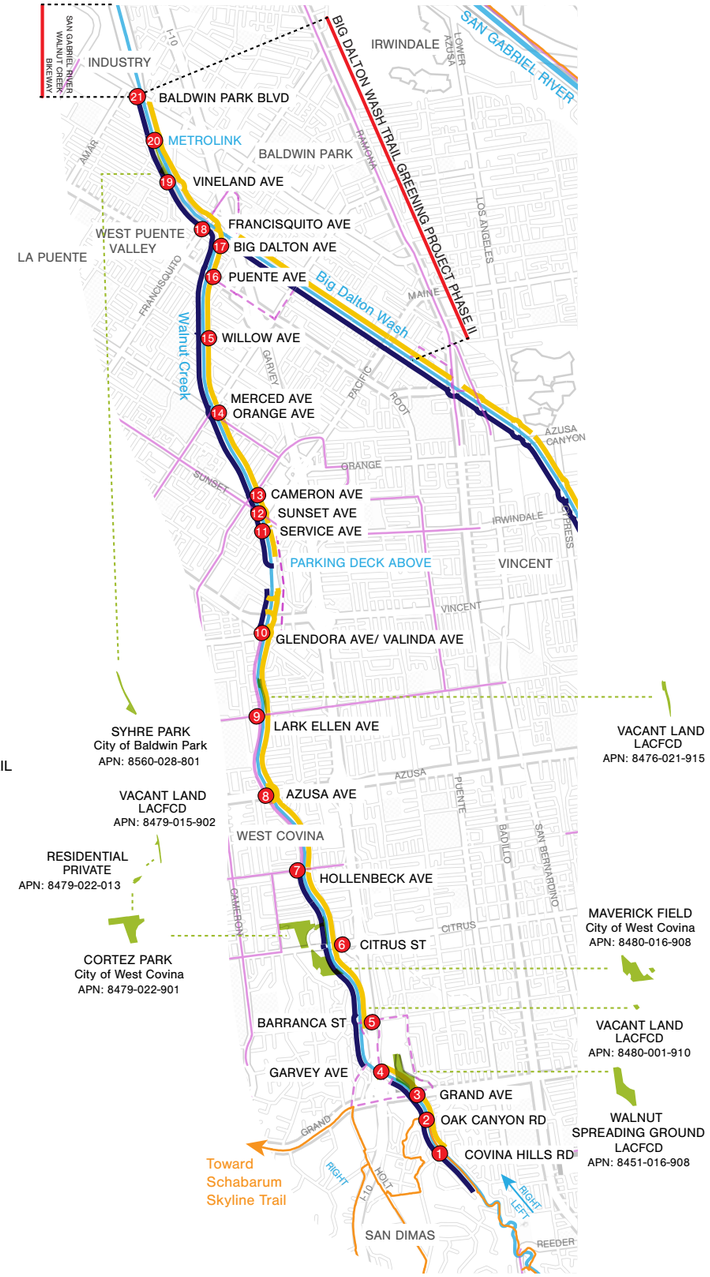
Crossing treatments Thompson Creek

Crossing #	Crossing	Treatment
1	Mills Ave.	Install guide signs at the greenway terminus.
2	Pomello Dr.	Utilize the existing crosswalk.
3	Mountain Ave.	Utilize the existing crosswalk.
4	Glen Way	Provide guide signs.
5	Towne Ave.	Provide an off-channel Class II or III bikeway on Towne Avenue leading to Foothill Boulevard.
6	210 Freeway	Provide an off-channel Class II or III bikeway on Towne Avenue between Foothill Boulevard and the existing bike path south of the freeway interchange.
7	Lockhaven Way	Provide a Class III bike route on Sumner Avenue between the existing bike path access point at Ridgefield Drive and Lockhaven Way.
8	Garey Ave.	Install crosswalk, possibly with beacons or traffic signal.
9	Foothill Blvd.	Install crosswalk, possibly with beacons or traffic signal.
10	Grove St.	Install crosswalk, possibly with beacons or traffic signal.
11	Bonita Ave.	Install crosswalk, possibly with beacons or traffic signal.
12	Metrolink and Metro Light Rail grade crossings and station driveway	Install a new ped/bike overpass above five railroad tracks and two driveways, with a connecting bridge to an elevator/ staircase structure serving the two train stations.
13	Arrow Hwy.	Install crosswalk, possibly with beacons or traffic signal.
14	La Verne Ave.	Install crosswalk, possibly with beacons or traffic signal.
15	White Ave.	Utilize the existing traffic signal at Gates 5 and 6 to cross White Avenue. Provide a southbound sidewalk-level bike lane and anorthbound Class 2 bike lane on White Avenue.
16	McKinley Ave.	Provide a southbound sidewalk-level bike lane and anorthbound Class 2 bike lane on White Avenue.

Figure 4-30. Thompson Creek crossing treatments

Opportunities

Walnut Creek



ALIGNMENT POSSIBILITIES

- RIGHT BANK
- LEFT BANK
- OFF CHANNEL

EXISTING NETWORK

- BIKE PATH
- EARLY IMPLEMENTATION PROJECTS
- POTENTIAL CONNECTION TO EXISTING MULTI-USE TRAIL

PROPOSED CROSSING TREATMENTS

- # CROSSING
  Refer to table on next page for more information

0 0.5 1 mi

Figure 4-31. Walnut Creek opportunities

Crossing treatments Walnut Creek

Crossing #	Crossing	Treatment
1	Covina Hills Rd	Guide signs.
2	Oak Canyon Rd	New crosswalk. Relocate equestrian trail east of Oak Canyon Road to left bank.
3	Grand Ave	New crosswalk. Modify median.
4	Garvey Ave North	Guide signs.
5	Barranca St @ Garvey North	Existing traffic signal.
6	Citrus St	Bike lanes on Barranca St. I-10 overcrossing.
7	Hollenbeck Ave	New crosswalk.
8	Azusa Ave	New crosswalk. Modify median.
9	Lark Ellen Ave	Existing crosswalk.
10	Glendora Ave/Valinda Ave	Existing traffic signal with bulb out. New over-channel platform on east side of intersection.
11	Service Ave	Guide signs.
12	Sunset Ave	New crosswalks (2) with RRFBs, modify median.
13	Cameron Ave	New crosswalk.
14	Merced Ave/Orange Ave	Existing traffic signal. Aquire ROW from WCUSD.
15	Willow Ave	New crosswalk.
16	Puente Ave	New crosswalk, modify median.
17	Big Dalton Ave	New crosswalk.
18	Francisquito Ave	New crosswalk.
19	Vineland Ave	New crosswalk.
20	Metrolink	New ped/bike overpass.
21	Baldwin Park Blvd	Depends on the other two EIP alignments.

Figure 4-32. Walnut Creek crossing treatments

SECTION 5

GREENWAY OPPORTUNITIES AND EXAMPLE CONCEPTUAL DESIGNS

SECTION 5. GREENWAY OPPORTUNITIES AND EXAMPLE CONCEPTUAL DESIGNS

This section is focused on the development and presentation of resources for greenway project implementation throughout the SGV, including channel ROW availability, greenway alignments and alternative cross sections based on ROW width, potential project subcomponents within channel ROW and on adjacent public land (Greenway Amenities, Pocket Parks and Greenspaces, Safe Crossings, and Stormwater Management), and ten example Conceptual Designs, 3D renderings of select greenway sections, subcomponents, and beneficial elements.

Examples provided in the SGV Greenway Network Plan are not prescriptive and are meant to demonstrate how greenway paths and subcomponents could be applied to opportunity locations anywhere in the SGV Greenway Network. Future project proponents should use the resources provided to identify opportunities and implement greenway projects. Example Conceptual Designs were developed using project opportunity characterization tools and intentionally included a vast array of greenway alignments and sections, subcomponents, and beneficial project elements. With any given tributary segment and adjacent public parcel(s) there are many potential combinations of project elements that can be implemented depending on the community priorities and desires. Section 6.8 details funding resources to pursue projects that address community priorities.

Greenway path alignment maps were developed to identify the ROW availability along Tier 1 segments in greater detail than the tributary characterization presented in the Section 4.2 channel ROW analysis. Section 5.1 discusses alignment ROWs, what those classifications mean for greenway development, and what greenway alignment information is available to support future planning efforts. Project proponents can use resources specified in the Tributary Opportunities and Constraints Section 4.2 to complete a similar exercise for Tier 2 and 3 areas. Example greenway sections, as a function of available ROW width, are also provided in Section 5.1. Greenway alignments, subcomponents, and beneficial elements may be applied throughout the SGV Greenway Network in accordance with the Design Guidelines and Standards (Section 6 and Appendix H).

Greenway safe crossings, including intersection navigation opportunities, were analyzed for the full extent of Tier 1 reaches. Section 5.2 discusses how the types of safe crossings were formulated to provide project proponents with an approach and many examples to develop safe crossings along Tiers 1, 2, and 3 reaches throughout the SGV Greenway Network.

In addition, channel adjacent parcels that could support project subcomponents were identified along Tier 1 reaches. In particular, pocket parks and greenspaces, and stormwater management opportunities were the focus. Section 5.3 discusses how opportunity sites were identified and characterized for future use. Project proponents should use the approach and results to identify subcomponents that may be paired with greenway paths to implement multiple benefit greenway projects throughout SGV Tiers 1, 2 and 3 reaches.

To complement the Board of Supervisors (BOS) motion goals and the SGV Greenway Network Plan's objectives, ten example Conceptual Designs were developed with the project component, greenway path(s), and a broad array of subcomponents and beneficial elements. These are not projects designed for implementation and are provided to demonstrate the tools and resources to formulate a greenway project throughout the SGV Greenway Network. Section 5.4 describes the development of the ten example Conceptual Designs and also shows what multi-benefit greenway network projects in accordance with the SGV Greenway Network Plan objectives. Section 5.5 includes 3D diagrams of some greenway subcomponents and beneficial elements for use throughout the SGV Greenway Network. Additional information is provided in the Design Guidelines and Standards (Section 6 and Appendix H).

5.1 Greenway Path Alignment ROW Opportunities

Tier 1 segments with potential channel adjacent ROW areas were analyzed to identify tributary segments that may support future greenway projects. This analysis went above and beyond the ROW analysis presented in Section 4 in that the Plan Team manually curated potential alignments on Tier 1 reaches. Tier 2 and 3 segments provide similar opportunities, and the same approach can be used to identify viable greenway projects for all SGV Greenway Network Plan reaches. Available ROW width for potential greenway path alignments along Tier 1 reaches is shown on Figure 5-1. A minimum ROW width of 13 feet is needed to implement a greenway path project. These alignments and associated ROW widths may be used in future planning efforts in the SGV by using Appendix G- Greenway Alignment Alternatives. For guidance about how to design greenway path segments associated with different ROW widths refer to this section, along with Section 6, and the Design Guidelines and Standards that accompany the SGV Greenway Network Plan (Section 6 and Appendix H).

5.1.1 Alignment Identification Objective

In the initial phase of characterizing greenways for future planning, we identified all potential segments of Tier 1 channel adjacent right-of-way (ROW) capable of supporting greenways. These segments were identified on both sides of the channel and, when necessary, off-channel to ensure connectivity between on-channel segments. This collection of greenway alignments serves as a tool for pinpointing potential greenway projects in areas where such initiatives have not yet been identified. Additionally, these alignments may be considered in conjunction with other projects, such as Safe Clean Water stormwater management projects (https://safecleanwaterla.org/), that may not initially focus on greenway development.

Existing bike paths and the EIP were included to add context to potential greenway alignments identified as part of the SGV Greenway Network Plan. EIP are in varied stages of design, construction, and completion, which are noted in Appendix G: Greenway Alignment Alternatives, which provides information on channel adjacent ROW availability. Alignments specified in the SGV Greenway Network Plan exhibit numerous connection points to existing greenways, EIP, and other destinations, which present opportunities to maximize connectivity across the SGV.

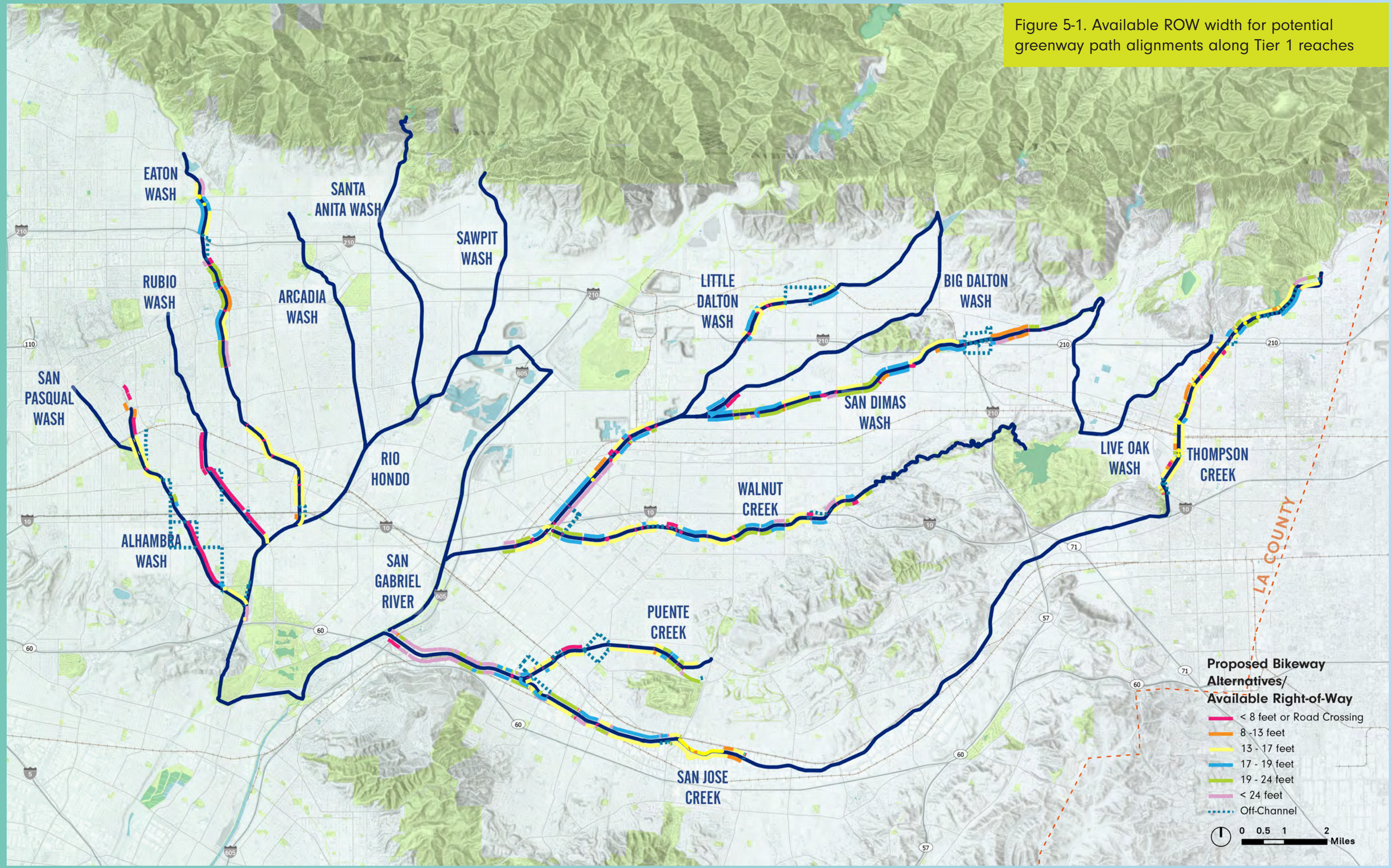
5.1.2 Alignment Identification Methodology

The potential greenway alignments were developed with consideration of constraining features such as ROW width limitations, vegetation, utility structures, railroad crossings, intersections, parking lots, etc. Eight greenway cross-sections, applicable to all three tributary tiers, were considered for four different ROW widths (13 ft, 17 ft, 19 ft, and 24 ft) where each cross-section was developed for a different mix of uses. The four different ROW widths were considered because they each support varied use types (i.e., pedestrian, cyclist, and equestrian paths). ROW width classification may be conducted for Tier 2 and 3 reaches by project proponents using a GIS desktop analysis conducted using tools provided in Appendix B: GIS Analysis, Database, and Mapping, as done for Tier 1 reaches, or through physical verification of ROW availability. Table 5-1 provides a summary of potential greenway uses for each ROW width. Figure 5-2 to Figure 5-7 demonstrate example cross sections for multiple users if the available ROW is at least 13 feet, 19 feet, or 24 feet. Additional greenway sections are provided in the Design Guidelines and Standards (Appendix H).

Table 5-1. SGV Greenway Network ROW width cross section summaries

Minimum ROW Width	Use Type			
	Ped (min width 4 ft)	**Bike** (min width 8 ft)	**Ped + Bike** (min width 8 ft)	**Equestrian** (min width 4 ft)
13 ft			●	
17 ft	●		●	●
19 ft Option A	●		●	●
19 ft Option B	●		●	●
24 ft Option A	●	●		●
24 ft Option B	●	●		●

Figure 5-1. Available ROW width for potential greenway path alignments along Tier 1 reaches



13 FEET ROW MULTI-USE PATH

This example greenway configuration shows an 8 ft bi-directional shared use path with 2 ft vertical clearance shoulders and 1 ft of fencing clearance. These widths meet minimum federal and state standards for bikeways.

A 12 ft wide ***brushed concrete*** path with 2 ft shoulders and 1 ft at the channel wall, 17 ft minimum ROW width, that accommodates bikers, pedestrians, and equestrians can be used if necessary to achieve multi-use trail connectivity, but is not recommended for long distances. Refer to design guidelines for more details.

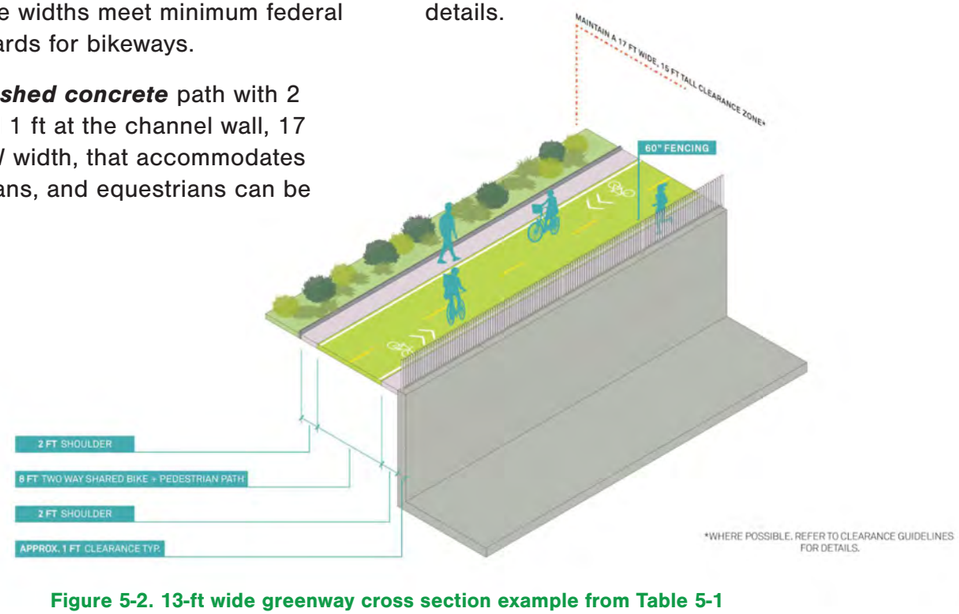


Figure 5-2. 13-ft wide greenway cross section example from Table 5-1

17 FEET ROW MULTI-USE PATH

This example greenway configuration shows a 13 ft shared use path, coupled with an adjacent 4 ft wide multi-use trail. The 4-ft wide multi-use trail is for low use. Refer to design guidelines for more details.

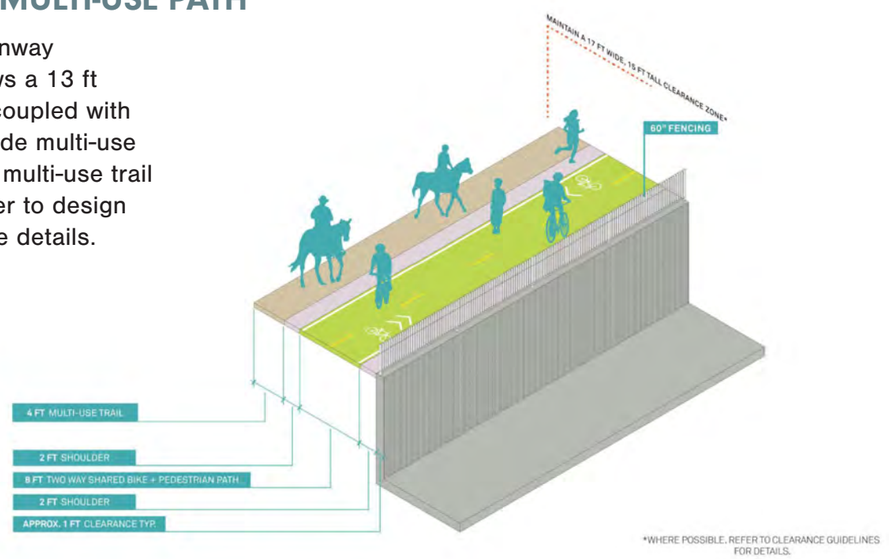


Figure 5-3. 17-ft wide greenway cross section example from Table 5-1

19 FEET ROW MULTI-USE PATH

This example greenway configuration shows a 13 ft shared use path, coupled with an adjacent 5 ft wide multi-use trail and 1ft of planting area. The 5-ft multi-use trail is for low use. Refer to design guidelines for more details.

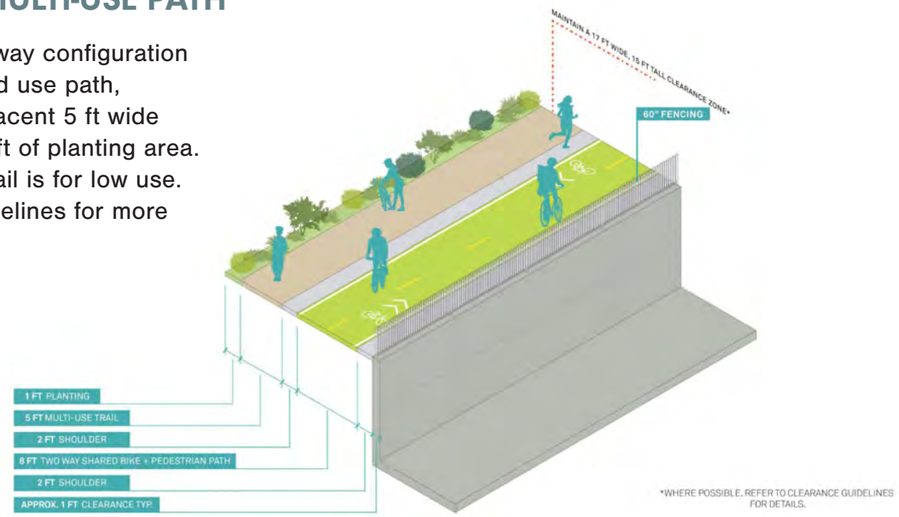


Figure 5-4. 19-ft wide greenway cross section Option A example from Table 5-1

19 FEET ROW MULTI-USE PATH

This example greenway configuration shows a 13 ft shared use path, coupled with an adjacent 6 ft wide multi-use trail. A minimum multi-use trail width of 6 ft is recommended in moderate use areas. A fence/barrier can be added by reducing the trail width by 1 ft and should be considered in high traffic areas. Refer to design guidelines for more details.

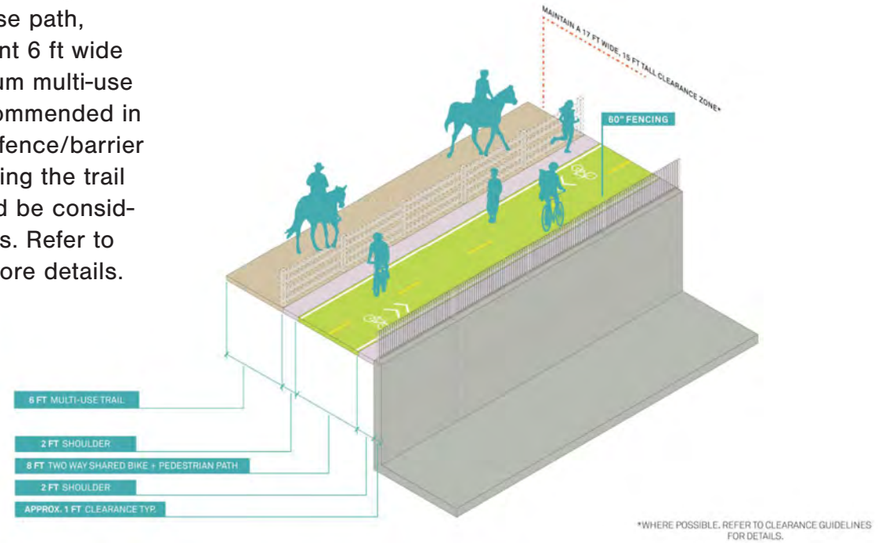


Figure 5-5. 19-ft wide greenway cross section Option B example from Table 5-1

24 FEET ROW MULTI-USE PATH

This example greenway configuration shows a 13 ft shared path, coupled with an adjacent 8 ft multi-use trail, optional fence, and landscaping at the edge. Barriers are recommended in high-traffic areas. With adequate ROW, barriers can increase safety by separating different user-types. Refer to design guidelines for more details.

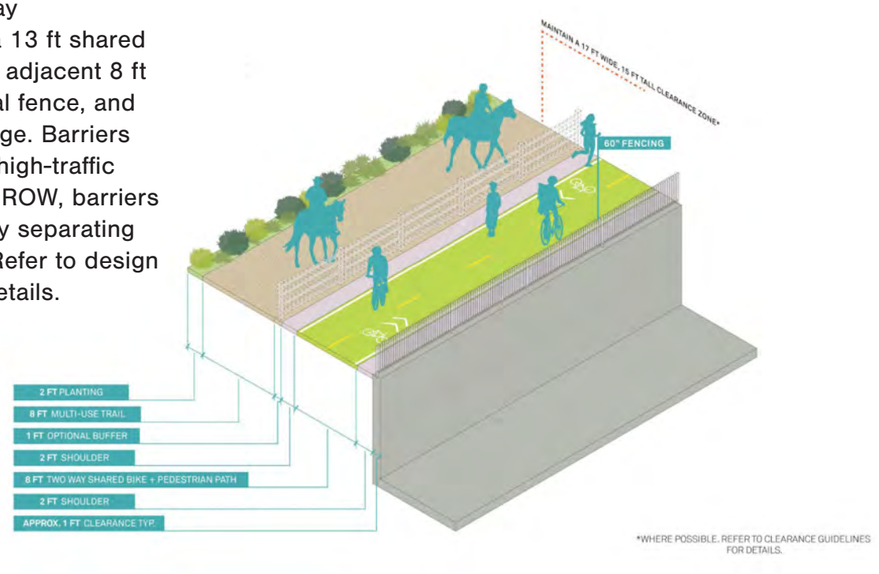


Figure 5-6. 24-ft wide greenway cross section Option A example from Table 5-1

24 FEET ROW MULTI-USE PATH

This example greenway configuration shows a 13 ft shared path, coupled with an adjacent 7 ft multi-use trail that is separated by a landscaped median. This separation of uses is ideal in high traffic areas. Refer to design guidelines for more details.

A 24 ft ROW alternative is to have both sides of the channelactivated with a trail on one side and a bikeway on the other; this would allow for larger planting areas and/or meandering paths/trails.

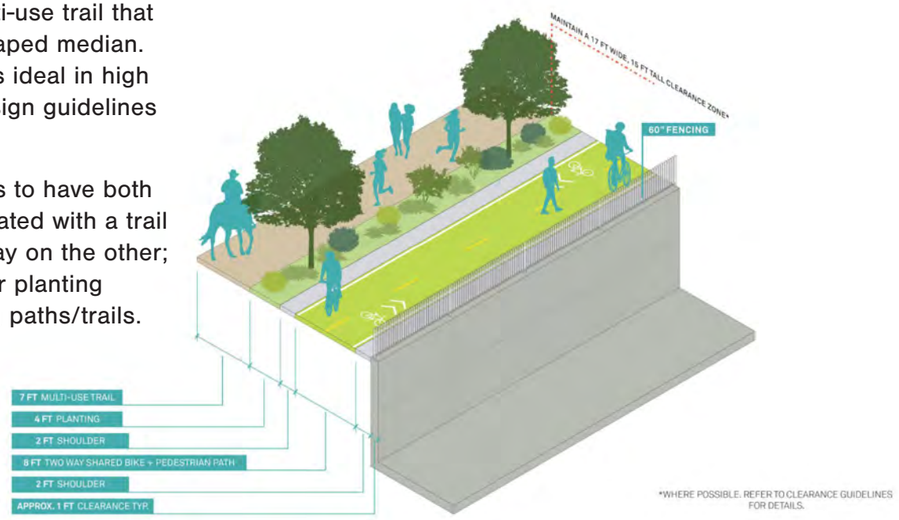


Figure 5-7. 24-ft wide greenway cross section Option B example from Table 5-1

The primary objective is to develop, at a minimum, the 13 feet greenway path (shown on Figure 5-2) on one side of the SGV tributary channel. In unique cases where there is an acceptable 13-ft. bikeway or greenway path on one side of the channel, a natural surface multi-use trail may be implemented in lieu of a bikeway on the opposite side. An example is shown on Figure 5-8. This requires approval by LA County Public Works and other regulatory entities.

ROW widths were assigned throughout Tier 1 reaches by using the minimum ROW for the extent of a potential path between intersections to avoid contracting and expanding greenways. For example, if the ROW width of a stretch ranged between 13 and 19 feet, the Plan Team assigned a width of 13 feet to 17 feet in mapping tools (Appendix G: Greenway Alignment Alternatives), which would leverage the 13-foot-wide cross-section to remain within the available ROW for the entirety of a stretch. The same exercise may be conducted by project proponents on Tier 2 and 3 reaches. This provides flexibility for future greenway project planners.

Available ROW widths were determined without deciding which specific greenway cross section would be used. In cases where excess ROW width exists beyond what is needed for a greenway path, project subcomponents could be implemented in the ROW and should be designed in accordance with the Design Guidelines and Standards (Section 6 and Appendix H). Off channel alignments were delineated by the Plan Team when necessary to connect on-channel greenways. These instances occurred when there was less than 13 ft. of available ROW adjacent to the tributary channel and/or there was a major obstacle such as a highway that would require a substantial and costly overcrossing/bridge). Notes were added to identify alignment lengths that could require additional considerations such as grading to make certain segments ADA compliant (see example in Figure 5-9). Alignments and associated notes are included for each Tier 1 reach in the Greenway Alignment Alternatives in Appendix G.

EXAMPLE OF CHANNEL ACTIVATED ON BOTH SIDES

This example greenway configuration shows a 13 ft shared use path on one side of the channel, with a multi-use trail on the opposite side. This configuration can be useful when right-of-way is insufficient, but multi-use trail connectivity is desired. Refer to design guidelines for more details.

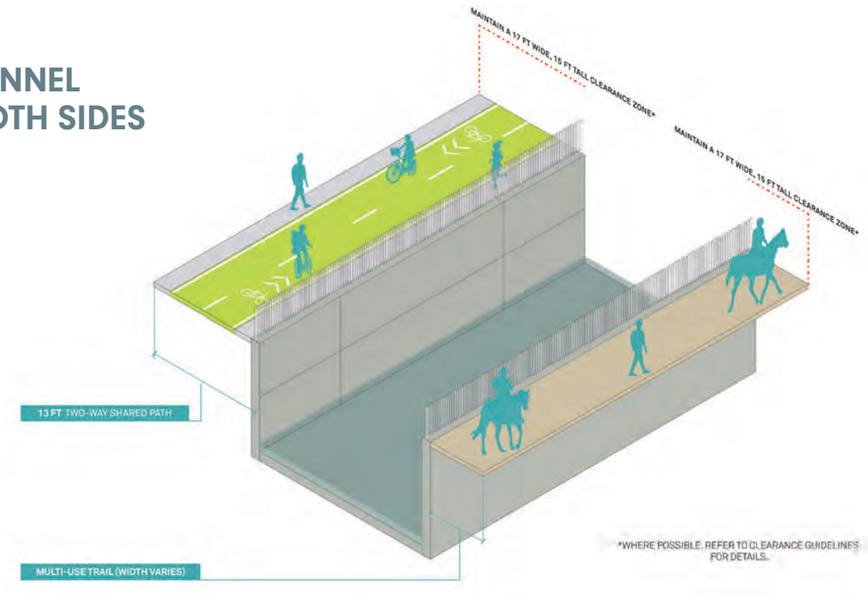


Figure 5-8. Example with 13 feet greenway on one side of channel and separate trail on opposite side

Figure 5-9. Alignment map resource example snapshot along Eaton Wash.

5.2 Safe Crossing Opportunities

Throughout the SGV Greenway Network, approximately 60 miles of Tier 1 tributary segments include 121 potential greenway crossings including driveways, local streets, roads, freeways, and railroad spurs and tracks. Appendix F: Channel Adjacent and Safe Crossing Subcomponent Opportunities, provides guidance for each of the 121 potential crossings. Developing efficient and safe crossings are essential to creating a desirable and continuous greenway system. Tier 2 and 3 segments include the same categories and types of crossings and project proponents may use the 121 example crossings as references to specify their own crossings. Each crossing was and should be evaluated while considering the following factors, barriers, and limitations:

- Ensuring distance from nearest intersection:
  - For signalized intersections, the proposed crossing was placed 200 to 300 ft away from the nearest signal.
  - For unsignalized intersections, the crossing was placed 100 ft away from the nearest signal.
- When either distance was not possible, the route was diverted to cross at the nearest existing intersection.
  - At signalized intersections, high visibility crosswalks (HVC) were selected, with a leading pedestrian interval to be considered.
  - At stop-controlled intersections, HVC were selected.
  - At uncontrolled locations where sufficient distance could not be achieved, the crossing was placed at the leg of the intersection, using the treatment as specified in Table 5-2.
- Coordination is required with whomever owns the transportation facility, whether it be State, County, cities, school districts, electric and water districts, and railroads.
- For rail intersections, it was noted when California Public Utilities Commission (CPUC), Rail Safety Division coordination would be required. The CPUC regulates services and utilities, assuring access to safe and reliable utility infrastructure and services. This includes overseeing grade crossings for all railroads, freight, and public transit. Any modification of a railroad crossing or proposal for a new crossing requires coordination with the CPUC.
- At locations where crossing near the channel was not possible due to proximity to the nearest intersection or roadway configuration (i.e., crossing a freeway), an alternate route utilizing on street bike routes and a combination of crossings was proposed.
- Table 5-2 outlines the crossing classifications based on roadway configurations and posted speed limits.

Table 5-2. Road crossing classifications for SGV Greenways

	Speed (mph)						
Configuration	**15**	**20**	**25**	**30**	**35**	**40**	**45**
2 Lanes	HVC	HVC	HVC	HVC	RRFB	RRFB	RRFB
2 Lanes, with Turn Lane	HVC	HVC	HVC	RRFB	RRFB	RRFB	RRFB
4 Lanes	HVC	HVC	HVC	RRFB	PHB	PHB	PHB
4 Lanes, with Turn Lane	HVC	HVC	HVC	RRFB	PHB	PHB	PHB
4 Lanes, with Raised Median	HVC	HVC	HVC	RRFB	PHB	PHB	PHB
6 Lanes, with Turn Lane	RRFB	RRFB	RRFB	PHB	PHB	PHB	PHB
6 Lanes, with Raised Median	RRFB	RRFB	RRFB	PHB	PHB	PHB	PHB
8 Lanes, with Raised Median	RRFB	RRFB	RRFB	PHB	PHB	PHB	PHB

RRFB: rectangular rapid flashing beacons
PHB: Pedestrian Hybrid Beacon
Highway crossings used off-channel/on-street routes and crossings with classification per the road configuration

Crossing treatments are suggestions generated by a conceptual review of the sites based on field conditions during SGV Greenway Network Plan development, design standards, and the assumed bank of the channel that will be selected for the greenway (Safe Crossings in Appendix F: Channel Adjacent and Safe Crossing Subcomponent Opportunities). See Figure 5-10 for a crossing treatment example along Eaton Wash. Each jurisdiction will require the design of specific crossing treatments based on the conditions at the time of implementation and jurisdiction requirements that consist of crosswalk markings, flashing beacons, or traffic signals as necessary.

At some locations, opportunities have been identified for new overcrossings, cross-channel bridges, and cantilevered platforms. For additional guidance about how crossings should be designed please refer to the Design Guidelines and Standards that accompany the Plan (Section 6 and Appendix H).

Figure 5-10. Example crossing treatment along Eaton Wash

5.3 Subcomponent Opportunities near SGV Channels

5.3.1 Identification of Subcomponent Opportunities on Channel-Adjacent Parcels

Through an in-depth analysis of Tier 1 channel ROW, adjacent parcels, and land uses, 268 potential project subcomponent opportunities were identified for further evaluation. Channel adjacent project subcomponent opportunities were identified immediately adjacent to Tier 1 reaches where there was open space or existing land use that could be modified to provide additional greenway project benefits. Project subcomponent opportunities identified for channel adjacent parcels consisted of:

- Stormwater management
  - Potential surface (parcel identification) stormwater BMPs
  - Potential sub-surface (stormwater conveyance alignment crossings) stormwater BMPs
- Pocket parks and greenspaces
  - Existing park enhancement sites and/or connections (parcel identification)
  - Potential new park or pocket park sites (parcel identification)
  - Open space enhancements to existing school sites and/or neighborhood connections (parcel identification)

Greenway amenities are an important subcomponent and may be applied along greenway paths and pocket parks and greenspaces as described and specified in the Design Guidelines and Standards (Appendix H). The SGV Greenway Network Plan also provides examples of many different greenway amenities in the example Conceptual Designs (Section 5.4). Guidance for safe crossing subcomponents is provided in the Safe Crossing section (Section 5.2).

For guidance on the planning and design of stormwater management and pocket park and greenspace project subcomponents on channel adjacent sites; refer to the Design Guidelines and Standards (Appendix H). Proponents of projects along Tier 2 and 3 reaches may use parcel ownership data developed in Appendix B: GIS Analysis, Database, and Mapping and the approach described in this section to identify similar opportunity locations that support stormwater management, pocket parks and greenspaces, and amenities to enhance greenway projects.

5.3.2 Channel Adjacent Site Analysis

All potential Tier 1 channel adjacent parcel opportunities were initially screened to identify feasible and desirable opportunities using the following criteria:

- Prioritize parcels that are publicly owned or owned by a public utility to increase the likelihood of successful project implementation.
- Deprioritize opportunities where only subsurface stormwater management BMPs are possible. This is because they would not provide multiple benefits. Opportunities for surface BMPs were not de-prioritized.
- Deprioritize parcels adjacent to tributary segments with insufficient ROW width for a greenway, as shown on the proposed greenway alternatives.
- Deprioritize parcels identified on school properties due to potential challenges complying with the cross-organization consensus.

Project proponents may choose whether or not screening criteria are relevant to how opportunity sites are prioritized as projects are designed. The SGV Greenway Network Plan used this screening to focus attention on opportunities that could be more feasible to implement. Applying the screening criteria mentioned above along with a manual review of opportunity sites, the number of channel adjacent project opportunities was reduced significantly from 268 to 64.

Channel adjacent project subcomponent opportunities were further refined based on qualitative analysis of the remaining 64. Specifically, the remaining opportunities were evaluated for their potential to achieve multiple benefits and capture offsite stormwater. Factors that were considered include: benefit to greenway users, benefit to adjacent neighborhoods, site area, site configuration, accessibility, potential to capture offsite runoff, and constructability. Channel adjacent parcels with the potential to be combined with another nearby subcomponent opportunity were considered to achieve additional benefits. This prioritization allowed the Plan Team to focus more closely on a subset of opportunities and develop summaries for those opportunities.

There was also a strong desire to create a relatively uniform geographic distribution of project subcomponents opportunities along Tier 1 channels throughout the SGV. In some cases, a channel adjacent opportunity that was initially screened out, or not previously identified, was considered to create a more balanced geographic distribution. Little Dalton Wash and Puente Creek opportunity sites for project subcomponents were extremely limited and adding subcomponents on these segments would likely require the acquisition of privately owned parcels to support a greenway project with an associated alignment. This qualitative review of channel adjacent opportunities further refined the list of opportunities from 64 to 35 sites.

All project subcomponent opportunity sites are presented in Figure 5-11 with notation showing which parcels were in the list of 64 and the subsequent list of 35. For resources and toolset on channel adjacent project subcomponent identification and evaluation see Appendix F: Potential Channel Adjacent and Safe Crossing Project Subcomponent Opportunities.

Project summaries were created for the 35 project subcomponent opportunities on parcels, which included a general description, site information, potential site benefits (stormwater management opportunities, reduction in impervious area, park/greenspace construction, neighborhood access to channel ROW, and adjacent to EIP), potential construction logistics (significant site slope, existing structures requiring demolition, construction access via public roadway, significant ground disturbance, tree removal and/or protection, nearby sensitive air quality/noise receptors), and adjacent channel prioritization scores.

The final 35 project subcomponent opportunities on parcels are provided in the SGV Greenway Network Plan and may be considered with future greenway projects. Some of these potential project subcomponent site improvements were combined with selected greenway paths and safe crossings to create the ten example Conceptual Designs. A Technical Memorandum summarizing the selected project subcomponents is provided in Appendix F: Channel Adjacent and Safe Crossing Subcomponent Opportunities.

5.4 Example Conceptual Designs

Ten example Conceptual Designs were developed to illustrate a wide range of opportunities and benefits provided by different greenway project configurations throughout the SGV. Various combinations of greenway path sections, project subcomponents, and beneficial elements were used to illustrate the multitude of opportunities and benefits available to communities. Conceptual Designs are provided to demonstrate what greenway projects could look like throughout the SGV. It is important to note the ten example Conceptual Designs are not currently funded for implementation as formulated. If a project proponent is interested in developing these Conceptual Designs further, much more work would be required to determine feasibility and develop a complete project. The following approach can be used to develop a greenway project throughout all Tiers 1, 2, and 3 tributary segments.

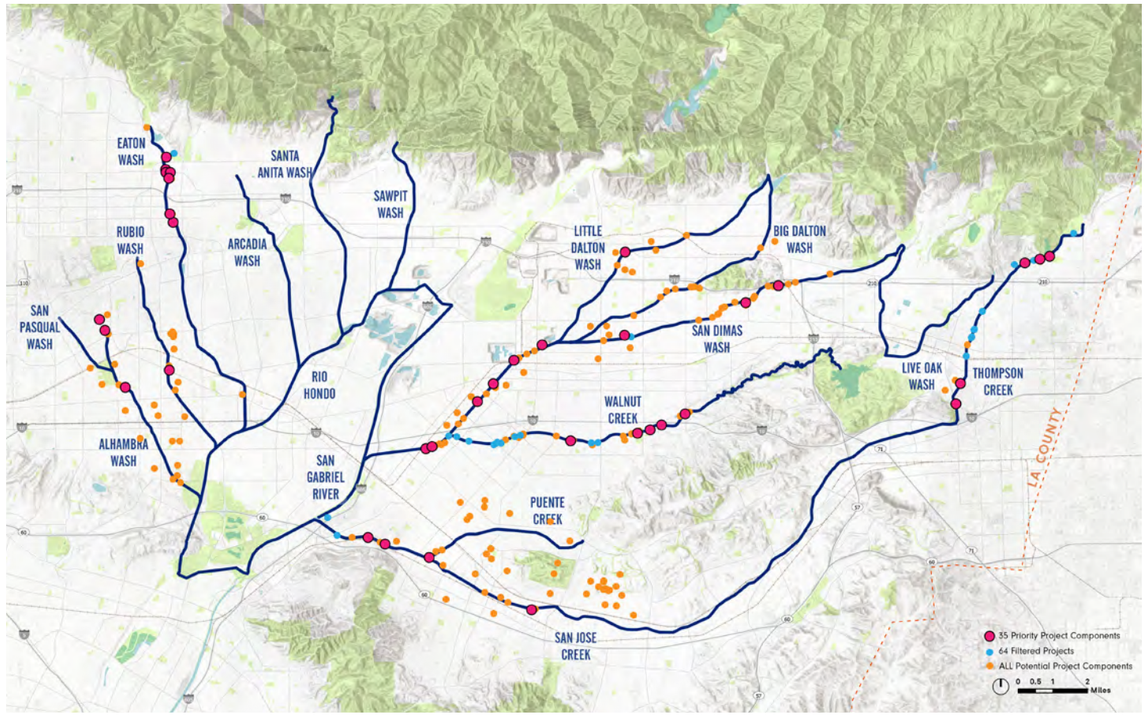


Figure 5-11. Project subcomponent opportunity location map.
The full list of project subcomponents is included in Appendix B map materials that accompany this plan.

To begin the example Conceptual Design process, Tier 1 reaches were carefully analyzed to identify potential designs that could meet multiple plan objectives/regional needs including:

- Promoting Equitable Practices
- Creating Recreational Opportunities
- Integrating Stormwater Management
- Boosting Connections
- Enhancing Natural Habitats
- Enriching Community Well-Being

SGV Greenway Network Plan Statement of Purpose:

- Create a countywide network of interconnected, multi-use community greenways by transforming the storm channels, washes, and creeks that feed into the San Gabriel and Rio Hondo Rivers into a modernized network of bicycle and pedestrian pathways in the SGV.

5.4.1 Factors for Conceptual Design Selection

Greenway alignments and project subcomponents were jointly considered in developing ten example Conceptual Designs for inclusion in the SGV Greenway Network Plan. This mirrors the approach that can be used by a project proponent to identify and conceptualize a greenway project. Projects were selected that had potential to advance connectivity of the greenway network and presented opportunities for addition of adjacent multiple benefit community spaces that could serve as destinations throughout the greenway network.

Greenway factors were considered as part of the basis for identifying example Conceptual Designs included:

- Potential to fill a gap adjacent to an existing greenway or EIP.
- Segment already exists or is proposed by EIP.
- Available greenway ROW.
- Minimal off-channel route requirements to enable greenway continuity throughout the greater network.

Specific factors used to assess project subcomponent opportunities included:

- Constructability (per the analysis in the Project Subcomponent Summaries in Appendix F: Channel Adjacent and Safe Crossing Subcomponent Opportunities)
- Multi-benefit project elements (per the analysis in Section 5.3)
- Greenway need per tributary prioritization (per analysis in Section 4.1)
- Parcel ownership (LA County ownership preferred)
- Proximity to or within a Disadvantaged Community as defined by CES 3.0

Details of project subcomponent factors were compiled to help the Plan Team identify the ten example Conceptual Designs. In a final consideration, the ten example Conceptual Designs were also selected to provide a good geographic distribution of benefits across the SGV. There was no single factor that determined the inclusion of a project in the list of Conceptual Designs, but rather, each potential Conceptual Design was reviewed for its potential to achieve the BOS's directive for the SGV Greenway Network Plan and provide multiple benefits within the overall greenway network.

Multiple departments within LA County and within LA County Public Works reviewed the example Conceptual Designs in addition to the Steering Committee who were introduced to the ten Conceptual Designs in a workshop on May 11, 2022. Other stakeholders were also engaged to review the ten Conceptual Designs including the Trust for Public Land and Sierra Club. Draft Conceptual Designs were also shared as posters during multiple community workshops. The involvement of multiple interested parties improved the ten example Conceptual Designs and made them more representative of the tremendous opportunities and diverse stakeholders in the SGV.

5.4.2 Conceptual Design Methodology

Conceptual Designs were conceived by first looking at the potential for greenways extending in either direction leading away from each selected project component. Conceptual greenway extents ended wherever they met existing or proposed bike paths, at the end of Tier 1 reaches, or where significant off-channel bike routes would be required to reconnect back to the channel (e.g., freeway crossings, no available ROW for extended lengths of channel). Greenways included in Conceptual Designs were only proposed on one side of the channel with associated ROW to provide connectivity to project subcomponents and streets along the route. These ROW examples are not site-specific and could applied to all SGV Network Plan reaches, not only Tier 1.

Project subcomponents associated with Conceptual Designs were selected on a case-by-case basis depending on existing land use, opportunities, and to provide a broad range of elements across the ten examples. Project subcomponents and beneficial elements include those amenities describes in Section 1.3 such as: greenspace, community gardens, seating, park amenities, stormwater management features, greenway access, pocket parks, gateway parks, safe crossings, etc. Section 6 discusses how the resources developed in this plan are used for project implementation.

5.4.3 Example Conceptual Designs

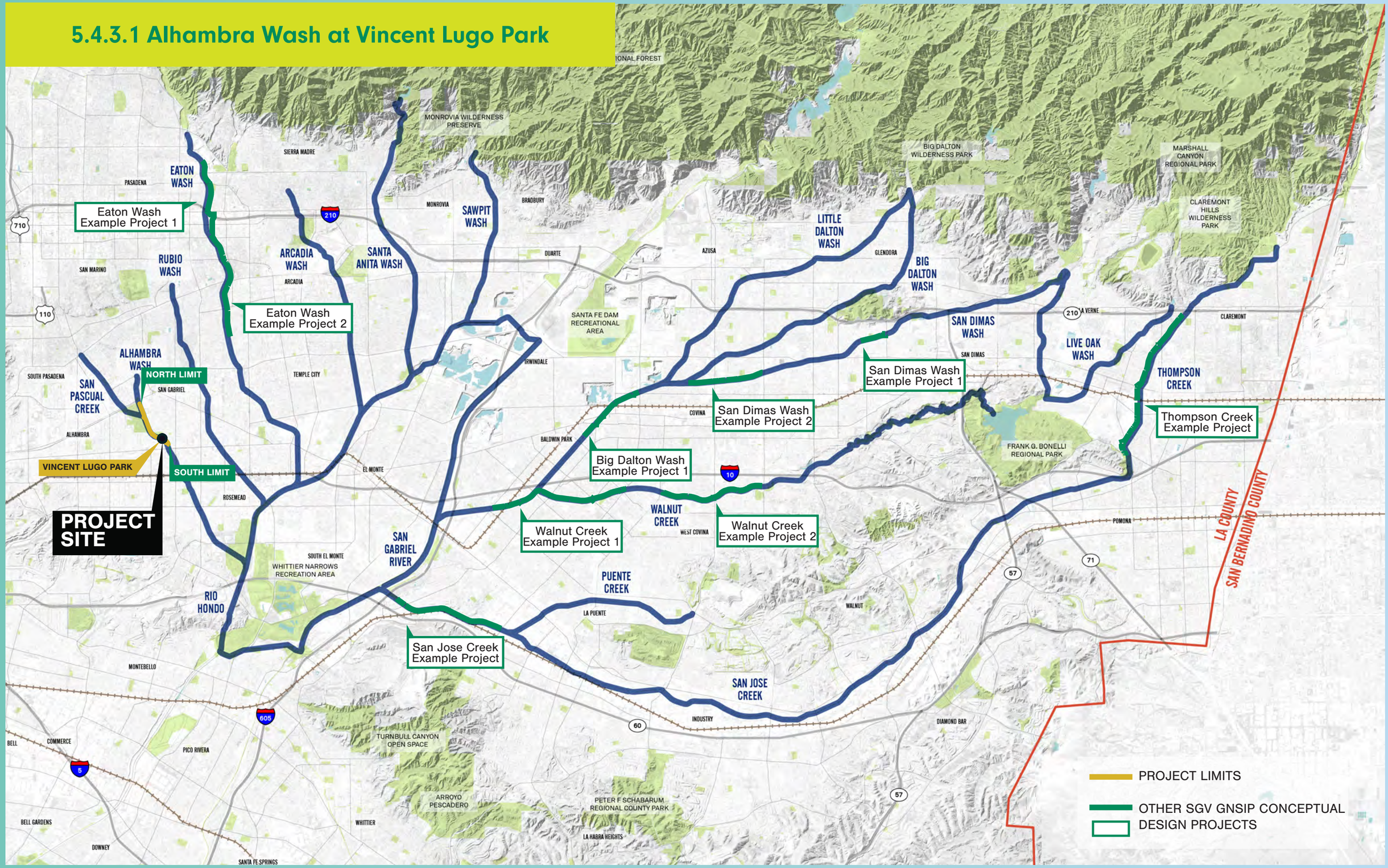
Following the approach described in the preceding section, the Plan Team developed ten example Conceptual Designs throughout the SGV. These concepts are intended to show the potential for new and exciting projects throughout the SGV Greenway Network. Ideally, the Conceptual Designs will inspire future proponents to take a next step towards project implementation or use ideas from these designs to create greenways in other communities. The Conceptual Designs are not funded and are not planned for construction by LA County.

Each Conceptual Design includes the following information/pages:

- **Key Map/Regional Context**
  shows project location on a map within the SGV Greenway Network.
- **Existing Conditions Photos**
  for digital users, 3D interactive photos can be accessed via link.
- **Greenway Network Scale**
  Layout shows the projects connection to other projects and infrastructure along the tributary.
- **Neighborhood Scale**
  Layout shows the project's local connections to the surrounding neighborhood and major community centers in the area.
- **Parcel Scale**
  Layout shows how each project utilizes a particular parcel adjacent to the community with specific amenities and infrastructure adjacent to the greenway.
- **3D Renderings**
  Views were selected and rendered in 3D showing unique subcomponents of each project for further understanding and inspiration
- **Engagement with Cities**
  Individual presentations of the example Conceptual Designs were facilitated with cities that had jurisdiction to provide an opportunity for questions or feedback.

Some design subcomponents include multiple views/pages. Example Conceptual Designs are provided in subsequent sections for the following ten projects:

5.4.3.1 Alhambra Wash at Vincent Lugo Park



EXISTING CONDITIONS

ALHAMBRA WASH AT VINCENT LUGO PARK

This example greenway project on Alhambra Wash proposes enhanced connections between McKinley Elementary School, Vincent Lugo Park, Alhambra Municipal Golf Course, and the neighboring communities.

Aerial view of Alhambra Wash looking north toward Vincent Lugo Park.

Alhambra Wash looking north from existing McKinley Elementary bridge.

Alhambra Wash looking north from Emerson Place.

GREENWAY NETWORK SCALE

ALHAMBRA WASH AT VINCENT LUGO PARK

Available Right-of-Way
13-17 feet
Proposed Off-channel Alignment
Tributary Channels
Existing Bikeways (MTA data)
Proposed Bikeways (MTA data)
School Property
Proposed Bridge Crossing
Retail/Commercial/Industrial Areas
1 Intersection Crossing/Access Point
Greenway/Community Destinations

INTRODUCTION

The Alhambra Wash Example Greenway project provides 1.3 miles of new Greenway, connecting Mission Rd. to the north, and Hovey Ave. to the south. Central to the project is connecting Vincent Lugo Park to the surrounding community. The available R/W is between 13-17 FT wide for the project's complete extents, providing an opportunity for planting along the edge of the 12 FT path that could double as linear stormwater BMPs. Expanding connectivity through the adjacent neighborhoods to major arterials Valley Blvd. to the south and Mission Rd. to the North is proposed. At Hovey Ave., where the wash goes undergrounds, an on-street (Class II or Class III) bike route along Abbot Ave. is proposed. It provides a low-stress connection between Valley Blvd. and the Greenway. To the north, a connection over Mission Rd. and the adjacent Union Pacific tracks would link communities across the tracks. Furthermore, an east-west bicycle and pedestrian route across a proposed cross-channel bridge via Alhambra Park and the school district roads would provide an alternative to Mission Road, and connect San Gabriel High School with its attendance zone to the west.

AGENCY CONTEXT

A portion of the proposed Alhambra Wash Greenway project falls within an area of the wash that is owned and operated by USACE. The project extents fall within the Cities of Alhambra and San Gabriel. Future outreach with the project's neighbors - Almansor Park, Alhambra Golf Course, Winston Smoyer Memorial Community Garden, San Gabriel High, and McKinley Elementary will provide further opportunities to enhance the Greenway project.

PROPOSED GREENWAY ALIGNMENT

Starting at Mission Rd., a 12 FT multi-use path would extend south along the west (right) bank adjacent to the Alhambra Golf Course and around the confluence of the Alhambra and San Pascual Washes. Coordination with Alhambra Parks and Recreation could allow the path to continue along their maintenance access road. At Ramona St., the path would shift to the east (left) bank and follow the channel through Vincent Lugo Park, and past McKinley Elementary to Hovey Ave.

ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1 Mission Rd. + the Union Pacific Tracks
A railroad crossing and a cross-channel bridge would enable this Greenway to fill a missing active transportation link in both the north-south and east directions.

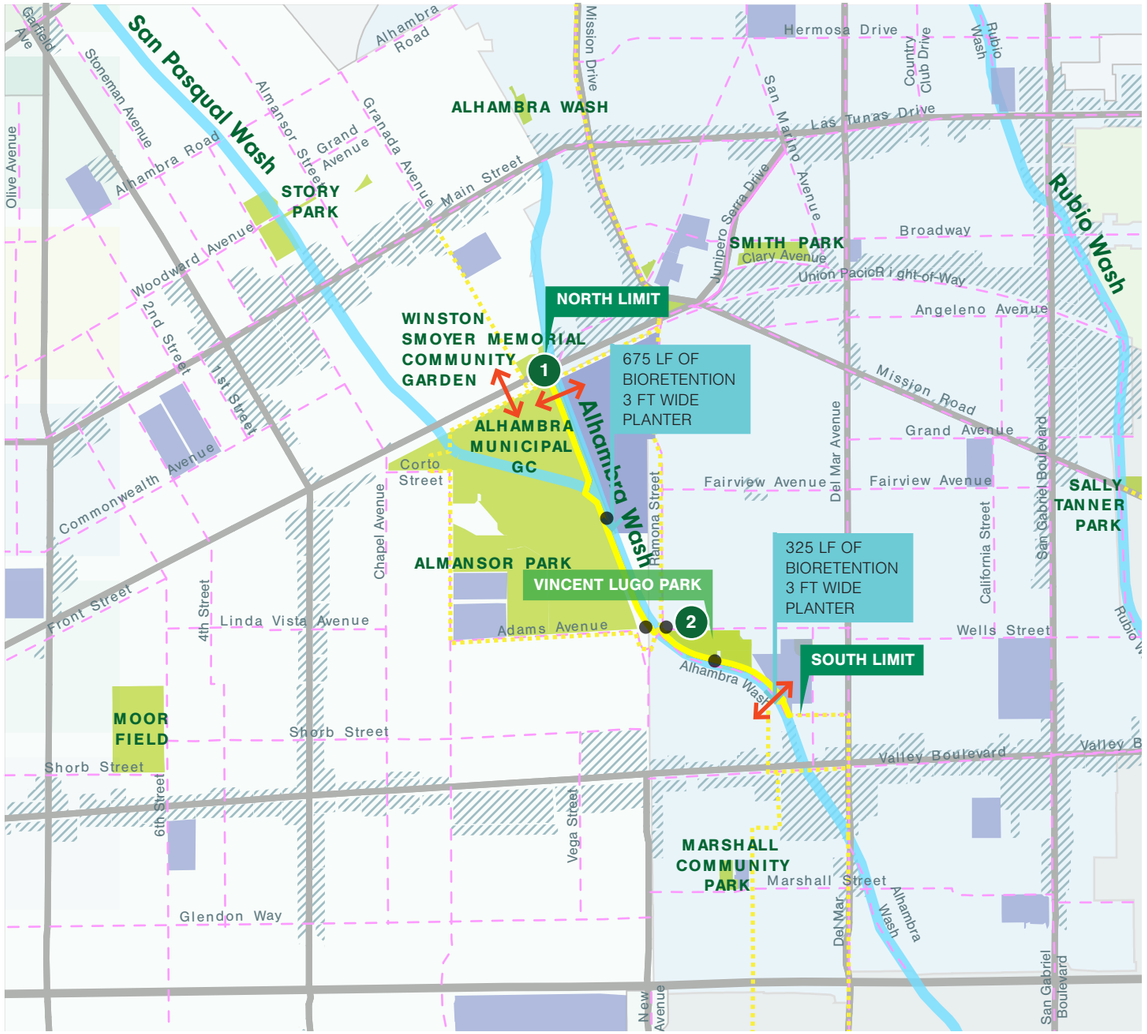
2 Ramona St. + Vincent Lugo Park
A new shared medium-sized gateway should be incorporated into the existing park entrance, with signage directing Greenway users to key park amenities.

3 Newby Ave. / Abbot Ave.
Update the existing pedestrian path as a small gateway and provide a new bridge crossing that is ADA compliant. Add Class I bike route along existing walkway.

4 Hovey Ave.
Provide a small gateway connection, with directional signage and safety bollards to assist in user navigation and connection to the proposed on-street bike route.

GREENWAY NETWORK SCALE

ALHAMBRA WASH AT VINCENT LUGO PARK



GREENWAY SEGMENTS - AVAILABLE R/W

The on-channel alignment neighbors community resources and amenities, creating a real opportunity for increased connectivity and recreation space. Every effort to collaborate in future design should be explored and where feasible, widening the Greenway for additional amenities or increased connectivity should be prioritized.

1. Mission Road to Ramona Street - 3675 LF of 13-17 FT R/W width available.
2. Ramona Street to Hovey Avenue - 2095 LF of 13-17 FT R/W width available. 1507 LF of this section falls within Vincent Lugo Park. These sections should be coordinated with any on-going or upcoming projects at Vincent Lugo Park.

Along the proposed on-channel extents, the SGV Greenway Network Design Guidelines and Standards shall be followed. The proposed section would include new fencing along the channel, a path, and 3 FT wide bioretention planters that provide planting, habitat, beautification, and stormwater infrastructure.

STORMWATER APPROACH

A stormwater project has been proposed for implementation at Vincent Lugo Park as part of the Safe Clean Water Program to capture, treat, and infiltrate dry weather flows from the Alhambra Wash. This prospective project would leverage space available in the Park to enhance or add 10,000 square feet of dry creek bed, 12,000 square feet of new bioswale, 14 shade trees, 8 benches, 1400 LF of nature path, and educational signage. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.

NEIGHBORHOOD SCALE

ALHAMBRA WASH AT VINCENT LUGO PARK

In addition to providing a continuous path alignment, some additional enhancements can be incorporated into the project to create multi-beneficial opportunities. Connecting the path to the existing amenities that Vincent Lugo Park already has to offer is the primary objective.

PROJECT POSSIBILITIES

1 INCREASE CONNECTIVITY
Install a bridge across the channel south of the Union Pacific tracks to provide an east-west ped/bike route along the golf course service road and school district road.

Other connectivity options should be explored and highlighted through the signage program outlined per the design guidelines. Connection should include, but not be limited to: San Gabriel Mission, San Gabriel High School, and Almansor Park.

2 STORMWATER CAPTURE AND TREATMENT
Where the Pascual and Alhambra Washes meet, there's an opportunity to provide additional stormwater capture and treatment in the form of a demonstration garden with educational signage.

3 GATEWAY PARK
Vincent Lugo Park is one of the few public open spaces in the area. The park has many amenities including playground space, paved paths, trails, restrooms, a baseball field, extensive parking, and open lawn. Minor enhancements to improve upon the existing plan is advised to align more directly to the greenway project goals. These include converting the existing decomposed granite path along the channel to a paved mutli-use path and adding signage to direct path users to the park's existing amenities.

4 ACCESSIBILITY
Upgrade the existing bridge to conform to ADA standards of access. Add a Class I bike path along the Newby Avenue walkway between the bridge and Abbot Avenue.

Available Right-of-Way

13-17 feet

Proposed Off-channel Alignment

Tributary Channels

Proposed Bikeways (MTA data)

School Property

Rendering Camera View

1 Elements to Feature

Greenway/Community Destinations

PARCEL SCALE

ALHAMBRA WASH AT VINCENT LUGO PARK

ELEMENTS TO FEATURE

1. Provide a multi-use path along the channel edge, taking advantage of the existing tree canopy along the Alhambra Golf Course edge. Coordination with the golf course to ensure adequate planting and/or netting is provided to mitigate any safety concerns from flying golf balls will be required. In addition to netting, a visual non-transparent shield is recommended so that golfers teeing off would not be distracted by passing bicyclists or pedestrians.

2. Class II or III bike path along New Avenue to Alhambra Corporation Yard.

3. Open space enhancements to create connection between the neighborhood, open space area, and the proposed path. This could be a small interpretative neighborhood garden to demonstrate garden types such as low water use, habitat, or pollinator gardens.

4. Enhance the existing park entry to become a medium sized gateway, with signage directing users to the Greenway path, and other park amenities, and local destinations.

5. Where feasible, the decomposed granite walking trail shall be replaced, or repaired so it aligns with the multi-use path and provides a path for slower traffic.

6. Connection to existing park amenities.

7. Privacy screening between path and school.

8. Demonstration garden at edge of school parking lot. This will act as a small gateway moment at the end of Hovey Avenue.

9. Replace existing pedestrian bridge with ADA compliant bicycle/pedestrian crossing at a minimum width of 10 FT.

10. Small Gateway on west side of bridge.

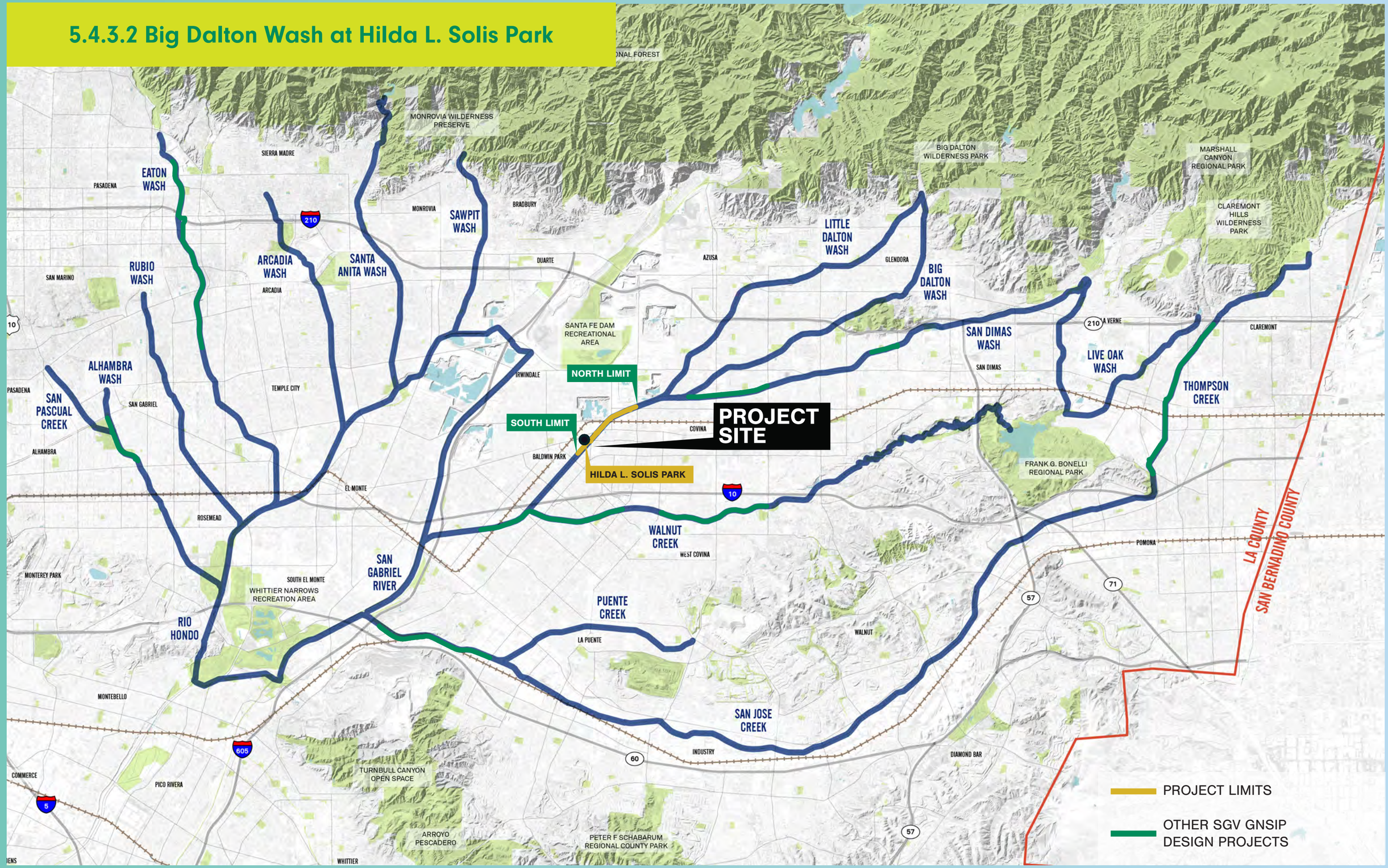
11. On-street bike route alternatives if a Greenway channel were not available to the south.

IN CONCLUSION

This example greenway project was created to promote inspiration for future projects and coordination amongst stakeholders. This section of Alhambra Wash scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This rendering shows enhanced connections to McKinley Elementary School, an enhanced bridge at Newby Ave., along with seating, lighting, and planting along the Greenway. This view also shows the possibility of further coordination with the adjacent school property to add permeable paving to the parking lot, and a group seating area.

Rendering of example greenway project elements. Looking Northwest from McKinley Elementary School.

5.4.3.2 Big Dalton Wash at Hilda L. Solis Park



EXISTING CONDITIONS

BIG DALTON WASH AT HILDA L. SOLIS PARK

This example greenway project at Big Dalton Wash aims to expand connections to Hilda Solis Park, and build off the existing Vincent Community Bikeways project.

Aerial view of Big Dalton Wash looking north from Central Ave.

Big Dalton Wash Service Road looking north from Hilda Solis L. Park.

Big Dalton Wash looking southwest from Hilda L. Solis Park.

Available Right-of-Way
- Less than 8 feet
- 13-17 feet
- 17-19 feet
- 19-24 feet
- >24 feet
- Proposed Off-channel Alignment
- Tributary Channels

- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)
- School Property
- Early Implementation Projects
- Proposed Bridge Crossing
- Retail/Commercial/Industrial Areas
- 1 Intersection Crossing/Access Point
- Greenway/Community Destinations

0 1000 2000 Feet

GREENWAY NETWORK SCALE

BIG DALTON WASH AT HILDA L. SOLIS PARK

INTRODUCTION

Located along the Big Dalton Wash, this example greenway project would start at Hilda L. Solis Park and continue northeast along the east bank for 1.8 miles to Irwindale Avenue. Both ends of this proposed alignment would connect with early implementation (EIP) projects, creating a continuous path for the community.

At the south limit, this segment would connect with the Big Dalton Wash Greening Project Phase II by the City of Baldwin Park; a 12 FT multi-use path along the north bank of Walnut Creek from Baldwin Park Boulevard, up Big Dalton Wash to Badillo Avenue, which is partially funded with a completion date TBD. At the north limit, it would connect with the Vincent Community Bikeways Project by LA County; which extends along Big Dalton Wash between Irwindale Avenue and Lark Ellen Avenue, also scheduled to complete construction in late 2024.

AGENCY CONTEXT

The proposed Big Dalton Wash Greenway project falls within the Cities of Baldwin Park and Irwindale.

PROPOSED GREENWAY ALIGNMENT

The extent of this project would focus on a 12 FT multi-use path along the east bank. Starting at Central Avenue the project would cross the channel and continue northeast to Badillo. For this first stretch, there will be a path on one side of the channel. Continuing east the path would follow the channel to Ramona, then Los Angeles Street and Azusa Canyon Road, crossing over the Southern Pacific rail line, and ending at Irwindale Avenue.

ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Irwindale Avenue – Provide connection to the EIP, and the bike routes at this intersection.
2. Cypress Street
3. Rail spur crossing - Requires an overpass at railroad spur track unless authorization for a grade crossing is obtained.
4. Los Angeles Street / Azusa Canyon Road – The interface with the existing open space at Azusa Canyon Road and Los Angeles Street creates the opportunity for a large gateway moment.
5. Ramona Street / San Bernardino Avenue
6. Badillo Street / Puente Avenue – Provide connection to on-street bike routes on Badillo Street eastward.
7. Central Avenue - Replace existing pedestrian bridge with ADA crossing.

GREENWAY NETWORK SCALE

BIG DALTON WASH AT HILDA L. SOLIS PARK

GREENWAY SEGMENTS - AVAILABLE R/W

Each section of the proposed greenway responds to the available R/W. The following segments are proposed:

1. Irwindale Avenue to Cypress Street - 650 LF of 19 to 24 FT R/W width available. The R/W combined with the adjacent vacant parcel creates a potentially significant greening opportunity. Shade should be prioritized wherever feasible, and if community supported, an urban agriculture project.
2. Cypress Street to Azusa Canyon Road - 2125 LF of 17 to 19 FT of R/W width. Requires an overpass or at-grade crossing.
3. Azusa Canyon Road to Los Angeles Street - 445 LF of 19 to 24 FT of R/W width. Creating a connection to the available parcel BD28 would make a significant greenway node, in this industrial location. Metrolink over crossing at Los Angeles Street.
4. Los Angeles Street to Ramona Boulevard - 1375 LF of 17 to 19 FT of R/W width.
5. Ramona Boulevard to (Puente) Badillo Street - 1220 LF of 13-17 FT of R/W width.
6. Badillo Street to (7.) Central Avenue - 1785 LF of >24 FT of R/W width on east bank for complementary walking trail.

STORMWATER APPROACH

Hilda L. Solis Park itself is somewhat constrained for treating off-site stormwater, but there may be potential for a subsurface infiltration area to treat stormwater from Big Dalton Wash. There is limited stormwater drainage nearby Hilda L. Solis Park to treat stormwater from neighboring areas. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature-based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site-specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.

NEIGHBORHOOD SCALE

BIG DALTON WASH AT HILDA L. SOLIS PARK

A continuous path alignment is proposed along the length of this segment on the east bank of the Big Dalton Wash. The proposed alignment connects to an Early Implementation Project on the west bank at Badillo Street, and a multi-use trail/walking path on the east bank, creating a loop in front of Hilda L. Solis Park. On-street alignments help connect the area around Hilda L. Solis Park to the larger Greenway network.

Available Right-of-Way
- Less than 8 feet
- 13-17 feet
- 17-19 feet
- 19-24 feet
- >24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)

- School Property
- Early Implementation Projects
- Proposed Bridge Crossing
- Retail/Commercial/Industrial Areas
- Green Street Enhancements
- 1 Project Possibilities
- Greenway/Community Destinations

0 400 800 Feet

PROJECT POSSIBILITIES

1 EXPANDED OPEN SPACE
Open space at Azusa Canyon Road and Los Angeles Street is a former quarry site. There is vast opportunity with both the scale and elevation of the site. Other sites of existing open space do not connect directly to the Greenway network. Improving exterior space leading up to these sites, such as wayfinding and improved paving, would create a greater connection.

2 GATEWAY PARK
Hilda L. Solis Park is an existing park with amenities including open space, a playground, basketball courts and exercise equipment. The Baldwin Park Teen Center and Skate Park occupies the north end of the park property. Including a gateway at this site would connect the park to the larger greenway network.

Every connection to the network should be considered a gateway point, and larger gateway expressions should be developed adjacent to existing and possible future open space areas. The vacant land at Azusa Canyon Road and Los Angeles Street, for example, has opportunities for viewing the site from an elevated vantage point - this unique condition should be leveraged and celebrated.

3 STREETSCAPE ENHANCEMENTS TO NEIGHBORHOOD SCHOOLS
The surrounding area east of the channel has a variety of schools within close proximity to each other. Many of the students in the attendance zones of Baldwin Park High School and Central Elementary School live west of the channel. Upgrading the Central Avenue pedestrian bridge and applying streetscape improvements, such as a green streets or a complete streets strategy to major thoroughfares connecting the schools could provide green infrastructure stormwater capture for local drainage and a safer environment for students who walk to school. This could also lead to educational opportunities for instructors to educate their students on topics such as urban heat islands.

PARCEL SCALE

BIG DALTON WASH AT HILDA L. SOLIS PARK

Available Right-of-Way
- 13-17 feet
- >24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)
- School Property
- Early Implementation Projects

- Proposed Bridge Crossing
- Green Street Improvements
- Rendering Camera View
- 1 Elements to Feature
- Greenway/Community Destinations

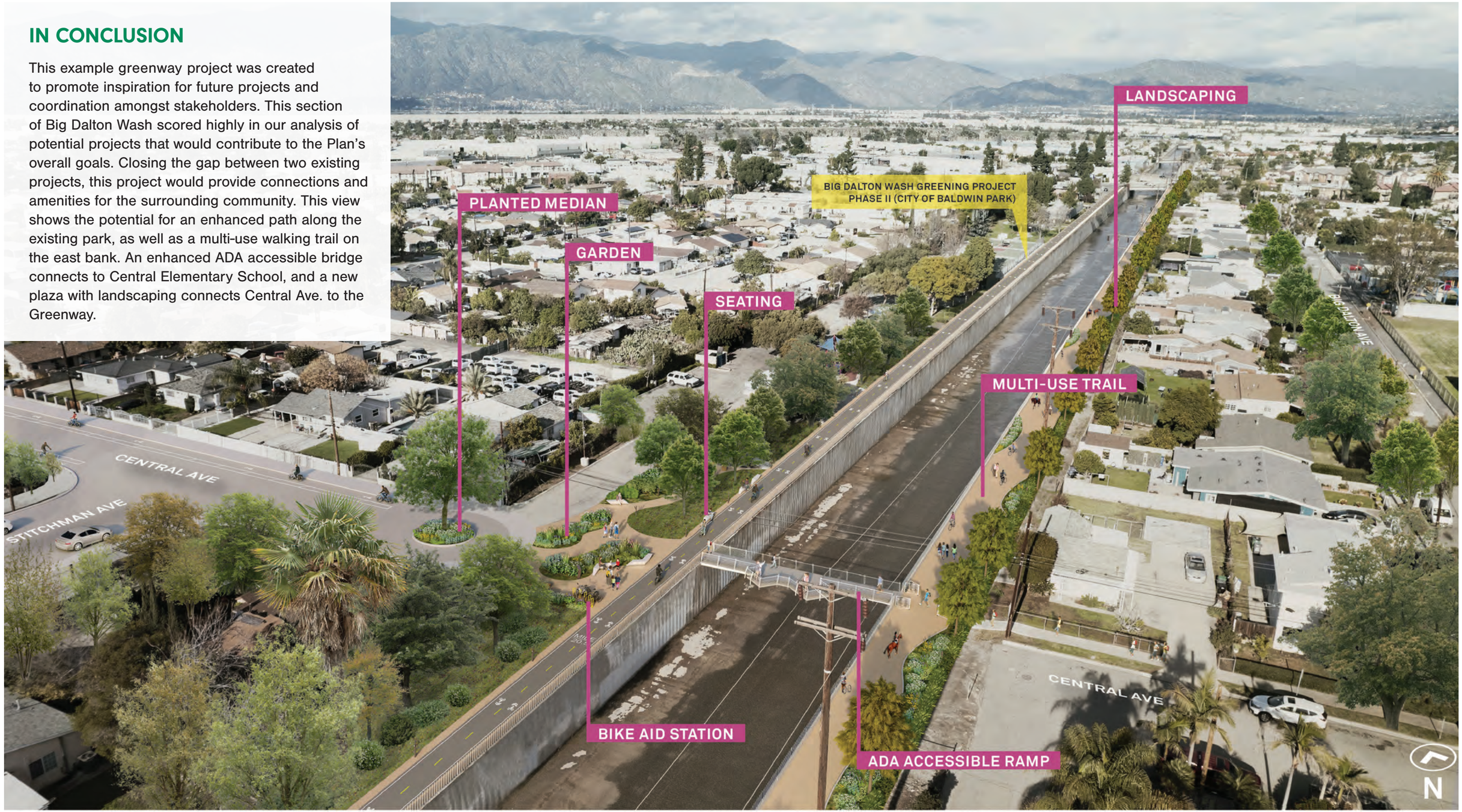
0 200 400 Feet

ELEMENTS TO FEATURE

1. Further enhancement along Puente Avenue and Badillo Street to create a Green street - with stormwater BMPs incorporated into a planted parkway.
2. Small gateways on both sides of Badillo Street, with a graphic community-driven art crosswalk.
3. Medium gateway with Interpretive signage, bike racks, and a safety call box.
4. Cantilevered viewing platform.
5. On-street Class III bike treatment from Metrolink Station to nearby schools and upgrading the existing pedestrian bridge with ADA compliant bicycle/pedestrian crossing at a minimum width of 10' between railings.

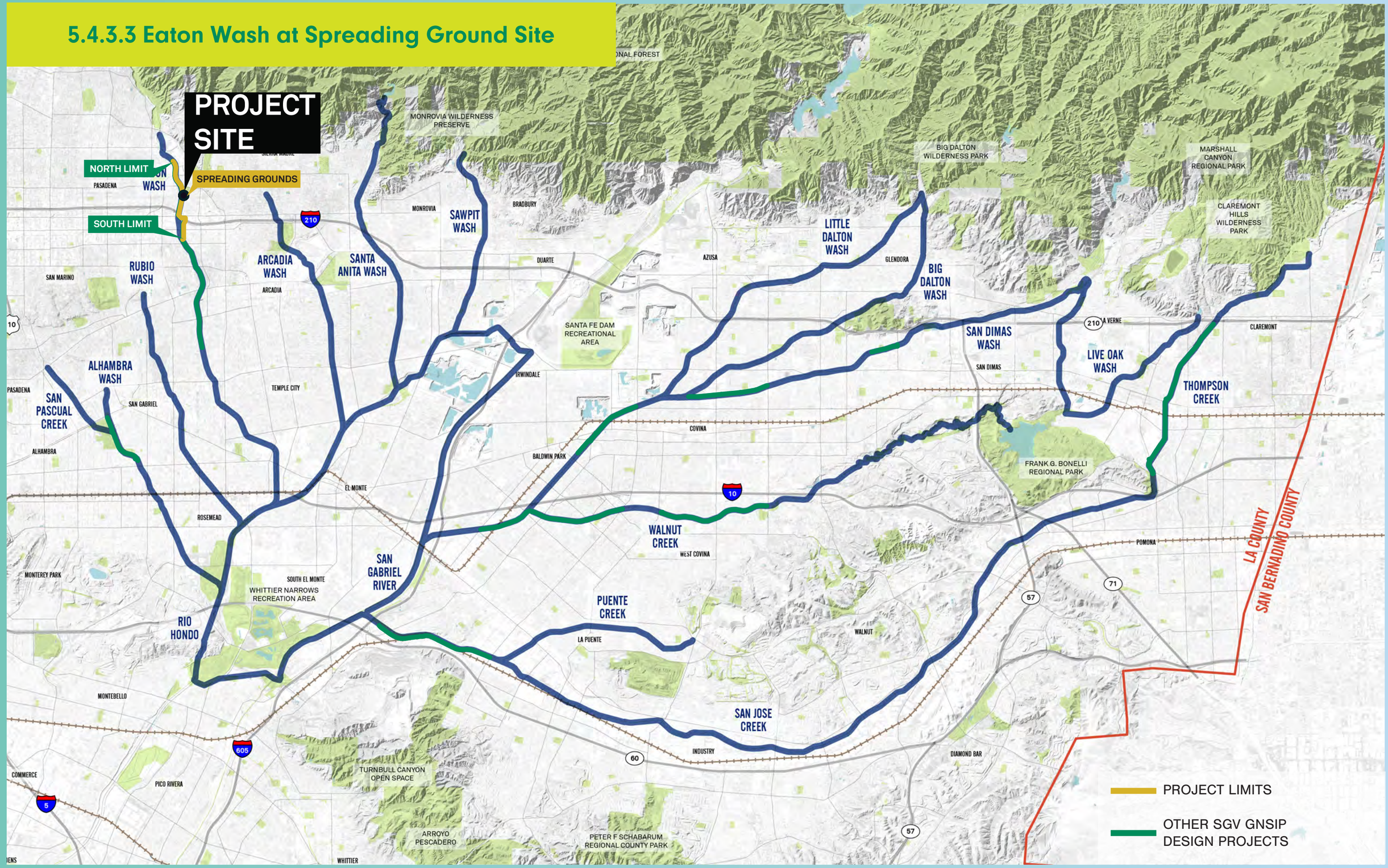
IN CONCLUSION

This example greenway project was created to promote inspiration for future projects and coordination amongst stakeholders. This section of Big Dalton Wash scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. Closing the gap between two existing projects, this project would provide connections and amenities for the surrounding community. This view shows the potential for an enhanced path along the existing park, as well as a multi-use walking trail on the east bank. An enhanced ADA accessible bridge connects to Central Elementary School, and a new plaza with landscaping connects Central Ave. to the Greenway.



Rendering of example greenway project elements. Looking northeast from Central Elementary School bridge.

5.4.3.3 Eaton Wash at Spreading Ground Site



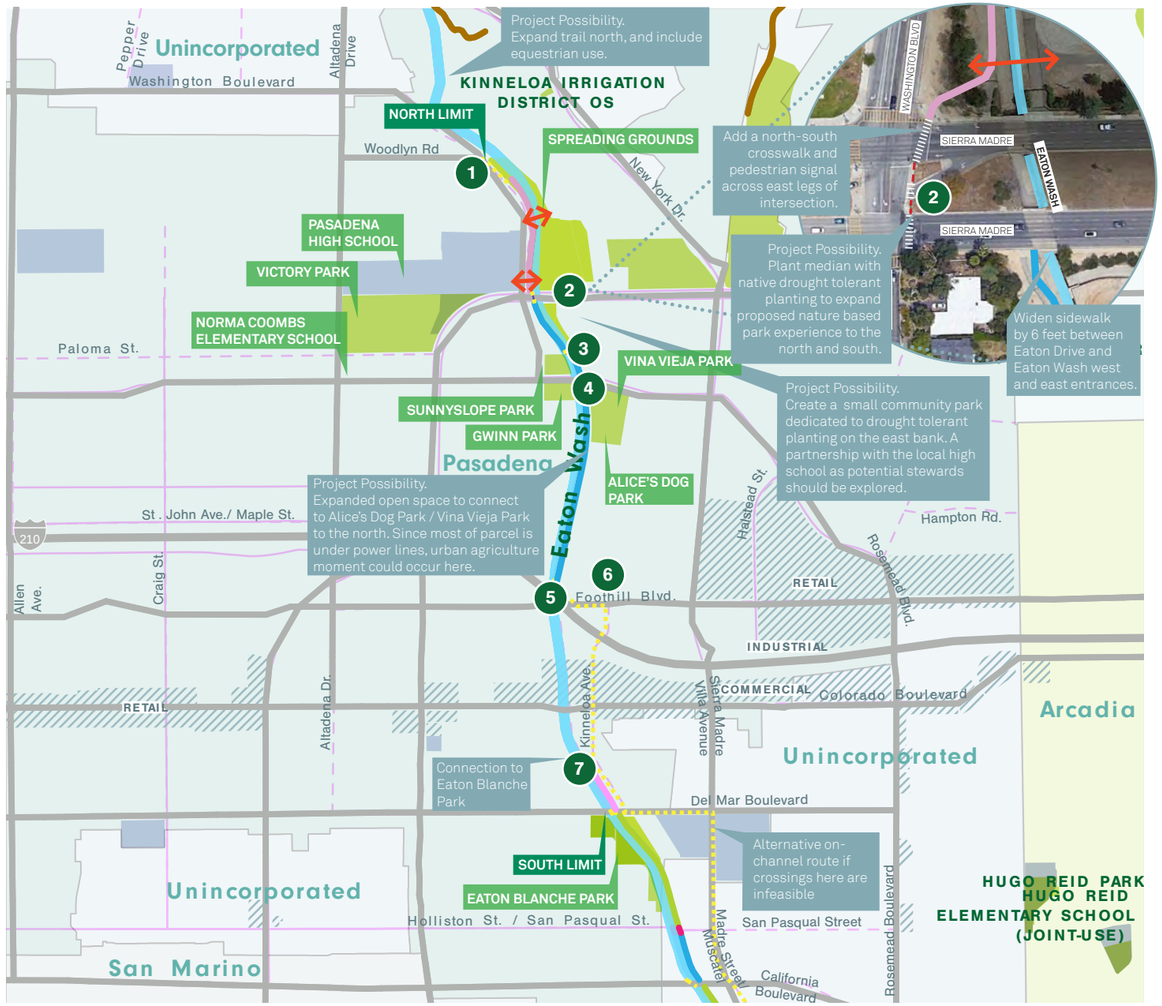
EXISTING CONDITIONS

EATON WASH AT SPREADING GROUND SITE

This example greenway project along Eaton Wash connects a series of parks together with a Greenway and proposes amenities along the path as well as stormwater capture opportunities. This segment of Eaton Wash scored highly in our analysis of potential Greenway projects that could meet Plan goals.

Eaton Wash at Sierra Madre Blvd. looking north

Eaton Wash looking south from Sierra Madre Blvd. along Right-of-Way



GREENWAY NETWORK SCALE

EATON WASH AT SPREADING GROUND SITE

INTRODUCTION

This Greenway project on Eaton Wash provides 2 miles of Greenway, starting at Woodlyn Road to the north, and ending at Eaton Blanche Park, the Eaton Wash project to the south. Central to the project is developing the large spreading grounds site located just north of Sierra Madre Boulevard, opposite Pasadena High School. This space provides significant opportunity to create a park ribbon around the active spreading grounds for pedestrians, students, nature enthusiasts, and cyclists to enjoy.

The entire 2 miles has a minimum of 17 FT of R/W available. Everything beyond the 12 FT path should be used for greening, shade creation, and stormwater BMPs.

The Greenway links a series of existing parks along the channel, creating new opportunities for engagement with varied open space. In addition, the close proximity to schools widens the possibility of introducing educational infrastructure that promotes stewardship of the local environment.

AGENCY CONTEXT

The proposed Eaton Wash Greenway project falls within the City of Pasadena. Coordination with Los Angeles County regarding access and design in and around the spreading grounds will be required.

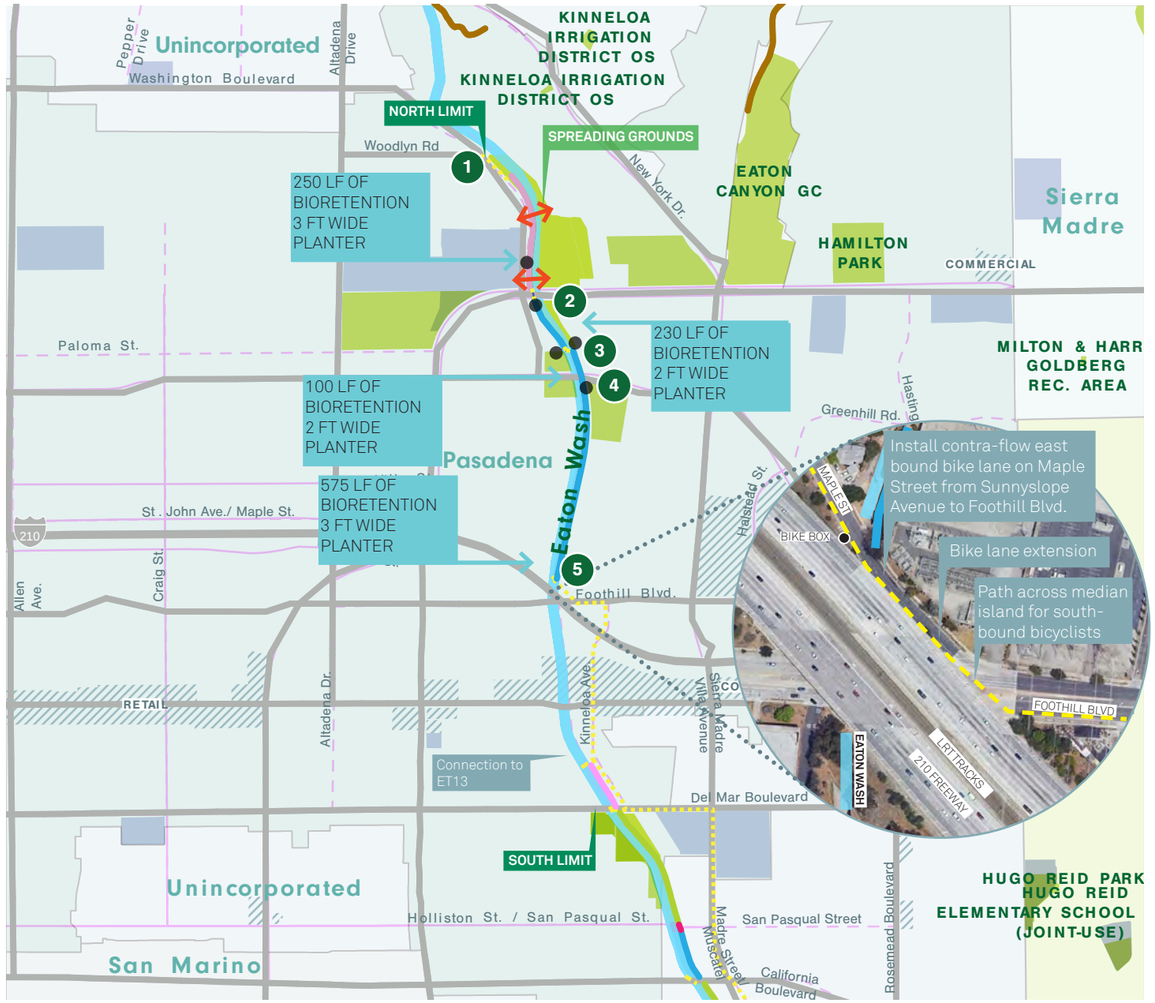
PROPOSED GREENWAY ALIGNMENT

Starting at Woodlyn Road, a 12 FT multi-use path would extend south along the west bank, opposite the spreading grounds at Sierra Madre Boulevard. At Orange Grove Boulevard, the route would shift to the east bank between Sunnyslope Park and Gwinn Park and follow the channel along Vina Vieja Park and Alice's Dog Park. An on-street alignment would occur when the channel meets Maple Street just north of the 210 Freeway. The route would continue south along Kinneloa Avenue until it connects with Eaton Blanche Park.

ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Woodlyn Road
2. Sierra Madre Boulevard
3. Paloma Street
4. Orange Grove Boulevard
5. Maple Street
6. Foothill Boulevard – On-street route connecting to Eaton Blanche Park.
7. Kinneloa Avenue



GREENWAY NETWORK SCALE

EATON WASH AT SPREADING GROUND SITE

GREENWAY SEGMENTS - AVAILABLE R/W

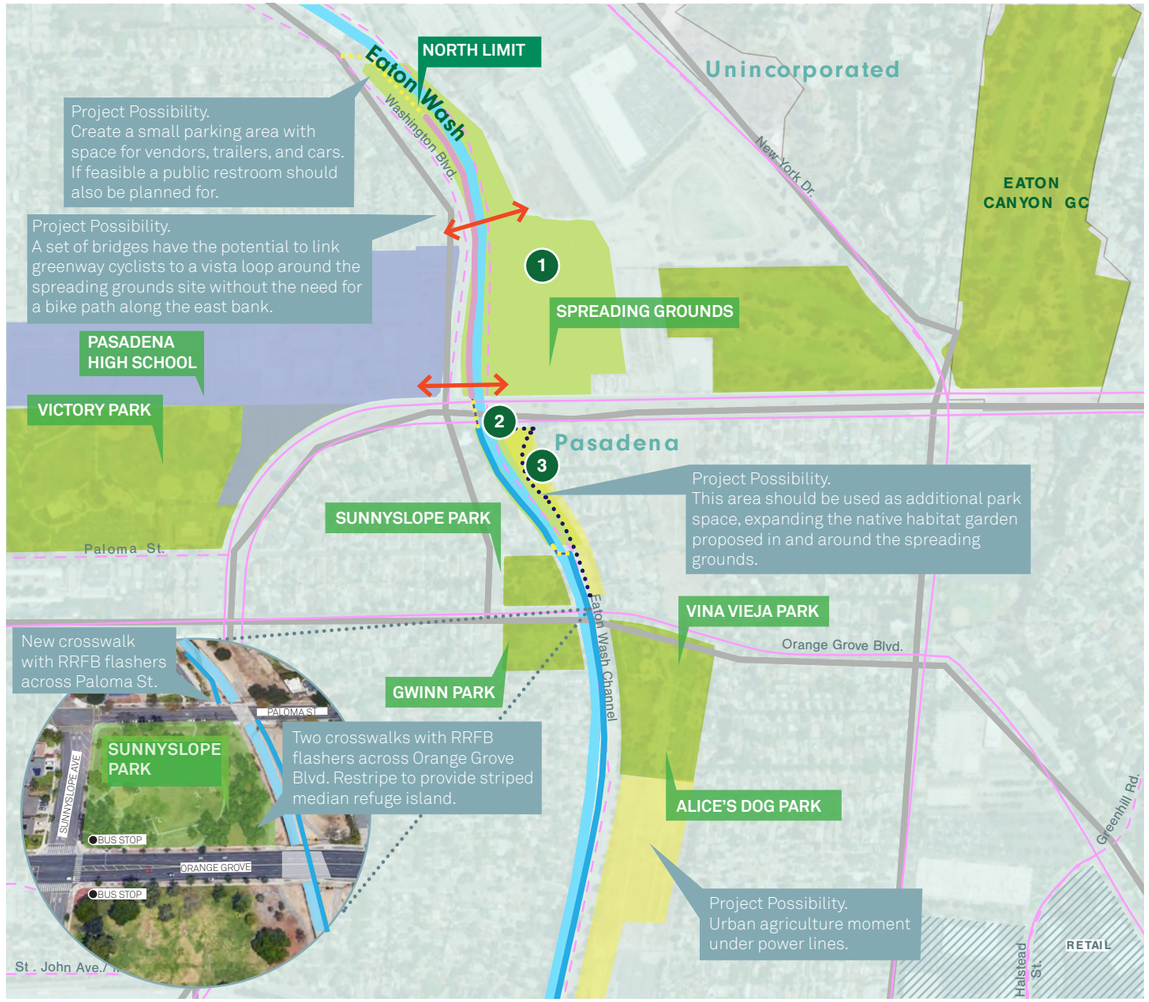
Each section of proposed Greenway relates to the available R/W and for this project can be identified between intersection crossings. The following segments are proposed:

1. Woodlyn Road to Sierra Madre Boulevard - 1655 LF of >24 FT of R/W width available. Creating a connection to the spreading grounds site will require two bridges.
2. Sierra Madre Boulevard to Paloma Street - 763 LF of 17-19 FT of R/W width available. There is a large area on the east bank that should be dedicated to a pedestrian path and native habitat garden, ensuring not to interfere with flood control operations.
3. Paloma Street to Orange Grove Boulevard- 315 LF of 17-19 FT of R/W width available. Continue proposed pedestrian path and habitat garden along the east (left) bank.
4. Orange Grove Boulevard to 5 Maple Street - 2825 LF of 17-19 FT of R/W width available.

STORMWATER APPROACH

Storm drain flows, from nearby storm drains, like the southern Sierra Madre Blvd. inlet could be diverted to the spreading grounds site and treated using stormwater control measures (e.g., bioretention, subsurface infiltration, or an extended detention basin). There may also be potential for stormwater controls to treat stormwater and/or dry weather flows directly from Eaton Wash. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature-based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site-specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.



- Available Right-of-Way
- 17-19 feet
- Greater than or equal 24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)
- School Property
- Proposed Bridge Crossing
- Retail/Commercial/Industrial Areas
- Expanded Open Space Opportunity
- Alternate Pedestrian Path

0 400 800 Feet

- 1 Project Possibilities
- Greenway/Community Destinations

NEIGHBORHOOD SCALE

EATON WASH AT SPREADING GROUND SITE

A continuous route alignment runs the length of this segment on the west bank of the channel from Woodlyn Road to Orange Grove Boulevard. The alignment crosses over the channel at Orange Grove Boulevard to the east side, eventually connecting to Eaton Blanche Park further south. Throughout this segment, a series of off-channel alignment possibilities connect greenway users to adjacent parks and open space.

PROJECT POSSIBILITIES

1 NEIGHBORHOOD AMENITY
The focal point of this segment is the spreading grounds at Sierra Madre Boulevard and Washington Boulevard. Enhancements to the area would include sculpting the land to provide varying sizes of zones for percolation, amenities of respite at the corners, and open space area for leisure along the southern edge of the project. This recreation and educational amenity would include pedestrian paths with native habitat gardens that exemplify riparian plant communities. Education should focus on urban stormwater infrastructure systems.

2 GATEWAY PARK
A gateway moment should be integrated where the path crosses over Sierra Madre Boulevard. This area is a space that both people utilizing the path and the surrounding community could benefit from. Program would include turf areas with ample seating, tree groves and picnic tables.

3 EXPAND OPEN SPACE
In addition to the spreading ground site, there are opportunities to connect to existing open space to the south of Sierra Madre Boulevard, and along the east bank of the channel by converting Southern California Edison (SCE) land, and the available wash R/W. Areas between the channel and residential community should be used to create a native drought tolerant habitat garden. This path should be primarily for pedestrians, complementing the bike path on the opposite bank. A stretch of the underutilized parcels is lined with power line infrastructure. The area underneath the SCE powerline could gain inspiration from the area just east of the spreading grounds and include a large scale urban agriculture resource.

Available Right-of-Way
17-19 feet
Greater than or equal 24 feet
Proposed Off-channel Alignment
Tributary Channels
Existing Bikeways (MTA data)
Proposed Bikeways (MTA data)
School Property
Alternate Pedestrian Path
Rendering Camera View
1 Elements to Feature
Greenway/Community Destinations

0 200 400 Feet

PARCEL SCALE

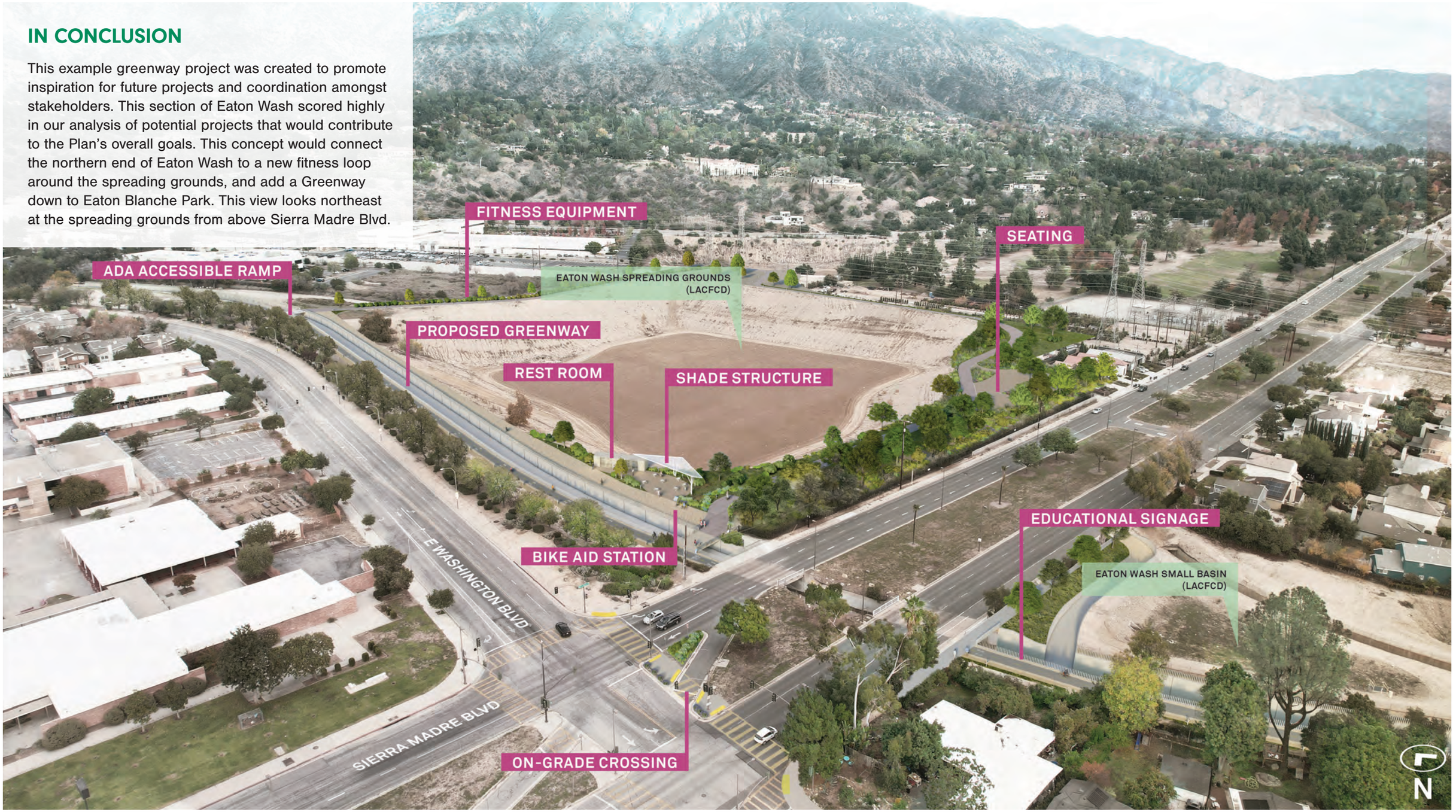
EATON WASH AT SPREADING GROUND SITE

ELEMENTS TO FEATURE

1. New parking lot at Woodlyn. If conditions are appropriate, permeable paving should be used to demonstrate alternatives to asphalt.
2. Trail head with signage about Eaton Wash Greenway.
3. Gateway bridge providing access to the alternative route through the spreading grounds garden site.
4. Provide an alternative route and native pollinator gardens in and around the spreading grounds. Curb cuts and eddy basins to irrigate planting with runoff.
5. Rest area and bathroom at north end of spreading grounds with an outdoor classroom, shade structure, and shade trees.
6. Learning Garden. Educational opportunities for the nearby Pasadena High School can be integrated into the curriculum.
7. Continue native pollinator garden planting within the median area. Curb cuts and eddy basins to irrigate planting with runoff.
8. On-grade crossing across Sierra Madre Boulevard. See enlargement on the introduction page - Greenway Network Scale. Path to continue on both sides of the channel, extending the native pollinator garden into the proposed pocket park.
9. Gateway Park for surrounding area to utilize - amenities to include a pedestrian path, shade, public art, and a drought-tolerant native habitat garden. No amenity should interfere with operations of basin.
10. Small gateway moment for signage pertaining to the Greenway network at northern corner of existing Sunnyslope Park.
11. In addition to trees and learning opportunities around the proposed path, the path itself should be considered as an exercise loop for the community. Paving material should be padded, similar to track surfacing or recycled rubber, and outdoor exercise equipment installed under shade.

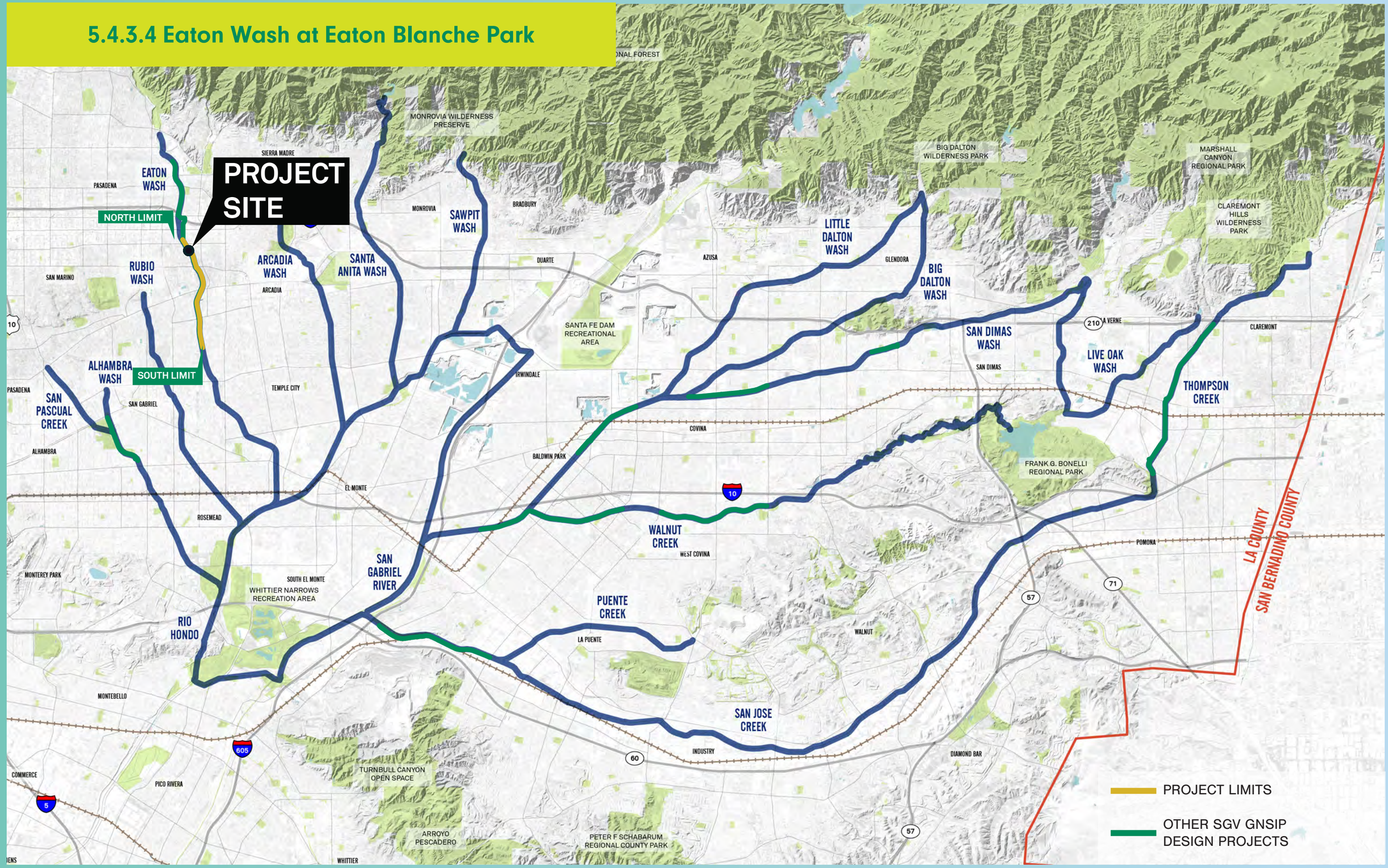
IN CONCLUSION

This example greenway project was created to promote inspiration for future projects and coordination amongst stakeholders. This section of Eaton Wash scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This concept would connect the northern end of Eaton Wash to a new fitness loop around the spreading grounds, and add a Greenway down to Eaton Blanche Park. This view looks northeast at the spreading grounds from above Sierra Madre Blvd.



Rendering of example greenway project elements.

5.4.3.4 Eaton Wash at Eaton Blanche Park



EXISTING CONDITIONS

EATON WASH AT EATON BLANCHE PARK

This example greenway project is on Eaton Wash at Eaton Blanche Park; ranked highly in its ability to meet the SGV Greenway Network Plan's overall goals. This Conceptual Design includes open-space and functional landscape improvements to Eaton Blanche Park, and a Greenway along the eastern bank of the tributary from Eaton Blanche Park south to Longden Avenue. This would connect to an Early Implementation Project (EIP), the Eaton Wash Bike Path Phase I project by LA County, between Longden Avenue and Rosemead Boulevard. A bicycle / pedestrian bridge linking the Greenway to Eaton Blanche Park would enhance connectivity and access to the project.

Looking east at line of trees above Eaton Wash from Eaton Blanche Park

Looking southeast at Eaton Wash from above Eaton Blanche Park.

Looking east at Eaton Wash from above Oneida St.

GREENWAY NETWORK SCALE

EATON WASH AT EATON BLANCHE PARK

INTRODUCTION

This 2.1 mile example greenway project is within the “Tier 1” segment of Eaton Wash; ranked highly in its ability to meet the Plan’s overall goals. This conceptual design includes open-space and functional landscape improvements to Eaton Blanche Park, and a Greenway along the eastern bank of the tributary from Eaton Blanche Park to Longden Avenue. This would connect to an early implementation project (EIP), the Eaton Wash Bike Path Phase I project by LA County, between Longden Avenue and Rosemead Blvd. Additionally, this example greenway project would enhance the Eaton Wash Greenway Phase 2 EIP project between Longden Avenue and Huntington Drive. A bicycle / pedestrian bridge linking the Greenway to Eaton Blanche Park would enhance connectivity and access to the project.

AGENCY CONTEXT

The proposed Eaton Wash Greenway project falls within the City of Pasadena and unincorporated LA County, with a key project partner potentially being Southern California Edison (SCE).

PROPOSED GREENWAY ALIGNMENT

The extents of this project would focus on implementing an alignment along the eastern bank only. Coordination with the City of Pasedena and SCE is needed for connecting to Eaton Blanche Park.

ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Del Mar Boulevard
2. California Boulevard
3. Huntington Drive. While a significant grade change is present ramping is considered feasible, and adequate lateral and longitudinal space is available. This is an important connection to make as it provides a connection to the future on-street bikeway network.
4. Rancho Mangana Road provides a potential access point.
5. Duarte Road
6. Ardendale Avenue -provides a potential access point.
7. Longden Avenue - the proposed path would connect with the LA County DPW Transportation Planning & Programs Division’s Eaton Wash Bike Path Phase I project (west side of the wash) to the south.

GREENWAY NETWORK SCALE

EATON WASH AT EATON BLANCHE PARK

GREENWAY SEGMENTS - AVAILABLE R/W

Each section of proposed greenway relates to the available R/W and for this project can be identified between intersection crossing. The following segments are proposed:

1. Brandon Street connection to Del Mar Boulevard - 670 LF of >24 FT R/W width available.
2. Del Mar Boulevard to San Pasqual Street - 1830 LF of 19-24 FT of R/W width available.
3. San Pasqual Street to East California Boulevard - 755 LF of 17-19 FT of R/W width available.
4. East California Boulevard to Lombardy Road - 850 LF of 19-24 FT of R/W width available.
5. Lombardy Road to Huntington Drive - 1600 LF of 19-24 FT of R/W width available.
6. Huntington Drive to Duarte Road - 3120 LF of 17 -19 FT of R/W width available.
7. Duarte Road to 8 Longden Avenue - 2795 LF of 19-24 FT of R/W width available.

STORMWATER APPROACH

Eaton Blanche Park consists of open green space that could be adapted for stormwater control. Surface nature-based or subsurface stormwater controls could be implemented across the site. Stormwater could be diverted from Eaton Wash, but there is limited formal stormwater drainage nearby Eaton Blanche Park to treat stormwater from neighboring areas except for a storm drain along Madre Street to the east. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.

NEIGHBORHOOD SCALE

EATON WASH AT EATON BLANCHE PARK

In addition to providing a continuous path alignment, some additional enhancements can be incorporated into the project to create multi-beneficial opportunities.

PROJECT POSSIBILITIES

1 GATEWAY PARK
The land on the west side of Kinneloa Avenue at Brandon Street is fenced-off, but according to County Assessor records is a City of Pasadena park, and a gateway opportunity. This site could host parking, and restroom facilities, as well as other park amenities.

By starting the on-channel alignment at this point, an under-crossing could be proposed at Del Mar Boulevard. If the under-crossing is not feasible, an off-channel bikeway on Kinneloa Avenue could be used.

2 BICYCLE / PEDESTRIAN BRIDGE I
A connection could be made across the Southern California Edison (SCE) easement from Eaton Blanche Park to Thorndale Road. All new bridges shall be ADA compliant bicycle/pedestrian crossing at a minimum width of 10 FT.

3 EXPANDED OPEN SPACE
The SCE easement proposes a unique opportunity to expand the Greenway footprint beyond the Eaton Wash Channel for passive recreational use, such as native plant gardens and birdwatching trails.

4 BICYCLE / PEDESTRIAN BRIDGE II
A connection could be made on the Lombardy Road alignment, which is on public R/W according to County Assessor maps. The bridge allows a low-stress alternative to Huntington Drive for bicyclists.

Available Right-of-Way
19-24 feet
Greater than or equal 24 feet
Proposed Off-channel Alignment
Tributary Channels
Existing Bikeways (MTA data)
Proposed Bikeways (MTA data)
School Property
Rendering Camera View
1 Elements to Feature
Greenway/Community Destinations

0 100 200 Feet

PARCEL SCALE

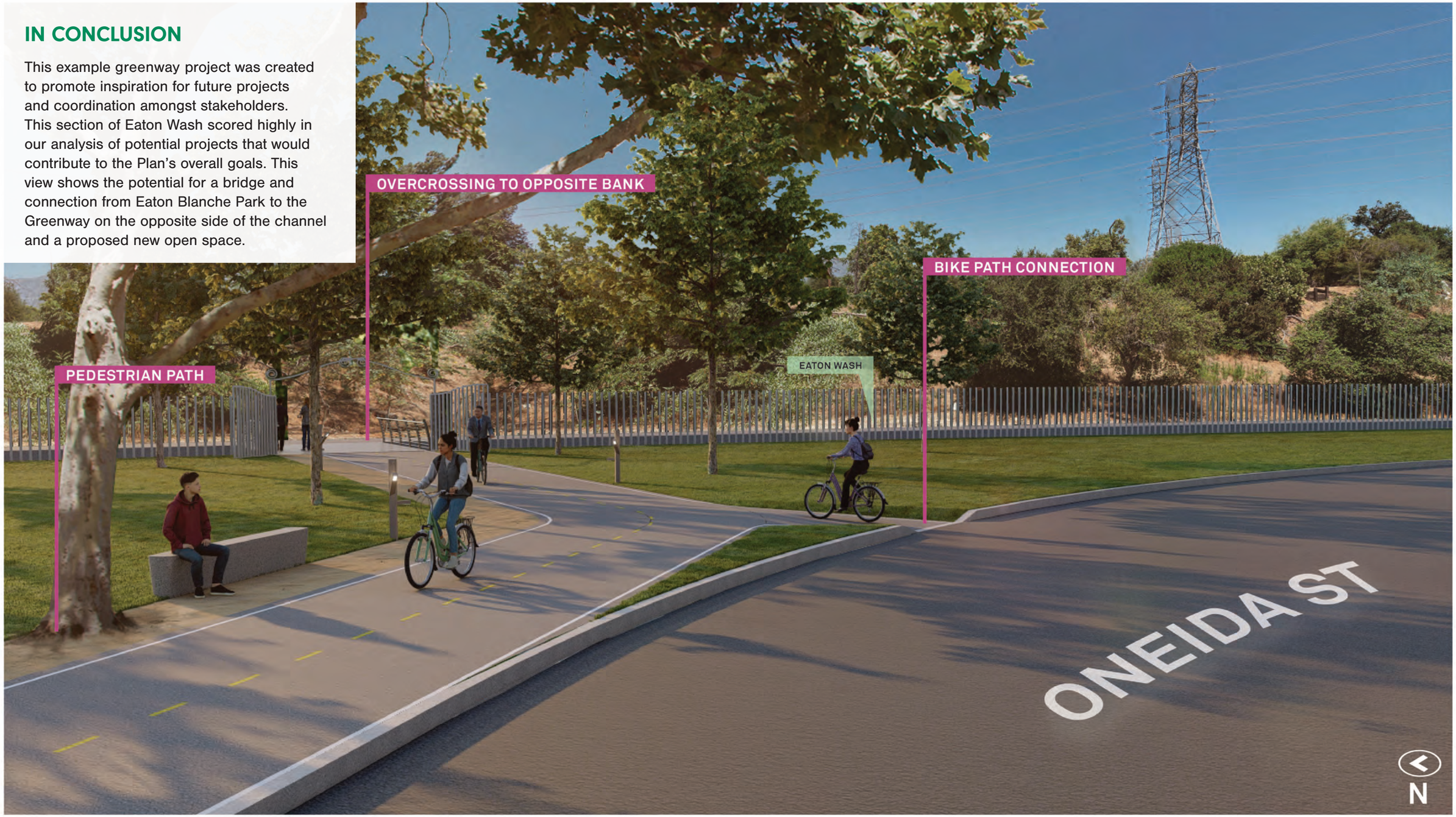
EATON WASH AT EATON BLANCHE PARK

ELEMENTS TO FEATURE

1. On-channel alignment from Del Mar Blvd to new Gateway Park.
2. Access ramp, if physically feasible.
3. Under-crossing, if physically feasible.
4. Medium Gateway on south side of Del Mar Boulevard
5. On-street alignment, if a Del Mar Boulevard undercrossing is infeasible.
6. Existing crosswalk
7. On-channel alignment with shade trees planted along slope.
8. Bicycle / Pedestrian bridge - ADA compliant at a minimum width of 10 FT.
9. Multi-use path connection to neighborhood and nearby schools to the east.
10. Additional open space for passive recreation, habitat, and outdoor classrooms. Connection to the existing nursery for educational opportunities or path plant material propagation could be made.
11. Pedestrian access down slope to Greenway path.
12. Overlook of Eaton Wash and Greenway path.
13. Add loop path to increase circulation around the proposed improvements and the existing park space. This should be multi-use in nature and accommodate different users groups by having a dedicated learn to ride lane, and dedicated rubberized walking path.

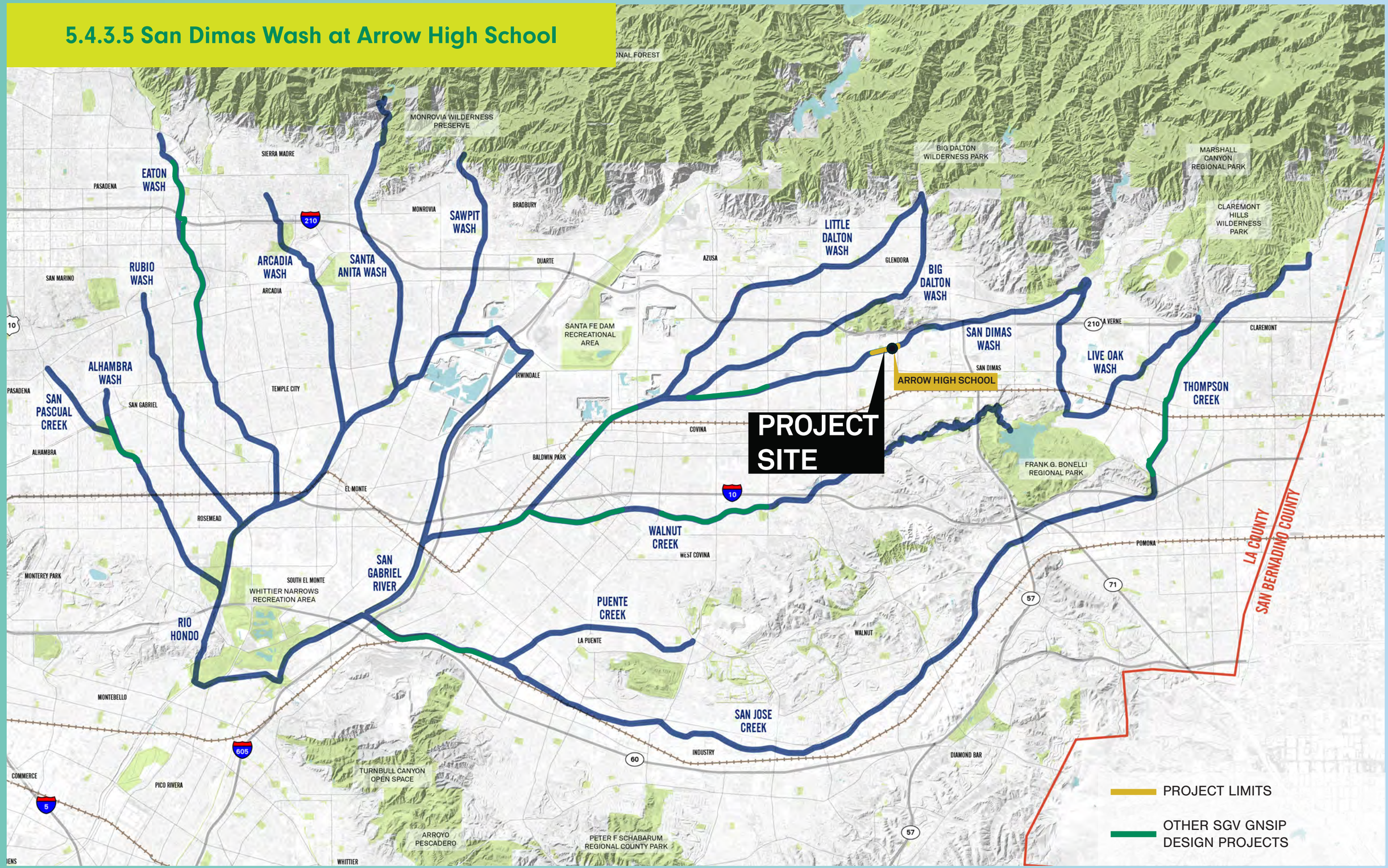
IN CONCLUSION

This example greenway project was created to promote inspiration for future projects and coordination amongst stakeholders. This section of Eaton Wash scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This view shows the potential for a bridge and connection from Eaton Blanche Park to the Greenway on the opposite side of the channel and a proposed new open space.



Rendering of example greenway project elements.

5.4.3.5 San Dimas Wash at Arrow High School



EXISTING CONDITIONS

SAN DIMAS WASH AT ARROW HIGH SCHOOL

This project falls within three EIP limits; The San Dimas Wash Urban Trail project Phases I, II, and III, by the City of Glendora. This project's main focus would be to navigate the intersection and crossing in front of Arrow High School at Gladstone Street and Sunflower Avenue, to build a connection to the school yard, and potentially create an education amenity within the school yard itself and further enhancing the EIP. This project would also add enhancements to the Greenway proposed along Gladstone Park including an ADA accesible bridge.

Looking east along San Dimas Wash at Gladstone Park.

Looking west along San Dimas Wash from the channel edge in Gladstone Park.

Looking east along San Dimas Wash from the south bank in Gladstone Park.

GREENWAY NETWORK SCALE

SAN DIMAS WASH AT ARROW HIGH SCHOOL

INTRODUCTION

This example greenway project falls within three early implementation project (EIP) limits; The San Dimas Wash Urban Trail project Phases I, II, and III, by the City of Glendora. This segment of San Dimas Wash scored highly in our analysis of areas that could contribute to overall plan goals.

This concept proposes new amenities and connections along these existing projects to futher benefit the surrounding community.

AGENCY CONTEXT

This example greenway project falls within the City of Glendora. Additionally, a major component of this project falls within Charter Oak Unified School District property and would need to be coordinated with the school district.

PROPOSED GREENWAY ALIGNMENT

The EIPs provide a connected bikeway along this extent of the Wash, so anything proposed under this project would be in addition to those improvements. One constraint to this idea is the LAC Fire Department parking lot. It extends to the edge of the wash's channel wall, restricting public access across it and into Gladstone Park.

STORMWATER APPROACH

Nature-based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site-specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.

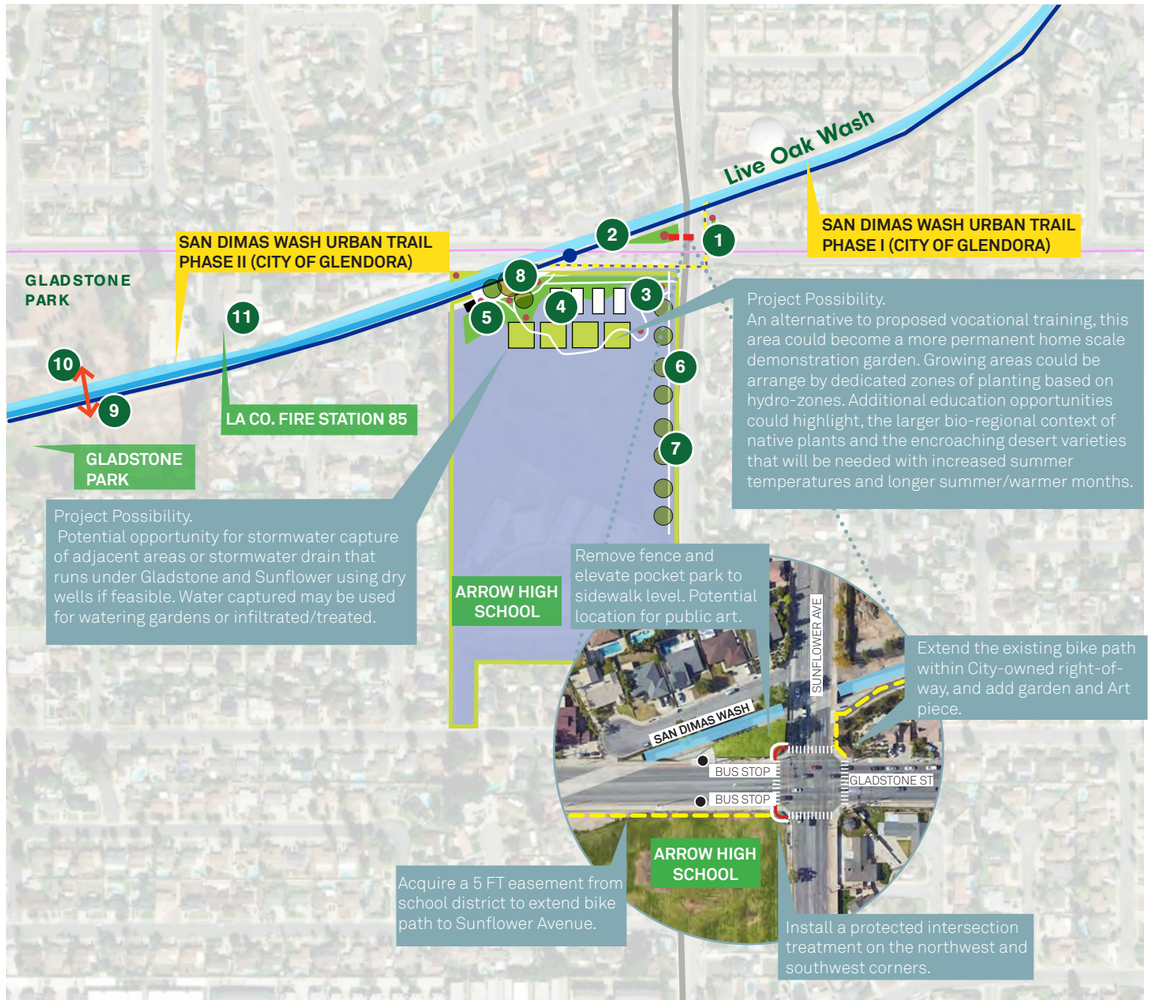
ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Bonnie Cove Avenue
2. Gladstone Street
3. Sunflower Avenue

PARCEL SCALE

SAN DIMAS WASH AT ARROW HIGH SCHOOL



Available Right-of-Way
17-19 feet
Proposed Off-channel Alignment
Tributary Channels
Existing Bikeways (MTA data)
School Property
Early Implementation Projects
Stormwater Drain Diversion and/or Capture Opportunity
Proposed Bridge Crossing
1 Elements to Feature
Greenway/Community Destinations

0 200 400 Feet

ELEMENTS TO FEATURE

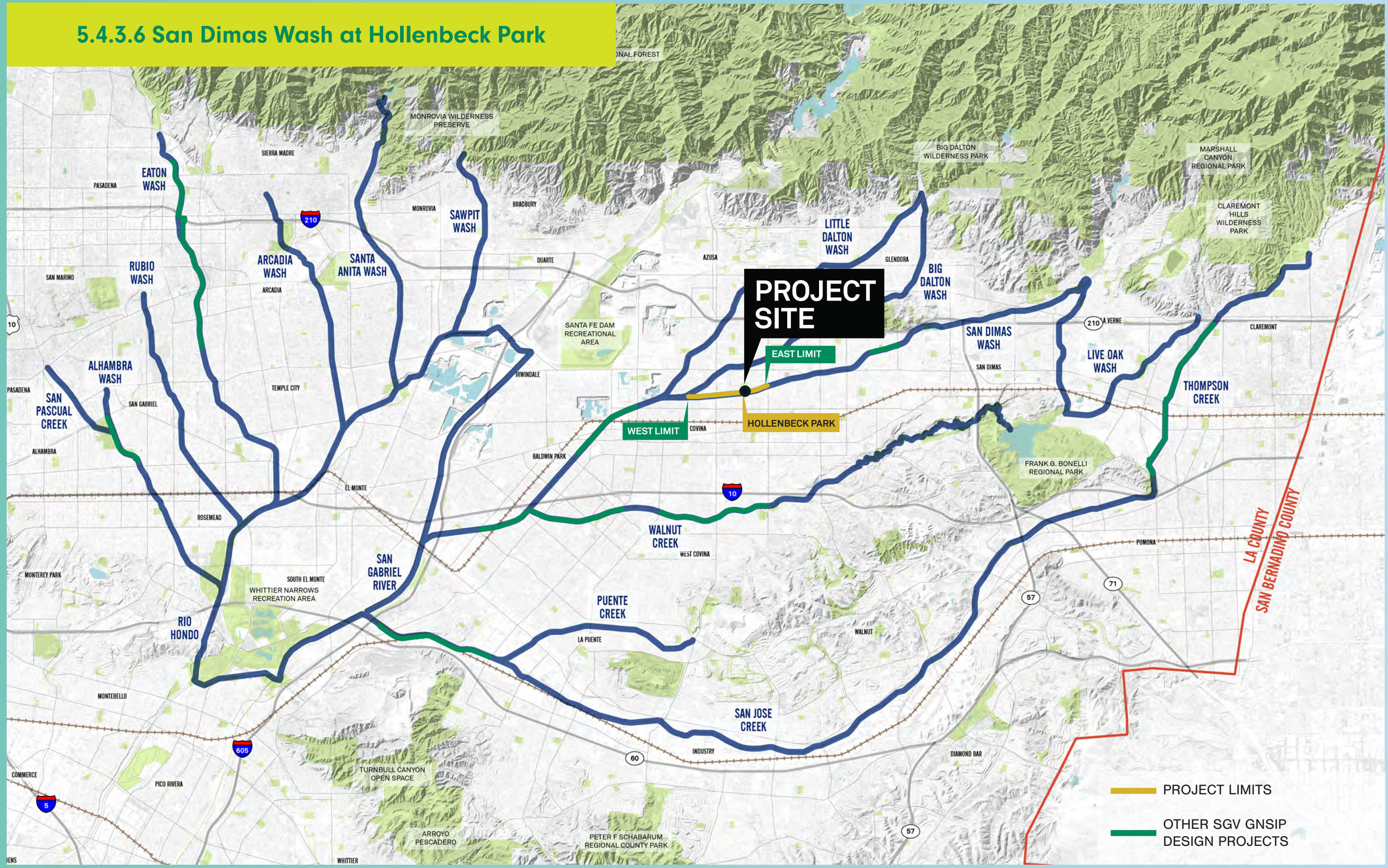
1. Extend the Phase I Urban Trail project to the northeast corner of the intersection within the existing R/W. Any additional area should be enhanced with drought-tolerant landscape and interpretive signage. Add a small art piece as part of the proposed community art walk.
2. Modify the existing pocket park, currently fenced-off from the public, to improve security by means of lighting and visibility improvements. Suggestions include- removing fence and develop as an accessible pocket park. Add a large art piece as part of the proposed community art walk. Include lighting and visibility improvements. If possible, raise the park to street level.
3. Work with the school district to either dedicate land back to the City and create a community art walk, and/or collaborate with the District to create a shared use space for art, education, and recreation. Shared use space will be scaled according to coordination with the District.
4. Create usable areas for education, demonstration and gathering. Site elements like shade structures, greenhouse, seating areas, a lockable shed, and garden plots should be incorporated and designed in collaboration with the intended operators, and daily users.
5. Native garden that showcases drought-tolerant species suitable for home gardens. Art should be integrated into this demonstration as part of the proposed community art walk.
6. Extend bike path to school/playfield parking lot for potential shared-use parking when not occupied by the District.
7. Enhance the pedestrian walk experience from the corner of Gladstone St and Sunflower Ave to the school entrance. Shade trees, and parkway planting should be considered.
8. Create a Plaza Gateway with a small bike fix it station, restroom area, hydration station, and shaded seating.
9. Provide additional shade tree planting along park edge. Continue art walk into Gladstone Park.
10. Replace bridge with ADA compliant bike/ped bridge at minimum 10ft width, and create covered overlooks down each direction of the wash. This segment of the Wash is owned in Fee by LACFCD.
11. Create decomposed granite path on both sides of the channel which allows for a continuous exercise opportunity, enhances connectivity, and utilizes under-developed ROW.

IN CONCLUSION

This example greenway project was created to promote inspiration for future projects and coordination amongst stakeholders. This section of San Dimas Wash scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This view looking east at Gladstone Park from above the Wash shows improvements to the planned Greenway including an ADA accessible bridge.

Rendering of example greenway project elements.

5.4.3.6 San Dimas Wash at Hollenbeck Park



EXISTING CONDITIONS

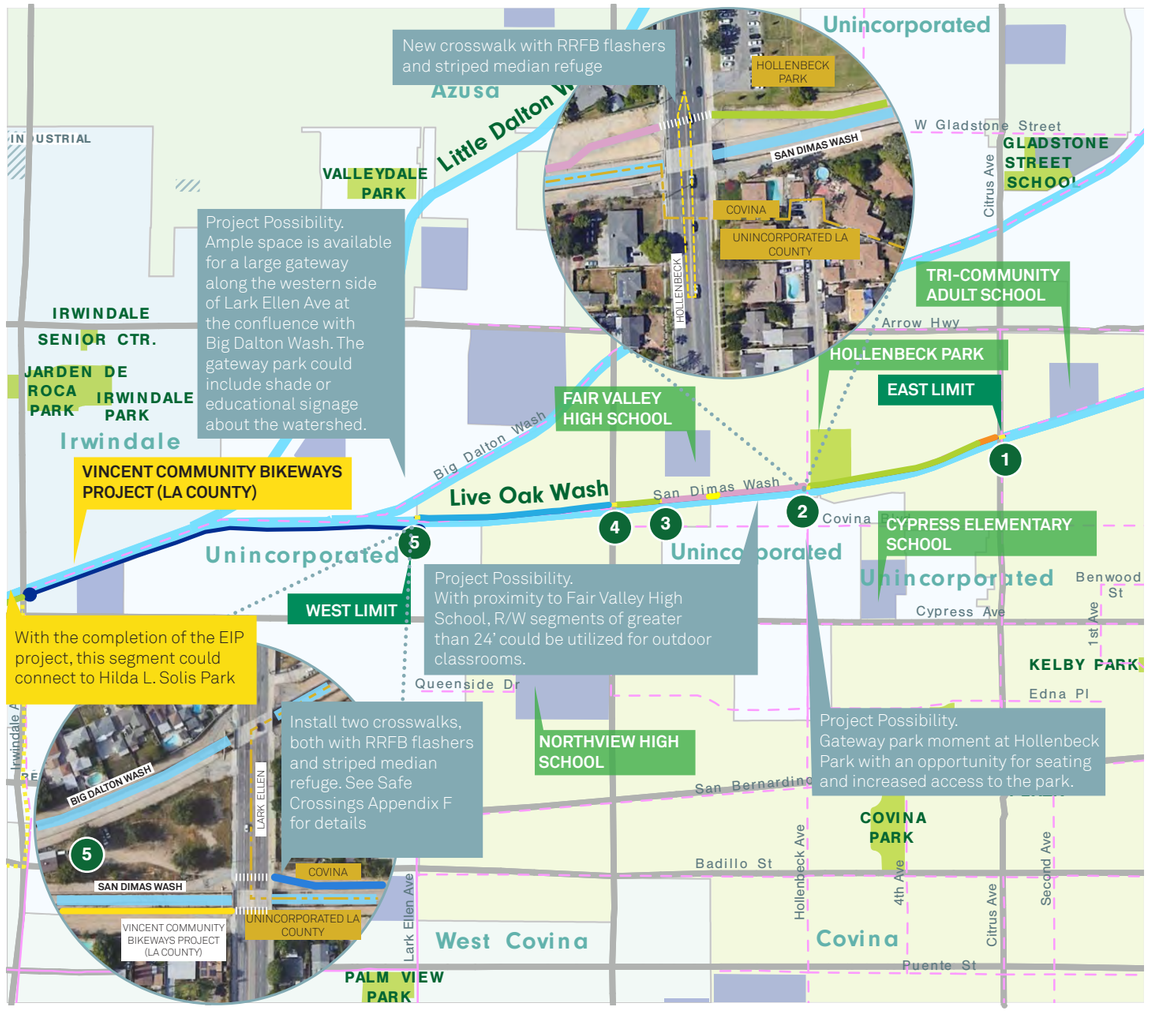
SAN DIMAS WASH AT HOLLENBECK PARK

Located along the San Dimas Wash, this example greenway project would start at Lark Ellen Avenue and continue east along the north bank for 1.5 miles to Citrus Avenue. The western end of this proposed alignment would connect with an Early Implementation Project, the Vincent Community Bikeways Project by LA County. This concept includes connections to Hollenbeck Park and a number of schools in the area. The concept also includes developing a new park at the confluence of Big Dalton and Live Oak Wash.

Existing conditions looking east at Hollenbeck Park from above San Dimas Wash.

Existing conditions at San Dimas Wash looking east towards Hollenbeck Ave. from the north bank.

Existing conditions looking east from the north bank of San Dimas Wash at Hollenbeck Park.



GREENWAY NETWORK SCALE

SAN DIMAS WASH AT HOLLENBECK PARK

INTRODUCTION

Located along the San Dimas Wash, this example greenway project would start at Lark Ellen Avenue and continue east along the north bank for 1.5 miles to Citrus Avenue. The western end of this proposed alignment would connect with an early implementation project (EIP), the Vincent Community Bikeways Project by LA County.

AGENCY CONTEXT

This segment of the proposed San Dimas Wash Greenway project falls within the City of Covina.

PROPOSED GREENWAY ALIGNMENT

The extent of this project would focus on a 12 FT multi-use path along the north (right) bank. Starting at Lark Ellen Avenue, the project would extend along the channel east to Citrus Avenue. Along this stretch, there are areas with a R/W width greater than 24'. These areas provide space for design opportunities such as outdoor classrooms, small community garden plots, or additional landscaped areas.

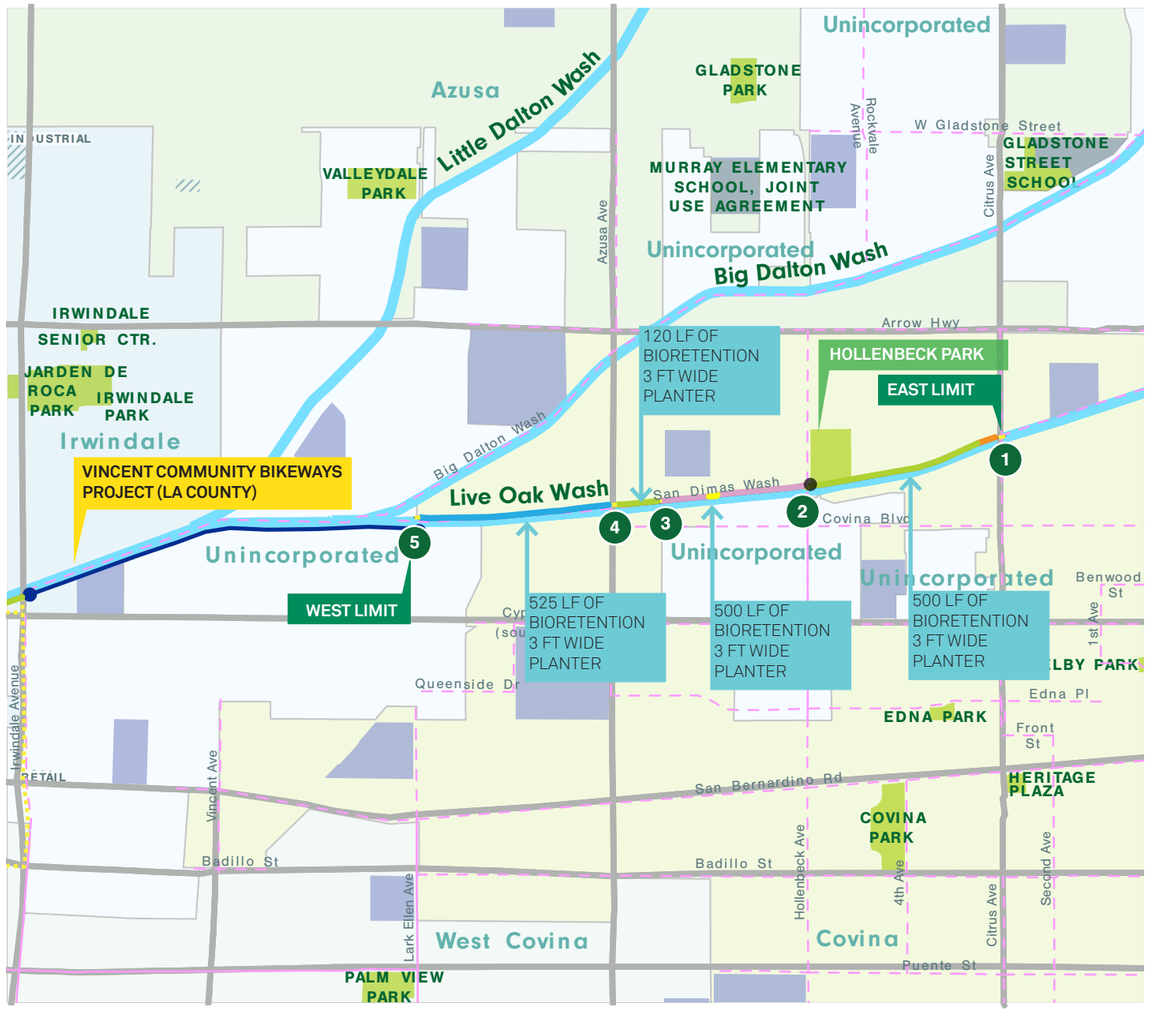
ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Citrus Avenue
2. Hollenbeck Avenue - The interface with the existing Hollenbeck Park creates the opportunity for a large gateway moment. Provide additional connection to the path along the southern end of the park and an at-grade pedestrian crossing.
3. Conwell Avenue
4. Azusa Avenue
5. Lark Ellen Avenue – Provide connection to the EIP along Big Dalton Wash, and the other regional bike routes at this intersection. Open space connection creates an opportunity for a large gateway moment taking advantage of the sites location at the confluence of the Big Dalton Wash and San Dimas Wash.

GREENWAY NETWORK SCALE

SAN DIMAS WASH AT HOLLENBECK PARK



Available Right-of-Way
- 8-13 feet
- 13-17 feet
- 17-19 feet
- 19-24 feet
- Greater than or equal 24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)

- School Property
- Early Implementation Projects
- Retail/Commercial/Industrial Areas
- Stormwater Drain Diversion and/or Capture Opportunity
- Stormwater BMP for Multi-use Path
- 1 Intersection Crossing/Access Point
- Greenway/Community Destinations

GREENWAY SEGMENTS - AVAILABLE R/W

The proposed on-channel alignment neighbors many existing community destinations and activity generators, creating a real opportunity for increased connectivity and recreation space. Every effort to collaborate in future design should be explored and where feasible, widening the Greenway for additional amenities or increased connectivity should be prioritized. Each section of the proposed greenway responds to the available R/W. The following segments are proposed:

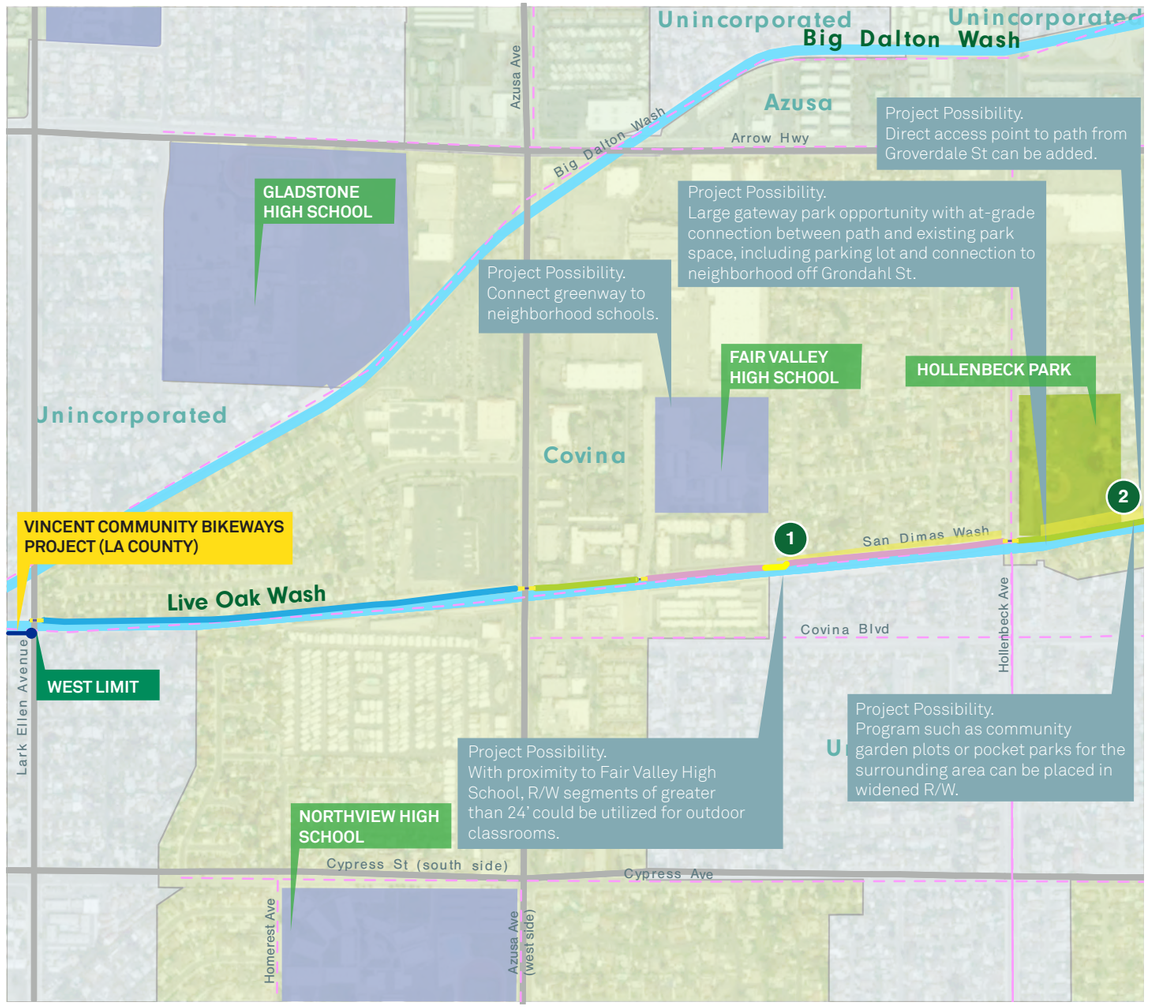
1. Citrus Avenue to Hollenbeck Avenue - 2367 LF of 19-24 FT of R/W width available.
2. Hollenbeck Avenue to Conwell Avenue - 1845 LF of >24 FT of R/W width available and 125 LF of 13-17 FT R/W width available.
3. Conwell Avenue to Azusa Avenue - 555 LF of 19-24 FT of R/W width available.
4. Azusa Avenue to (5) Lark Ellen Avenue - 2605 LF of 17-19 FT R/W width available.

Along the wider segments of the proposed Greenway, there is ample opportunity for including bio-retention planters. These planters add planting, habitat, beautification, and stormwater capture to the concept. The SGV Greenway Network Design Guidelines provide further guidance on incorporating these elements.

STORMWATER APPROACH

The park location is nearby a storm drain running from north to south on Hollenbeck Ave before it discharges to the San Dimas Wash. Storm drain flows could be diverted and infiltrated/treated using stormwater control measures (e.g., bioretention, subsurface infiltration, or an extended detention basin.) There may also be potential for stormwater measures to treat stormwater directly from San Dimas Wash. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature-based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site-specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.



NEIGHBORHOOD SCALE

SAN DIMAS WASH AT HOLLENBECK PARK

A continuous greenway alignment runs the length of this segment on the north bank of the channel from Lark Ellen Avenue to Citrus Avenue. Proximity to the Vincent Community Bikeways Project EIP helps connect this project to the larger network of paths.

PROJECT POSSIBILITIES

1 EXPANDED OPEN SPACE

The public right-of-way east of Fair Valley High School, and around Hollenbeck Park, contains generous widths of up to 50 FT. Besides the 12 FT dedicated to a multi-use path, the remaining width of the route could be dedicated to other program space such as pocket parks, community garden space, and stormwater capture for off-site drainage (e.g. drain on Hollenbeck Avenue to wash).

Outdoor classrooms could be provided to the segment of the route southeast of the high shool. Teachers could utilize this area as an opportunity to add visual material to their curriculum such as biology, hydrology, sustainability, and other subjects. This area would be conducive to basic field research and data collection such as monitoring water quality and species identification. Coordination with Covina-Valley School District required.

2 GATEWAY PARK

Hollenbeck Park is an existing park with amenities including open space, a playground, a baseball field and half basketball courts. The proposed path runs along the southern edge of the park. A seating area with shade that overlooks the San Dimas Wash could be implemented to create a unified connection between the park and the multi-use path. Improvements to this park would be coordinated with the City of Covina to provide benefits and improve safety.

Another area for a gateway park is at the western limit of the alignment at Lark Ellen Avenue. The triangular shaped open space should have shaded seating and signage. The confluence location provides an educational opportunity about the watershed, the adjacent spreading grounds, and can be celebrated with a gateway garden feature within the existing space by adding habitat and beautification.

PARCEL SCALE

SAN DIMAS WASH AT HOLLENBECK PARK

Available Right-of-Way
19-24 feet
Greater than or equal 24 feet
Proposed Off-channel Alignment
Tributary Channels
Existing Bikeways (MTA data)
Proposed Bikeways (MTA data)
Rendering Camera View
1 Elements to Feature
Greenway/Community Destinations

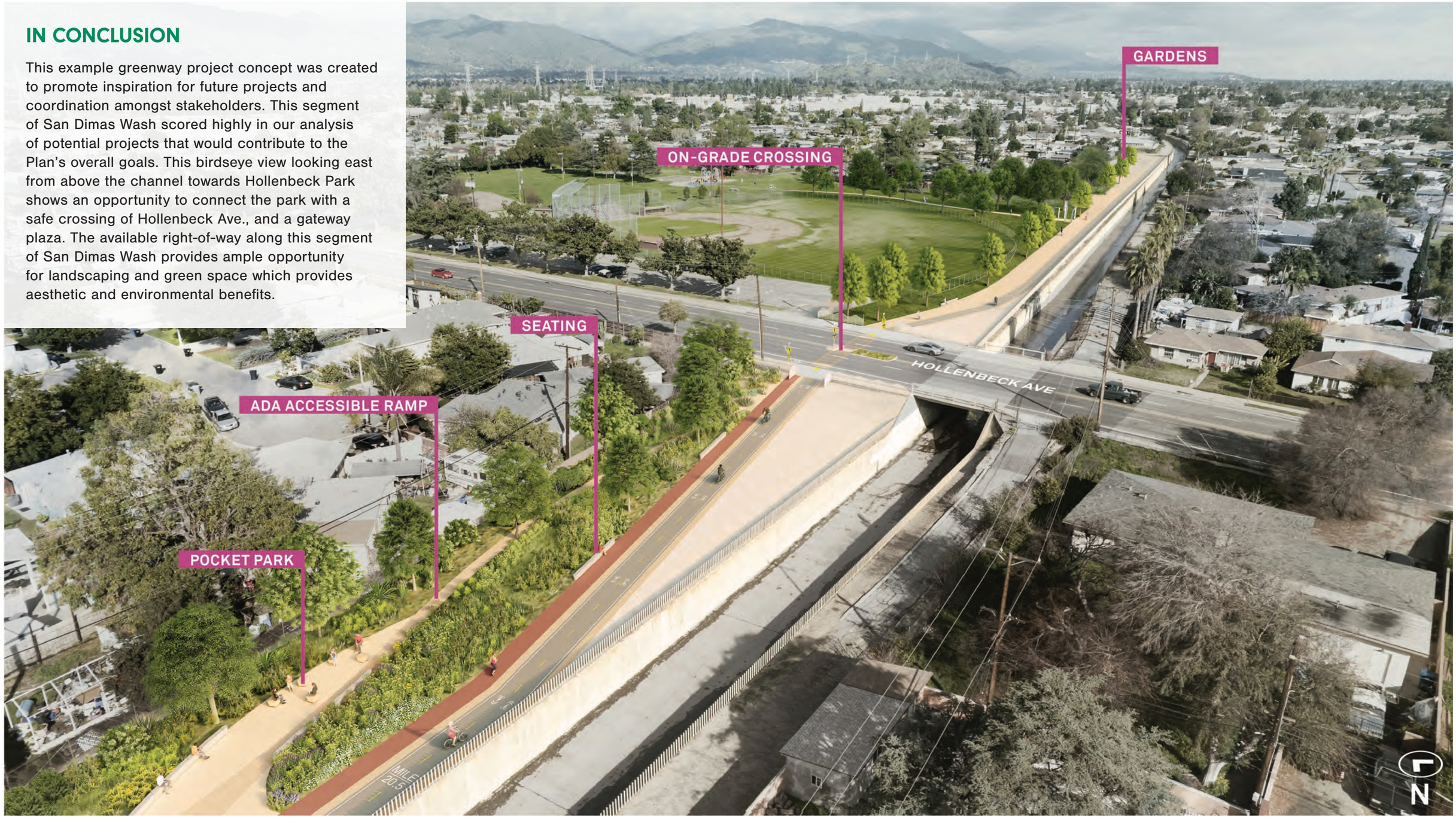
0 100 200
Feet

ELEMENTS TO FEATURE

1. Outdoor classroom for local high school to utilize. Provide lockable storage for field equipment and seating with ample shade.
2. Stormwater moment - utilize as educational opportunity for students and people walking along path.
3. Bicycle kiosk at entrance of Hollenbeck Avenue for repairs or rest.
4. Large gateway with seating, signage, bike racks, and a safety call box - utilize existing trees as shade.
5. Small community garden plots with lockable tool shed.
6. Pocket Park for surrounding area to utilize - amenities to include seating, shade, lawn area, drought-tolerant planting, and picnic tables.
7. Direct access to path for community.

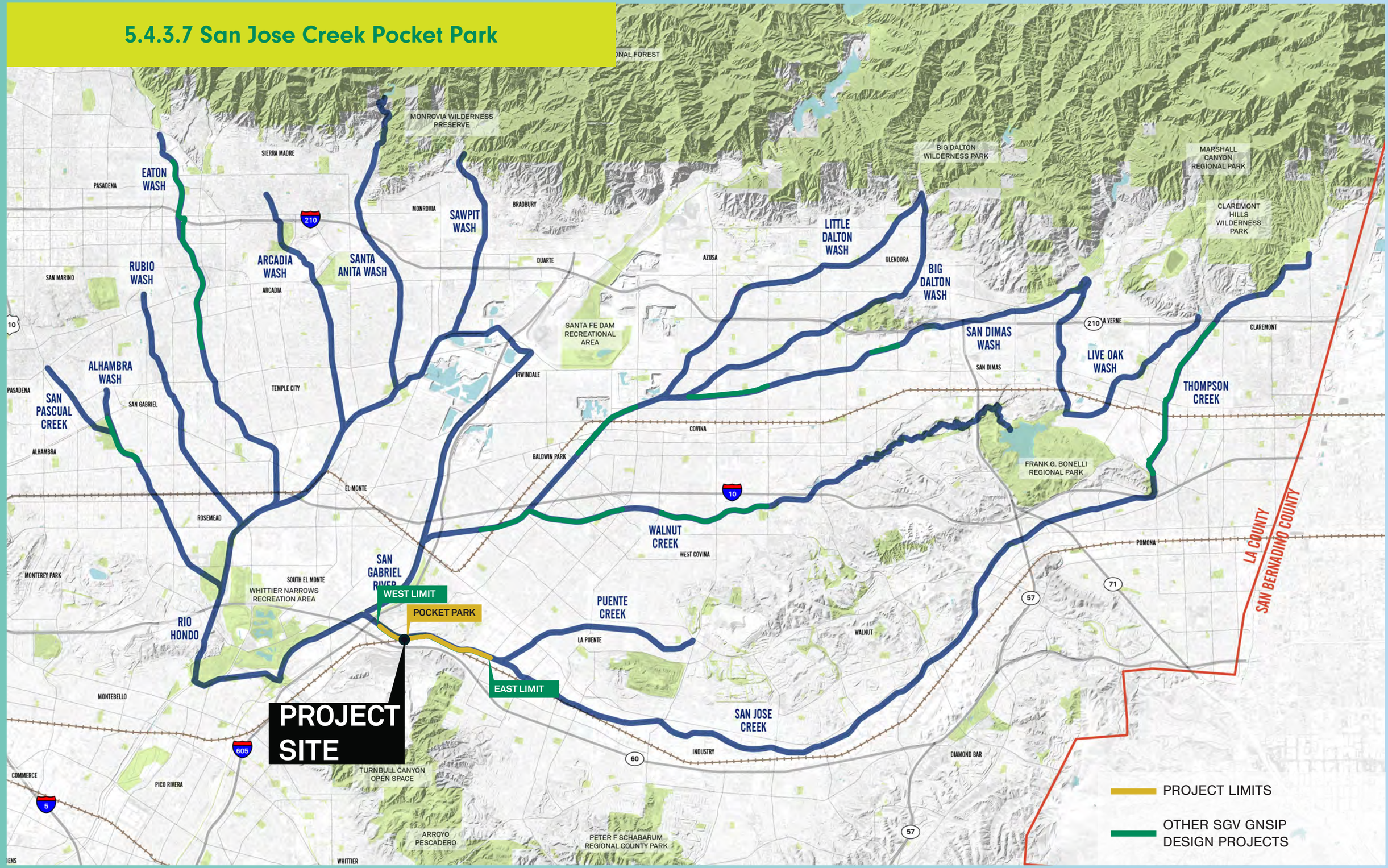
IN CONCLUSION

This example greenway project concept was created to promote inspiration for future projects and coordination amongst stakeholders. This segment of San Dimas Wash scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This birdseye view looking east from above the channel towards Hollenbeck Park shows an opportunity to connect the park with a safe crossing of Hollenbeck Ave., and a gateway plaza. The available right-of-way along this segment of San Dimas Wash provides ample opportunity for landscaping and green space which provides aesthetic and environmental benefits.



Rendering of example greenway project elements.

5.4.3.7 San Jose Creek Pocket Park



EXISTING CONDITIONS

SAN JOSE CREEK AT POCKET PARK

Located along San Jose Creek, this 2.3-mile example SGV Greenway Network project would start at the LA County San Jose Creek Regional Access Early Implementation Project at Workman Mill Road and continue east with enhancements along the existing 15 ft wide bike path on the south bank from Workman Mill Road to 7th Avenue. The western end of the proposed alignment connects to the Early Implementation Project at Workman Mill Road and extends the Greenway to the San Gabriel River. A small pocket park is proposed on the south bank where the concrete-bottom wash meets the natural-bottom channel. Much of the R/W along this segment's existing bike path is wide and has the potential for enhanced design opportunities. This concept also proposes to enhance the existing multi-use trail along the north bank with fencing and improved access to the existing overlook park. There is an active equestrian community in this area which makes it an ideal location for both an enhanced Greenway and a multi-use trail.

Looking west towards Workman Mill Rd from above San Jose Creek

Existing channel transitional wall near Hillview Drive where a pocket park is proposed.

Existing maintenance road at San Jose Creek Overlook Park.

GREENWAY NETWORK SCALE

SAN JOSE CREEK AT POCKET PARK

INTRODUCTION

Located along San Jose Creek, this 2.3 mile example greenway project of the SGV Greenway Network would start at the LA County San Jose Creek Regional Access early implementation project (EIP) at Workman Mill Road, and continue east with enhancements along the existing 15 ft. wide bike path on the south bank from Workman Mill Road to 7th Avenue. The western end of the proposed alignment connects to the EIP at Workman Mill Road and extends the Greenway to the San Gabriel River.

A small pocket park is proposed on the south bank where the concrete-bottom wash meets the natural-bottom channel. Much of the R/W along this segment's existing bike path is wide and has the potential for enhanced design opportunities.

AGENCY CONTEXT

The proposed San Jose Creek Greenway project falls within the City of Industry and the unincorporated LA County community of Avocado Heights.

PROPOSED GREENWAY ALIGNMENT

The extent of this project would focus on enhancing the existing bike path from Workman Mill Road to 7th Avenue into a multi-use path of varying R/W widths along the south bank. Starting at Workman Mill Road east of an EIP proposed bridge crossing, the project would continue east along the channel to 7th Avenue. Along this stretch, there are areas with a R/W width greater than 24'. These areas provide space for design opportunities such as outdoor classrooms, small community garden plots, rest areas with rest areas with seating and shade near crossings, or off-site stormwater capture. The north bank multi-use trail will be left soft bottomed for equestrians, hikers, and mountain bikers.

ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. 7th Avenue
2. Workman Mill Road
3. Proposed Bridge – LA County EIP San Jose Creek Regional Access proposes a cross-channel bridge for pedestrians, equestrians, and cyclists with connection to San Gabriel River.

GREENWAY NETWORK SCALE

SAN JOSE CREEK AT POCKET PARK

GREENWAY SEGMENTS - AVAILABLE R/W

Each section of the proposed greenway responds to the available R/W. The following segments are proposed:

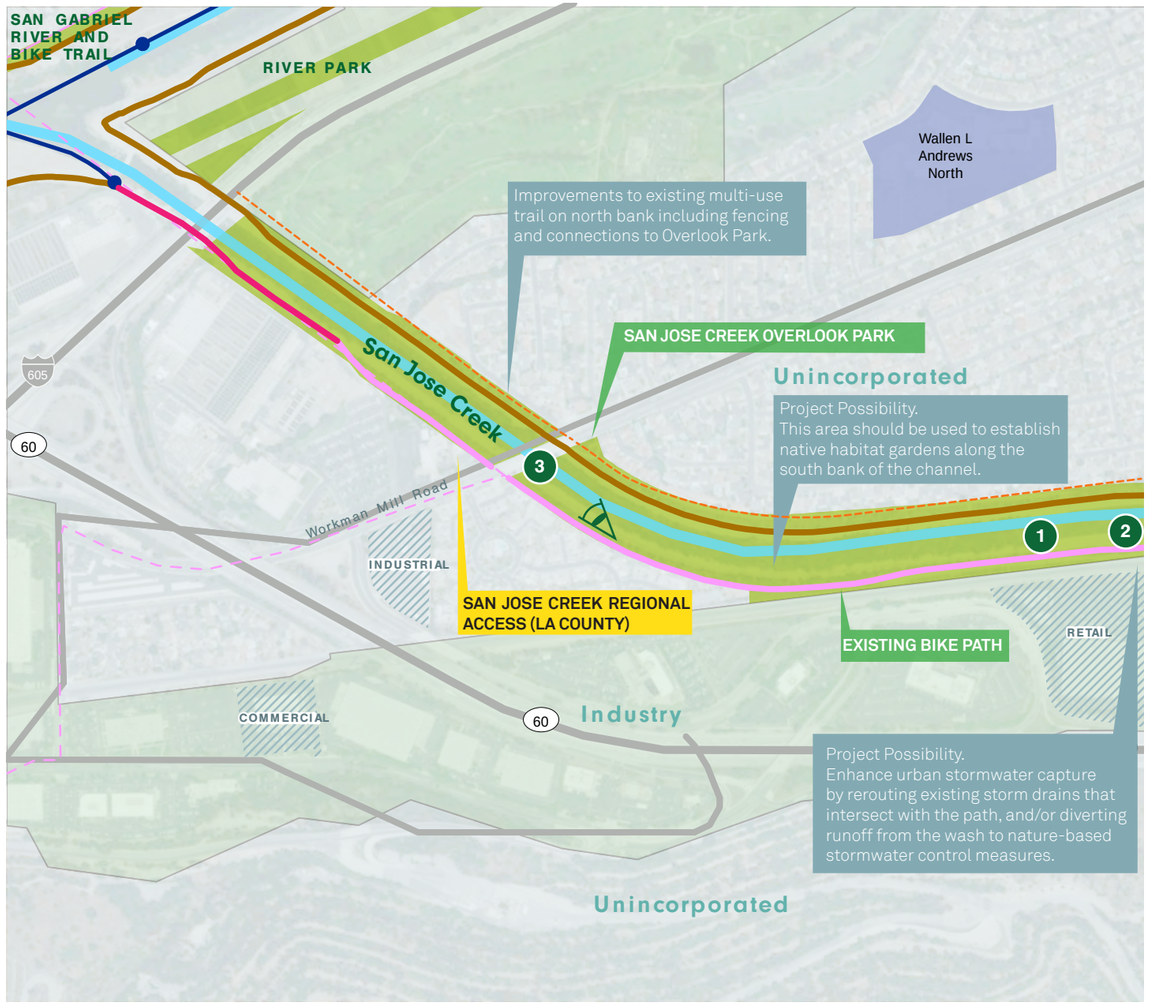
1. 7th Avenue to Workman Mill Road - Enhancements to the existing bike path along this segment are needed for: 2060 LF of 17-19 FT of R/W width available; 2135 LF of 19-24 FT of R/W width available, and 6806 LF of >24 FT of R/W width available.

2. Workman Mill Road to 3 LA County EIP San Jose Creek Regional Access proposed bridge crossing - 1090 LF of >24 FT of R/W width available.

STORMWATER APPROACH

Greenway segments to the west of 7th Avenue overlap with an existing storm drain, which could be captured and routed through nature-based stormwater controls instead of being discharged to the channel. There also may be potential to add stormwater controls to treat dry weather flows and/or stormwater from San Jose Creek. There are multiple other storm drains that intersect with the existing bike path that could be re-routed to on-path stormwater controls if desired. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature-based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site-specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.



NEIGHBORHOOD SCALE

SAN JOSE CREEK AT POCKET PARK

An existing route alignment runs the length of this segment on the south (left) bank of the channel from 7th Ave west to Workman Mill Road where the path connects to LA County EIP San Jose Creek Regional Access path and its proposed multi-use bridge across San Jose Creek west of Workman Mill Road.

PROJECT POSSIBILITIES

1 EXPAND OPEN SPACE
The public R/W east of Workman Mill Road contains generous segments >24 FT in width along the south (left) bank. Besides the 12 FT enhanced multi-use path, the remaining width of the route could be dedicated to other program space such as a pocket park, habitat corridors, community gardens, and stormwater capture and treatment.

2 POCKET PARK
A small pocket park is proposed on the south (left) bank where the concrete-bottom channel meets the natural-bottom channel. The proposed path brushes up against a roughly 0.25 acre area. A seating area with shade that overlooks the San Jose Creek could be implemented to create a moment of respite along the multi-use path.

3 MULTI-USE TRAIL
Improve the multi-use trail on the north bank with fencing, landscaping, and better access to the Overlook Park. There is an active equestrian community in this area and the north bank should be designed primarily for equestrian users.

Available Right-of-Way
Greater than or equal 24 feet
Tributary Channels
Existing Bikeways (MTA data)
Retail/Commercial/Industrial Areas
County Regional Multi-Use Trail Network (DPR data)
Existing Equestrian Trail
1 Elements to Feature
Greenway/Community Destinations

0 50 100
Feet

PARCEL SCALE

SAN JOSE CREEK AT POCKET PARK

ELEMENTS TO FEATURE

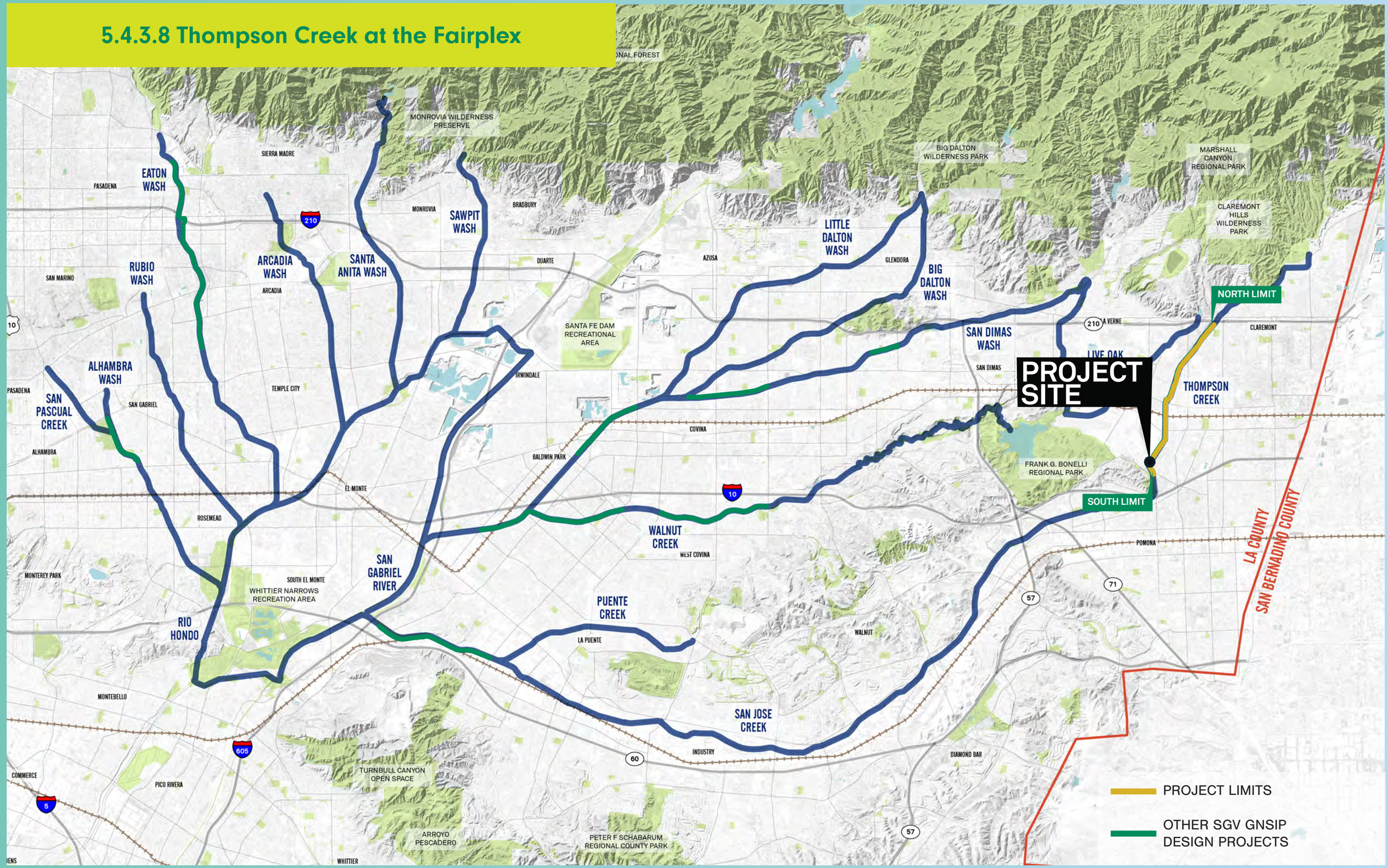
1. Native, riparian plant community trees and shrubs to provide habitat and drought-tolerant planting demonstration. Vegetation near the channel will follow LA County Flood Control District Channel Right of Way Vegetation Management Guidelines. Stormwater capture at this location may support passive irrigation of riparian vegetation.
2. Bike racks, water station, lighting and safety call box.
3. Signage featuring valuable watershed and stormwater information - utilize as educational opportunity for people using the greenway path.
4. Seating with shade structure.
5. Overlook of natural-bottom channel.

IN CONCLUSION

This example greenway project was created to promote inspiration for future projects and coordination amongst stakeholders. This section of San Jose Creek scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This view looking west at Workman Mill Rd. from above San Jose Creek shows improvements to the multi-use trail on the north bank, native planting on the south bank, ADA connections to the Overlook Park, and in the distance, the proposed EIP bridge connecting San Jose Creek to the San Gabriel River.

Rendering of example greenway project elements.

5.4.3.8 Thompson Creek at the Fairplex



EXISTING CONDITIONS

THOMPSON CREEK AT THE FAIRPLEX

This example greenway project would extend from the Foothill Freeway at its northern end to McKinley Avenue along the Fairplex complex and event center at the southern end. This 3.3-mile-long example Greenway project would connect the Fairplex to the Pomona North Metrolink Station via a proposed bridge structure over the tracks. The example concept also includes ample opportunities to capture stormwater via bioretention planters, at existing storm drains, and reducing impact runoff from a portion of the large paved parking area at its southern end.

Looking north from above Thomson Creek at the Pomona Fairgrounds parking lot.

Looking south from west side of Thomson Creek near Fulton Rd.

Looking north from above Thompson Creek near the Fairplex.

GREENWAY NETWORK SCALE

THOMPSON CREEK AT THE FAIRPLEX

INTRODUCTION

This example Greenway project would extend from the Foothill Freeway at its northern end to McKinley Avenue along the Fairplex complex and event center at the southern end. This 3.3 mile stretch would connect the Fairplex to the Pomona North Metrolink Station while reducing impact runoff from a large paved area at its southern end.

AGENCY CONTEXT

The proposed Thompson Creek Greenway project falls within the City of Pomona, City of La Verne, and City of Claremont. Key partners in this project would be the Fairplex and Metrolink.

PROPOSED GREENWAY ALIGNMENT

The extents of this project would focus on implementing a 12 FT wide multi-use path along the eastern bank of Thompson Creek from the Foothill Freeway to Grove Street, with a crossing to the western bank from Grove St to the Fairplex site.

ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Foothill Freeway
2. Lockhaven Way
3. Garey Avenue
4. Foothill Boulevard
5. Grove Street - On street connection to East bank. East Bank alignment begins
6. Bonita Avenue
7. Pomona North Metrolink Station - Connection to existing Metrolink San Bernandino Line and future Metro Foothill Gold Line Extension
8. Arrow Highway
9. La Verne Avenue
10. Fulton Road - Gateway neighborhood entry to proposed design area
11. White Avenue
12. McKinley Avenue - Direct connection to Ganesha Park

GREENWAY NETWORK SCALE

THOMPSON CREEK AT THE FAIRPLEX

Available Right-of-Way
- Less than 8 feet
- 8-13 feet
- 13-17 feet
- 17-19 feet
- 19-24 feet
- Greater than or equal 24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)

- School Property
- Proposed Bridge Crossing
- County Regional Multi-Use Trail Network (DPR data)
- Stormwater Drain Diversion and/or Capture Opportunity
- Stormwater BMP for Multi-use Path
- 1 Intersection Crossing/Access Point
- Greenway/Community Destinations

0 1000 2000 Feet

GREENWAY SEGMENTS - AVAILABLE R/W

Each section of proposed Greenway relates to the available R/W and for this project can be identified between intersection crossings. The following segments are proposed:

1. Foothill Freeway to Lockhaven Way. 957 LF of 13-17 FT R/W width.
2. Lockhaven Way to Garey Avenue - 3289 LF of 13-17 FT R/W width.
3. Garey Avenue to Foothill Boulevard - 940 LF of 13-17 FT R/W width.
4. Foothill Boulevard to Grove Street - 1937 LF of 13-17 FT R/W width.
5. Grove Street to Bonita Avenue - 1666 LF of 13-17 FT R/W and 477 LF of 19-24 FT R/W width.
6. Bonita Avenue to Pomona North Metrolink Station - 1178 LF of 13-17 FT R/W and 176 LF of 19-24 FT R/W width.
7. Pomona North Metrolink Station to Arrow Highway - Bike/pedestrian over crossing of Metrolink tracks. 775 LF of 13-17 FT R/W width remaining. An off-channel bike path proposed from 1st St to Arrow Highway.
8. Arrow Highway to La Verne Avenue - 399 LF of 19-24 FT R/W width.
9. La Verne Avenue to Fulton Road - 222 LF of 17-19 FT R/W and 584 LF of 13-17 FT R/W width.
10. Fulton Road to White Avenue - 1085 LF of 13-17 FT R/W width. An off-channel bike path proposed partially within the Fairplex property.
11. White Avenue to (12.) McKinley Avenue - Expand existing sidewalk to provide for 6.5 FT Class 4 sidewalk-level southbound bikeway and 6 FT sidewalk with 2.5 FT separation between them, per Caltrans DIB 89-02

STORMWATER APPROACH

The Fairplex parking parcel represents significant impervious area that could be adapted for stormwater controls. Stormwater could be diverted from Thompson Creek or from a stormwater drainage line to the North under Arrow Highway. There is 66.7 acres of parking area that could be adapted to add nature-based stormwater controls while still maintaining core site purpose. This could be a potential LAC SCWP project application. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel Greenway stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.

NEIGHBORHOOD SCALE

THOMPSON CREEK AT THE FAIRPLEX

In addition to providing a continuous Greenway alignment, some additional enhancements can be incorporated into the project to create multi-beneficial opportunities.

PROJECT POSSIBILITIES

1. SIDEWALK EXPANSION
   Expand existing west sidewalk of White Ave from McKinley Ave to the intersection of White Ave and Thompson Creek to provide a minimum 6.5 FT wide Class 4 sidewalk-level southbound bikeway and 6 FT sidewalk with 2.5 FT separation between them, per Caltrans DIB 89-02. Obtaining additional width for the bikeway might require R/W acquisition from adjacent parcels, median island removal, or removal of a traffic lane on White Avenue. Total length of expansion is approximately 1460 FT.

2. GREEN INFRASTRUCTURE
   Capture and direct stormwater through infiltration system of bioretention basins in parking lot. Reduce heat island effect with paint and/or permeable pavers.

STORMWATER OPPORTUNITIES

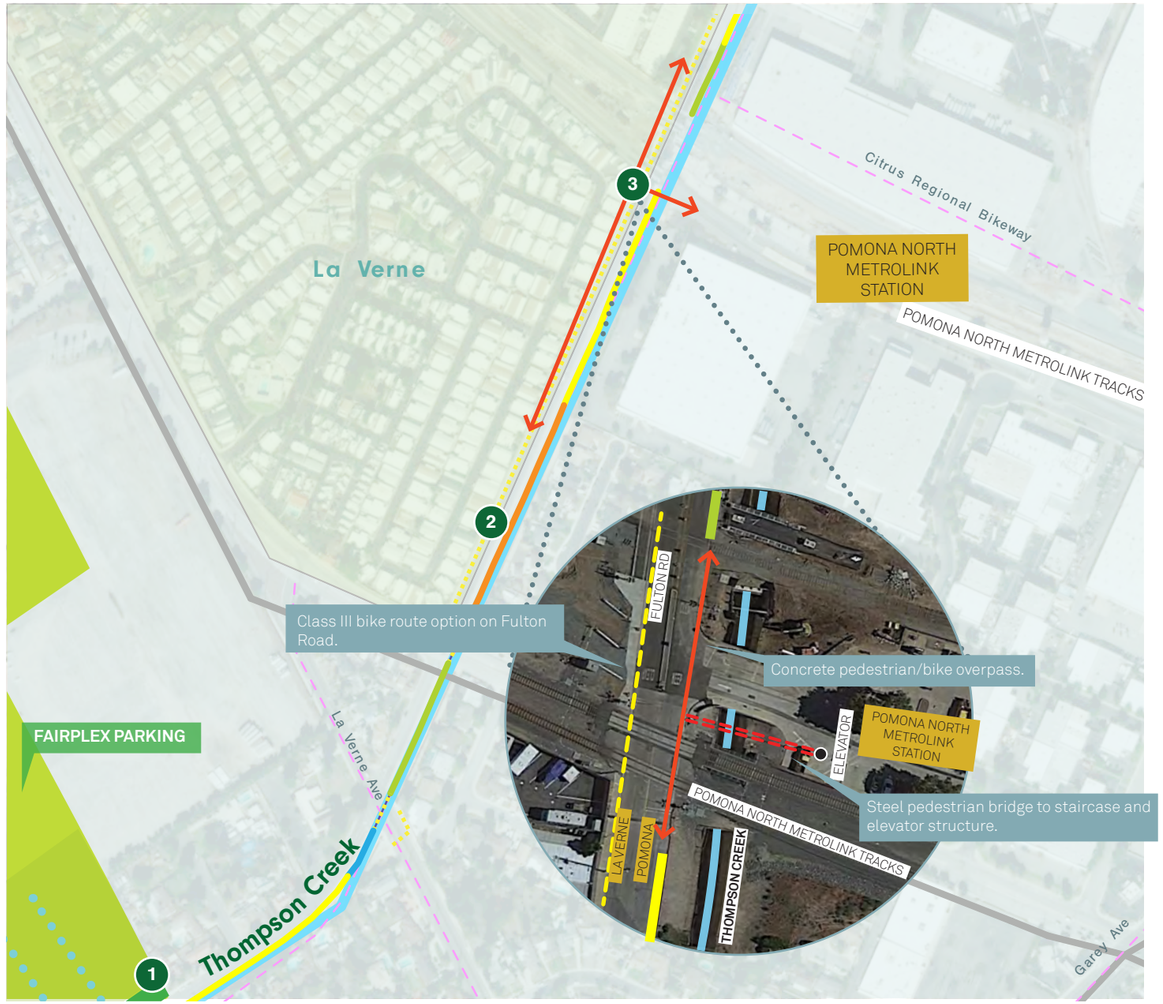
Reduction in impervious area by using permeable pavement and/or infiltration to capture stormwater and recharge groundwater.

The Fairplex parcel's large area may also provide opportunity to divert additional water from the channel for infiltration, groundwater recharge, and water quality improvement.

PARCEL SCALE 1

THOMPSON CREEK AT THE FAIRPLEX

The proposed alignment and green space establishes a strong connection between the Fairplex and nearby Pomona North Metrolink Station. A combination of new structural elements is suggested for a seamless transition between the Greenway network and the transit hub.



Available Right-of-Way
- 8-13 feet
- 13-17 feet
- 17-19 feet
- 19-24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Proposed Bikeways (MTA data)
- Proposed Bridge Crossing
- Cool Paint
- Bioretention - Vegetated Basins

1 Project Possibilities

Greenway/Community Destinations

PROJECT POSSIBILITIES

1 LIVING EDGE
Linear green space to act as a softer edge condition between the channel and parking area. 65 FT minimum, including bike path. Opportunity to include character planting, shade, seating, gathering space, and other recreational amenities for Greenway users. Medium-sized gateway entrance from Fulton Road.

2 GREENWAY OVER CROSSING
Concrete pedestrian/bike overpass on the right bank provides a grade separated ADA-compliant route over the station entrance driveway and the five tracks serving commuter rail, light rail transit, and freight rail. Pursue an FRA IIJA Rail Crossing Elimination Grant.

3 RAIL TRANSIT ACCESSIBILITY
Steel pedestrian bridge connects to staircase and elevator structure at Pomona (North) Metrolink and Metro Light Rail Transit Station. The station currently lacks an accessible pedestrian route from Fulton Road. A bridge between the over crossing and an elevator/ staircase structure within the station area would eliminate a one-mile detour that people in wheelchairs must currently use to reach one of the train platforms.

Available Right-of-Way
Less than 8 feet
8-13 feet
13-17 feet
Tributary Channels
Proposed Bikeways (MTA data)
Cool Paint / Permeable Pavers
Bioretention - Vegetated Basins
Rendering Camera View
1 Elements to Feature

0 100 200 Feet

PARCEL SCALE 2

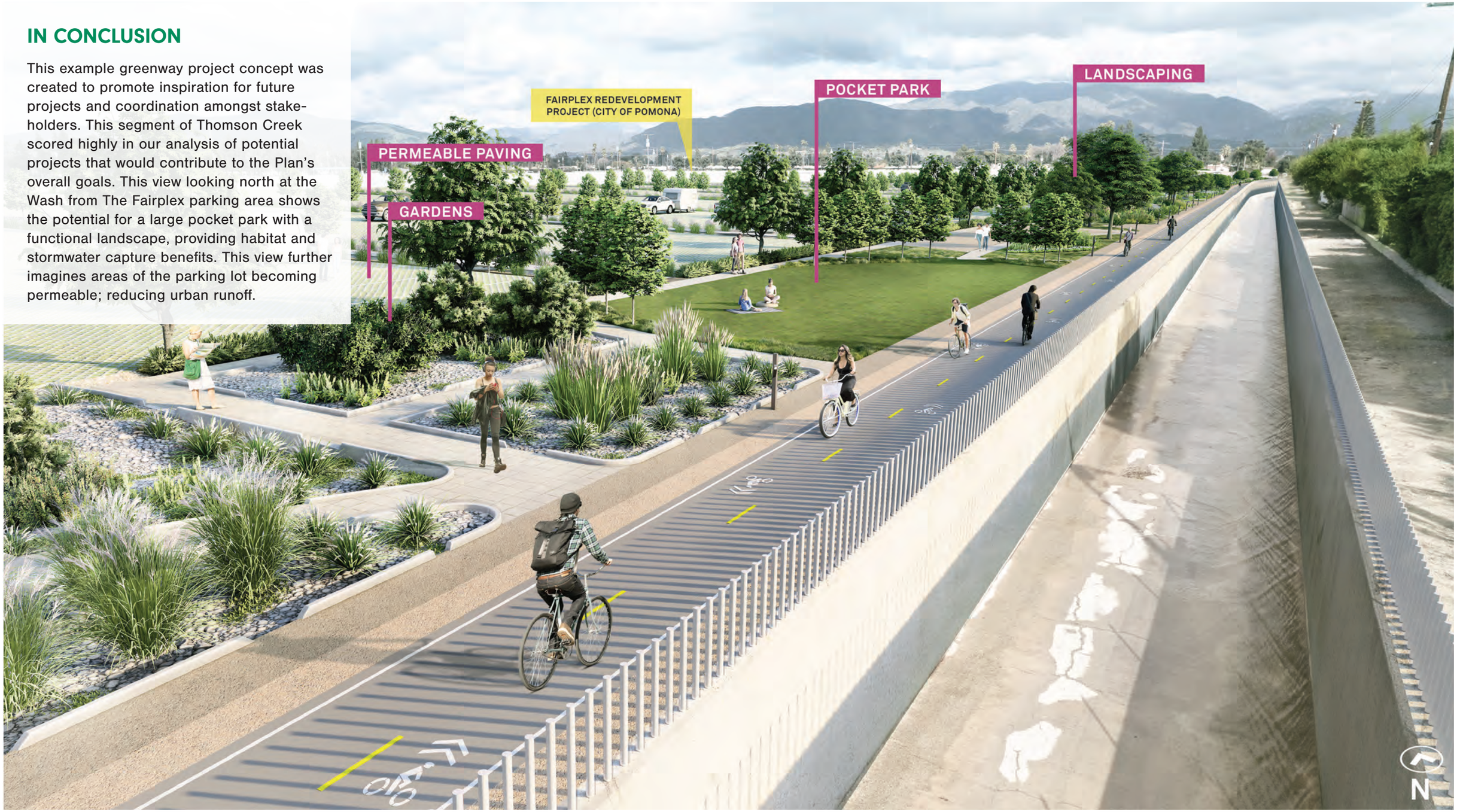
THOMPSON CREEK AT THE FAIRPLEX

ELEMENTS TO FEATURE

1. On-channel alignment from Fulton Road to Foothill Freeway
2. Neighborhood entry
3. Public Art
4. Shaded Seating
5. Shaded Picnic Area
6. Pollinator Garden
7. Wash Plant Community
8. Riparian Plant Community
9. Flexible Lawn
10. Interpretive Signage
11. Bioretention - Vegetated Basins w/in Parking Area
12. Bike Fix-it Station
13. Gateway - medium-sized w/ information about the tributary greenway

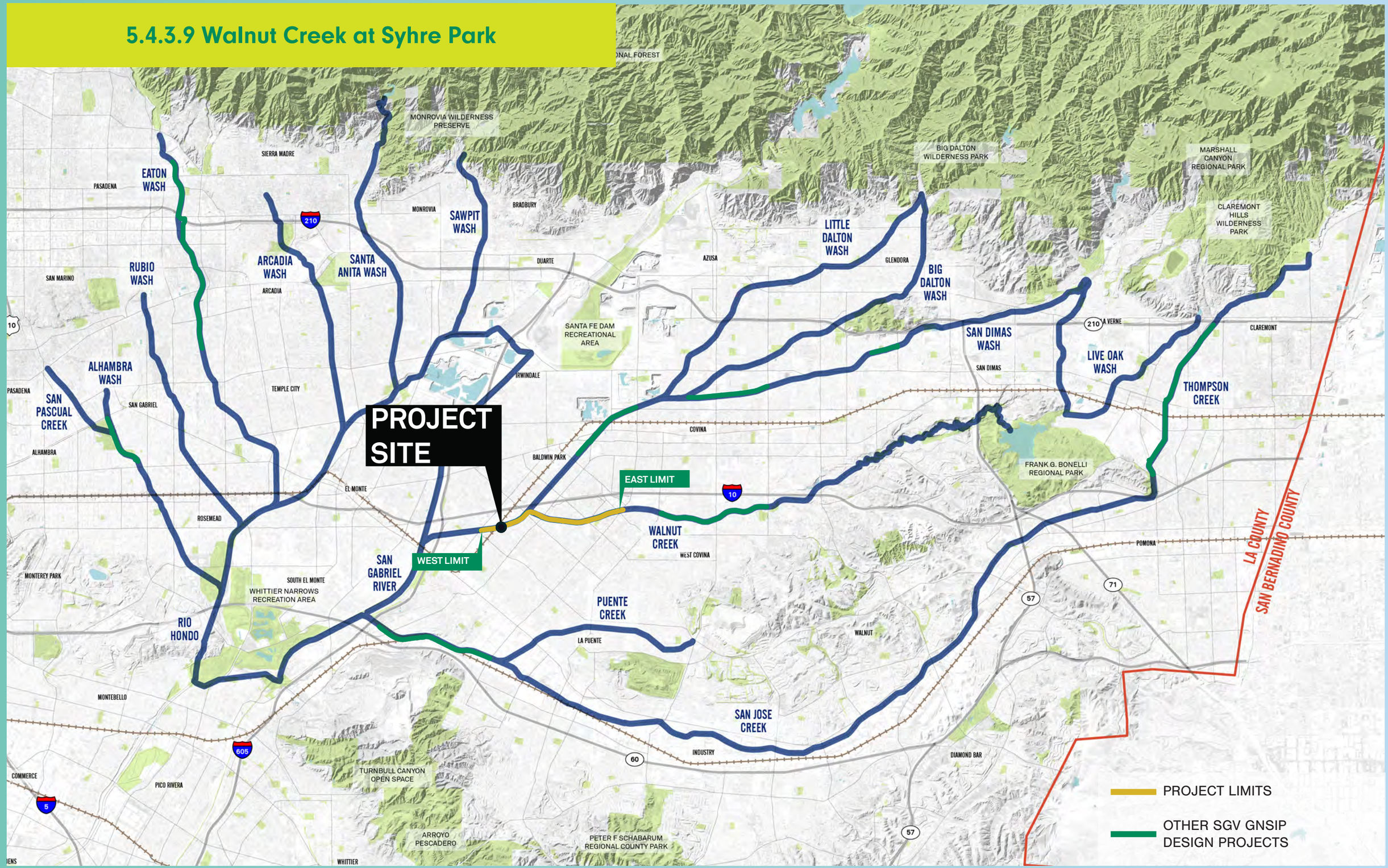
IN CONCLUSION

This example greenway project concept was created to promote inspiration for future projects and coordination amongst stake-holders. This segment of Thomson Creek scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This view looking north at the Wash from The Fairplex parking area shows the potential for a large pocket park with a functional landscape, providing habitat and stormwater capture benefits. This view further imagines areas of the parking lot becoming permeable; reducing urban runoff.



Rendering of example greenway project elements.

5.4.3.9 Walnut Creek at Syhre Park



EXISTING CONDITIONS

WALNUT CREEK AT SYHRE PARK

Located along Walnut Creek, this example greenway project would start at Baldwin Park Boulevard and continue east along the southern bank of Walnut Creek for 2.9 miles to Sunset Avenue. The proposed extents would provide connections to two Early Implementation Projects by the City of Baldwin Park: (1) the Big Dalton Wash Trail Greening Project Phase I, and (2) the Big Dalton Wash Greening Project Phase II, which is proposed along the north bank from Baldwin Park Boulevard up Big Dalton Wash to Badillo Street at Hilda L. Solis Park. This example Greenway project could also be connected to another proposed concept within this Plan – see Big Dalton Wash at Hilda L. Solis Park. In addition to the 2.9 miles of new Greenway, the project includes two opportunity areas adjacent to the proposed multi-use path, Syhre Park, at Vineland Avenue and the linear parcel directly west of Syhre Park, both of which are owned by the City of Baldwin Park. This example Greenway concept connects these opportunity areas with new amenities and open space for the surrounding community.

Walnut Creek looking west from Syhre Park.

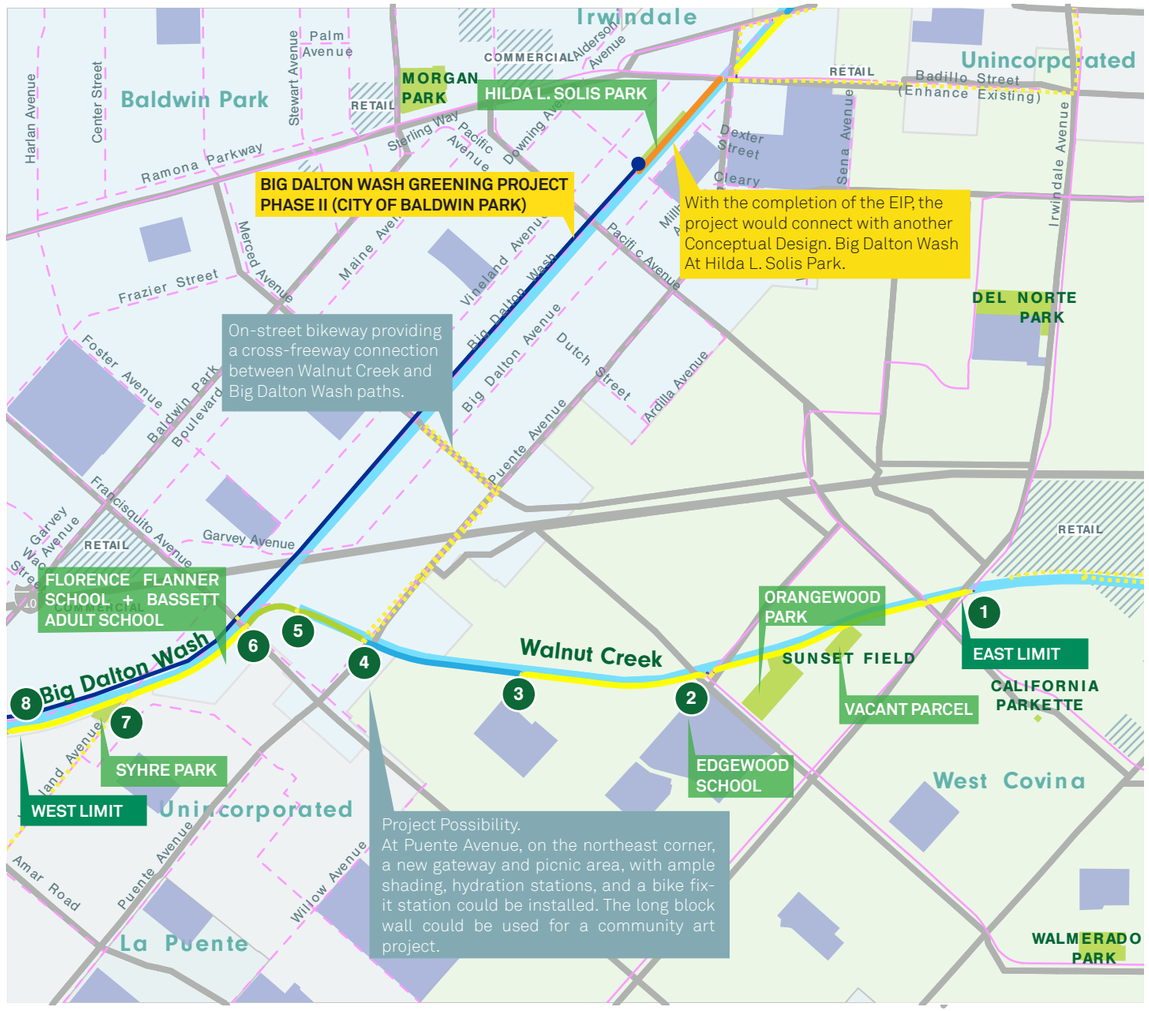
This view shows existing conditions looking west at the Wash from above Syhre Park and Vineland Ave.

This view shows existing conditions looking west at the Wash from above Syhre Park and Vineland Ave.

Existing conditions looking west from above Walnut Creek near Francisquito Ave. and the confluence with Big Dalton Wash.

GREENWAY NETWORK SCALE

WALNUT CREEK AT SYHRE PARK



Available Right-of-Way
- 8-13 feet
- 13-17 feet
- 17-19 feet
- 19-24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)
- School Property
- Retail/Commercial/Industrial Areas
- Early Implementation Projects

1 Intersection Crossing/Access Point

Greenway/Community Destinations

INTRODUCTION

Located along Walnut Creek, this example SGV Greenway Network project would start at Baldwin Park Boulevard and continue east along the southern bank of Walnut Creek for 2.9 miles to Sunset Avenue.

The proposed extents would provide connection to two Early Implementation Projects by the City of Baldwin Park: (1) the Big Dalton Wash Trail Greening Project Phase I, and (2) the Big Dalton Wash Greening Project Phase II, which is proposed along the north bank from Baldwin Park Boulevard and up Big Dalton Wash to Badillo Street at Hilda L. Solis Park. At Merced Ave, the greenway intersects with community resources such as the Hurst Ranch, Orangewood Park, and the Edgewood School. Users could use the greenway as an alternate route to access these amenities.

In addition to the 2.9 miles of new Greenway, the project includes (2) parcels adjacent to the proposed multi-use path, Syhre Park, at Vineland Avenue and the linear parcel directly west of Syhre Park, both of which are owned by the City of Baldwin Park.

AGENCY CONTEXT

The proposed Walnut Creek Greenway project falls within the City of Baldwin Park and City of West Covina.

PROPOSED GREENWAY ALIGNMENT

The extents of this project would focus on implementing a 12' wide multi-use path along the southern bank of Walnut Creek. While there are fluctuations in the available R/W width, all of the proposed extents are greater than 13 FT, which creates opportunities for adding planting areas for beautification, shade, habitat, and other green infrastructure elements.

ACCESS POINTS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Cameron Ave/ Sunset Avenue - Small gateway with signage.
2. Orange Ave/Merced Avenue
3. Willow Avenue
4. Puente Avenue
5. Big Dalton Avenue - Small gateway with signage.
6. Francisquito Avenue - Create a medium sized gateway along the southern bank, providing navigational signage for both projects.
7. Vineland Avenue
8. Connection to Big Dalton Wash Greening Project Phase I

GREENWAY NETWORK SCALE

WALNUT CREEK AT SYHRE PARK

GREENWAY SEGMENTS - AVAILABLE R/W

Each section of proposed greenway relates to the available R/W and for this project can be identified between intersection crossing. The following segments are proposed:

1. South Sunset Avenue to West Cameron Avenue to West Merced Avenue - 3750 LF of 13 - 17 FT R/W width.
2. West Merced Avenue to South Orange Avenue to South Willow Avenue - 2370 LF of 13 -17 FT R/W width.
3. South Willow Avenue to Puente Avenue - 2215 LF of 17-19 FT R/W width.
4. Puente Avenue to Big Dalton Avenue - 1025 LF 19-24 FT R/W width.
5. Big Dalton Avenue to Francisquito Avenue - 805 LF of 19-24 FT R/W width.
6. Francisquito Avenue to Vineland Avenue - 1873 LF of 13-17 FT R/W width. Similar to the previous section, it is adjacent to an available parcel increasing the available width for development to 75 FT.
7. Vineland Avenue to Rail crossing - 1755 LF of 13-17 FT R/W width. This section is connected to the available parcels associated with the project increasing the available width for development to approximately 75 FT wide.

STORMWATER APPROACH

Syhre Park is 1.6 acres and includes a baseball field. Surface nature-based stormwater controls could be implemented around the baseball field, and subsurface options could be implemented using the full site. Stormwater could be diverted from the Walnut Creek Channel, but there is limited formal stormwater drainage nearby Syhre Park to enable diversion and treatment of storm-water from neighboring areas. Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature based stormwater controls are recom-mended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater con-trol recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.

NEIGHBORHOOD SCALE

WALNUT CREEK AT SYHRE PARK

In addition to providing a continuous path alignment, critical enhancements can be incorporated into the project to create a multi-beneficial project, These include:

PROJECT POSSIBILITIES

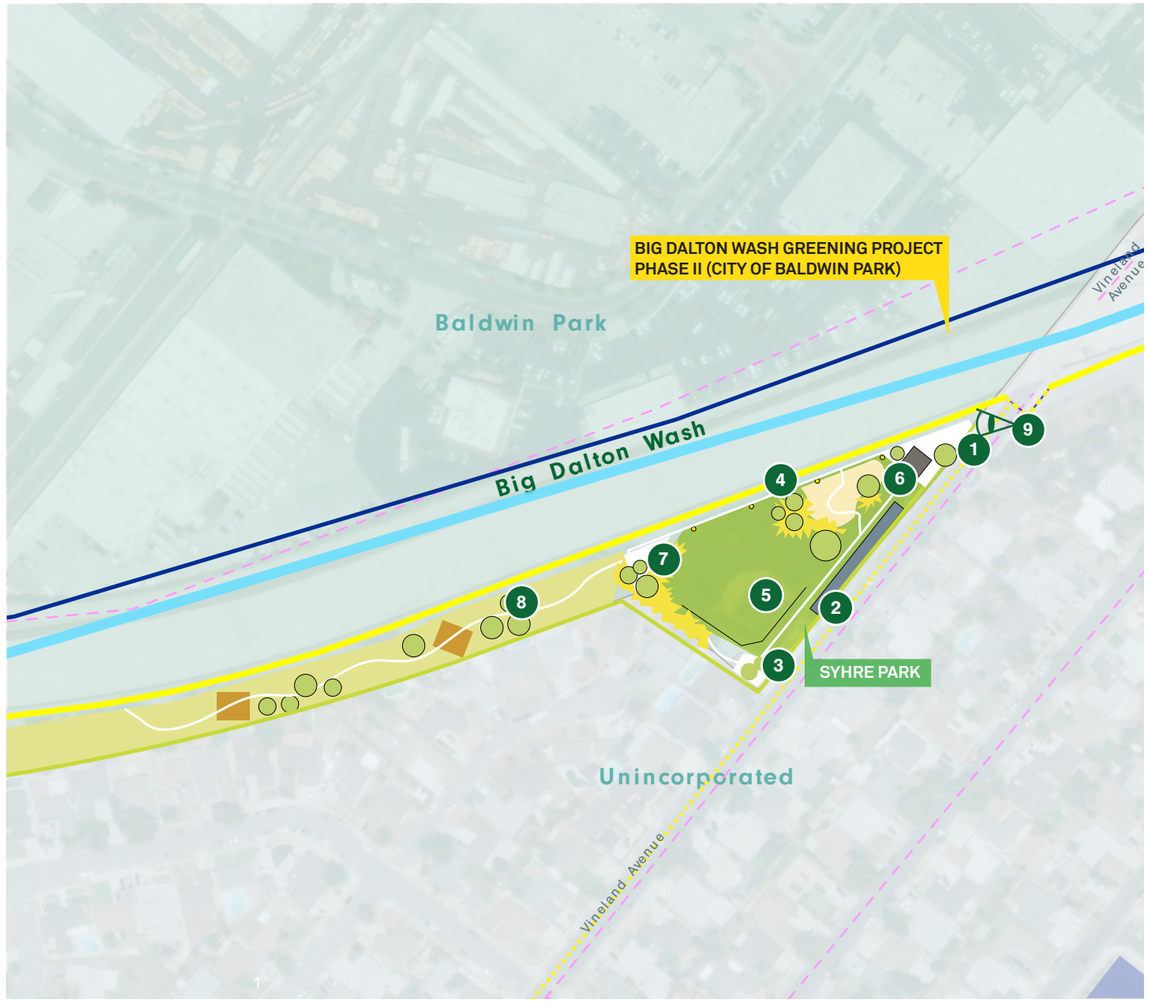
1 NORTH BANK GREEN INFRASTRUCTURE NEIGHBORHOOD PROJECT
From Baldwin Park Boulevard to Vineland Avenue, the available R/W along the southern edge of the In-n-Out property is greater than 24 FT creating the opportunity for a significant green infrastructure project, that could potentially collect and treat storwmwater from the commercial development to the north.

Any area along this edge, that is greater than the 12 FT multi-use path configuration, should be dedicated to green infrastructure, such as a linear stormwater BMP feature. This would be above and beyond any BMP requirements triggered by the projects hardscape areas.

2 CREATE EXPANDED OPEN SPACE AND HABITAT AREAS
The two nursery sites along the south bank, on either side of Syhre Park provide a unique opportunity to expand the width of the Greenway to create habitat gardens for birds, and a slower meandering pedestrian walk through the gardens.

3 NEIGHBORHOOD LOOP WALK
The wide R/W available on both sides of the bank creates an opportunity to introduce a 2-mile pedestrian walking loop. In stretches with greater than 17 FT available R/W width, provide a permeable walking surface separate from the 12 FT multi-use path. In areas less than 17 FT R/W width, the 4 FT of additional area outside of the multi-use path should be dedicated to planting, and provide shade and screening along the Greenway property edge.

4 RAILROAD CROSSING
A bicycle and pedestrian overcrossing of the Metrolink tracks would provide a direct connection between the Greenway and the City of Baldwin Park's San Gabriel River Greenway Project.



- Available Right-of-Way
- 13-17 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Proposed Bikeways (MTA data)
- School Property
- Early Implementation Projects
- Rendering Camera View
- 1 Elements to Feature
- Greenway/Community Destinations

0 100 200 Feet

PARCEL SCALE

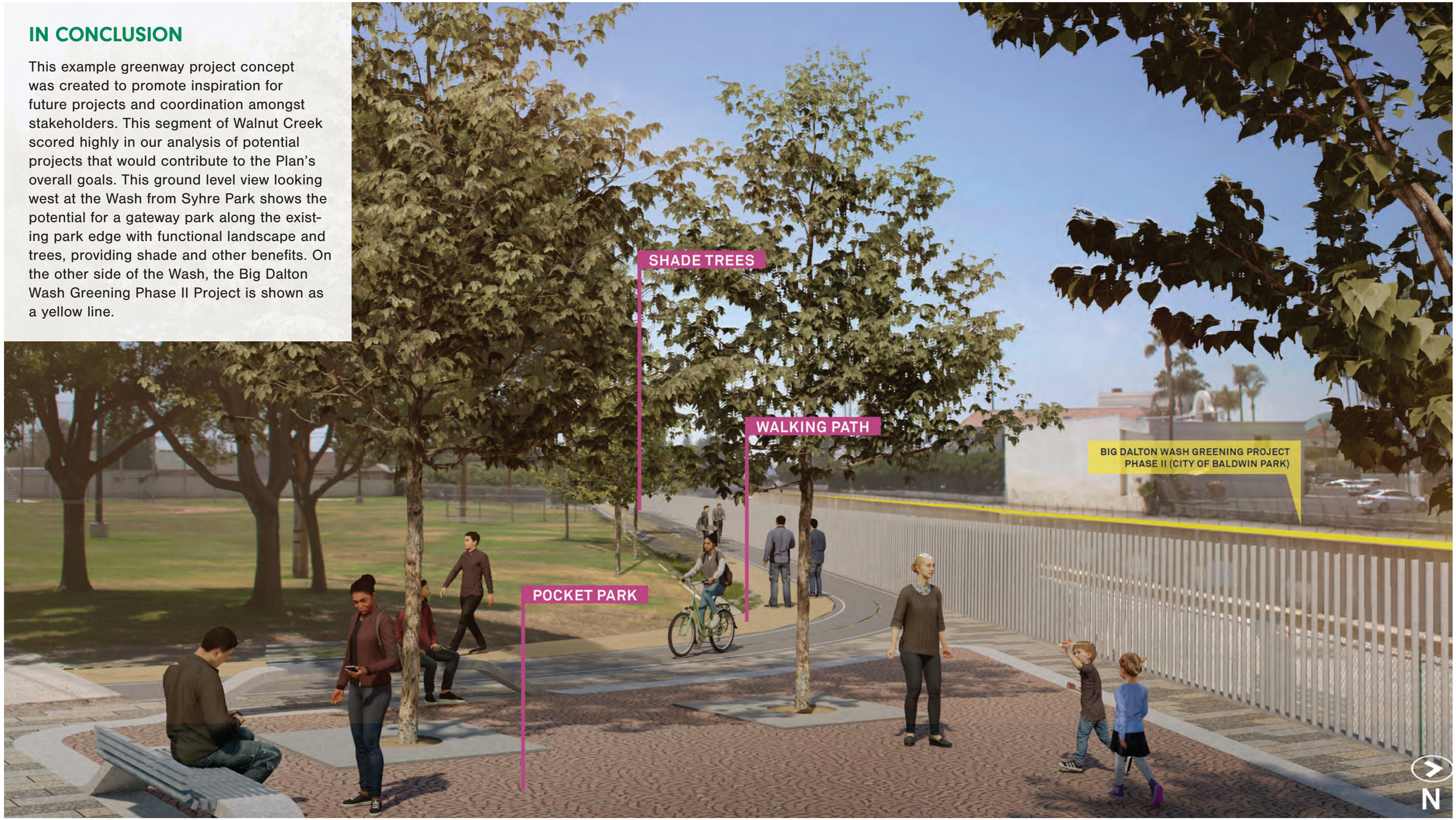
WALNUT CREEK AT SYHRE PARK

ELEMENTS TO FEATURE

1. New Gateway Plaza - relocate restroom to this location and incorporate an information kiosk and bike fix-it station.
2. Adjust curb alignment and relocate power poles to create new angled parking area with permeable pavement.
3. Create new entry garden with shade and bench seating.
4. Separated walking path from the multi-use path with site lighting along edge of park.
5. Maintain existing field.
6. New stormwater garden, with educational signage, and nature oriented play area.
7. Picnic rest area with shade and seating.
8. Remove commercial nursery use, and plant bird garden, with shade trees and pedestrian path that meandering through the planted areas providing a slower-paced option adjacent to the multi-use path.
9. Graphic paving to highlight crossing at Vineland Avenue and extend gateway experience from Syhre Park to the eastside of Vineland Avenue.

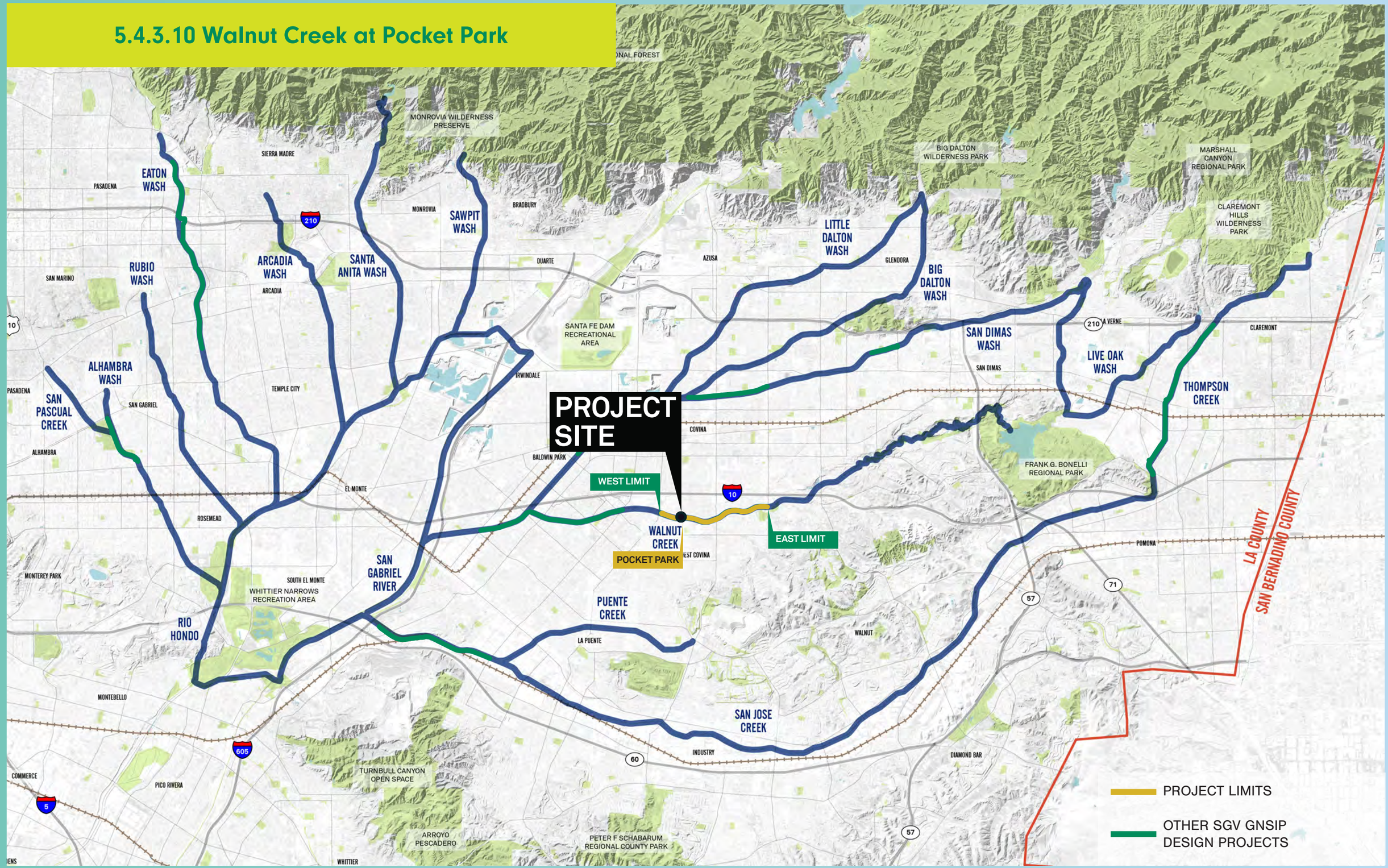
IN CONCLUSION

This example greenway project concept was created to promote inspiration for future projects and coordination amongst stakeholders. This segment of Walnut Creek scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This ground level view looking west at the Wash from Syhre Park shows the potential for a gateway park along the existing park edge with functional landscape and trees, providing shade and other benefits. On the other side of the Wash, the Big Dalton Wash Greening Phase II Project is shown as a yellow line.



Rendering of example greenway project elements.

5.4.3.10 Walnut Creek at Pocket Park



EXISTING CONDITIONS

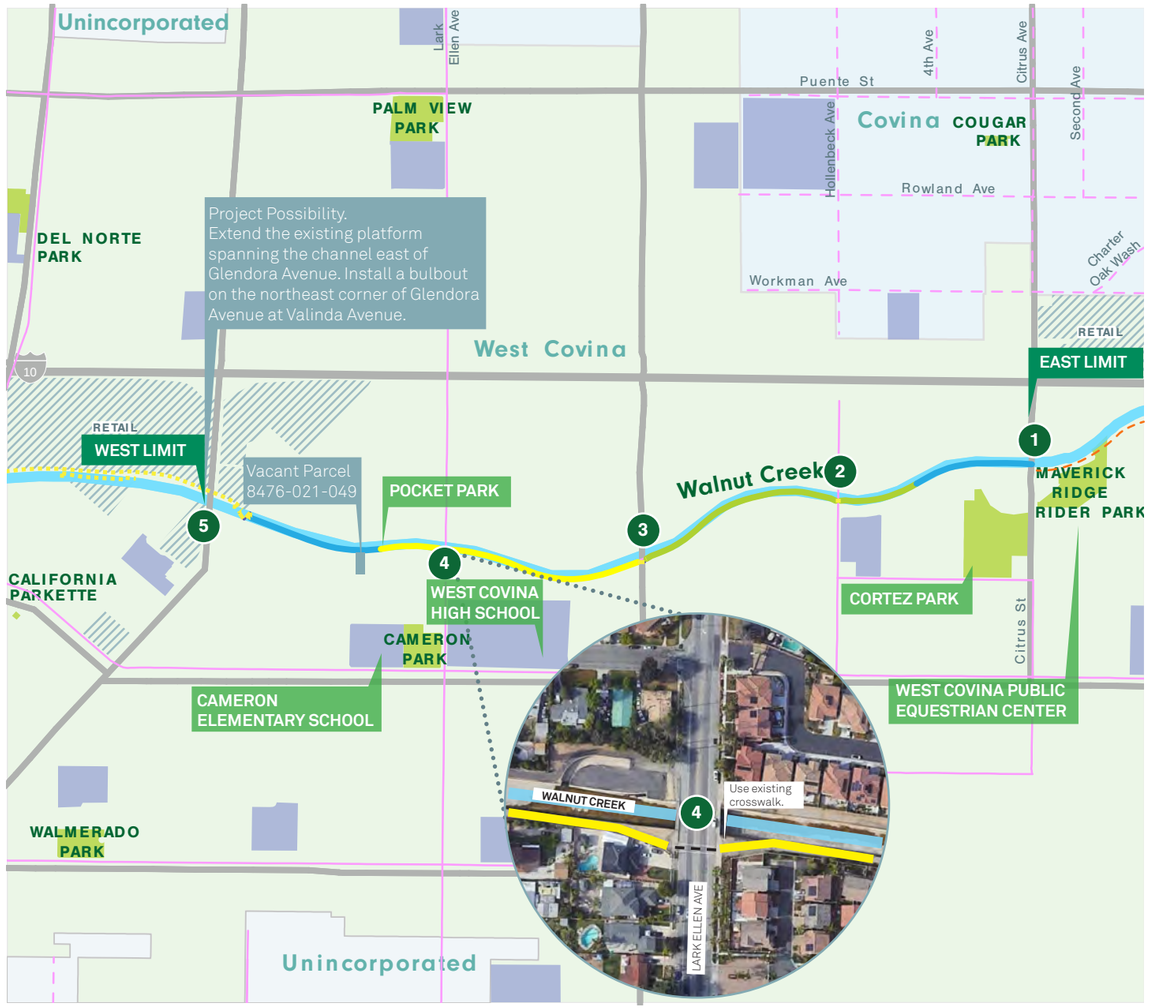
WALNUT CREEK AT POCKET PARK

Located along Walnut Creek, this example SGV Greenway Network project would start at the intersection of Glendora Avenue and Valinda Avenue, continuing east along the south bank for 2.2 miles to Citrus Street. Both ends of this conceptual alignment would connect with an existing bike path between Lark Ellen Avenue and Azusa Avenue, creating a continuous path for the community. In close proximity to the west limit, a vacant parcel midway between Valinda Avenue and Lark Ellen Avenue could be converted into a connection between the Greenway and the adjacent neighborhood with the incorporation of a small pocket park. At the east limit, the Greenway would connect to the Cortez Park complex.

Existing conditions looking west at an empty lot near Lark Ellen and East Service Ave.

Existing conditions looking north from East Service Ave. at Walnut Creek from the empty lot/proposed pocket park.

Looking west from north bank of channel at Lark Ellen Ave.



Available Right-of-Way
- 13-17 feet
- 17-19 feet
- 19-24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)
- School Property
- Retail/Commercial/Industrial Areas
- East Hills Equestrian Trail

1 Intersection Crossing/Access Point

Greenway/Community Destinations

0 1 000 2000 Feet

GREENWAY NETWORK SCALE

WALNUT CREEK AT POCKET PARK

INTRODUCTION

Located along Walnut Creek, this example SGV Greenway Network project would start at the intersection of Glendora Avenue and Valinda Avenue, continuing east along the south bank for 2.2 miles to Citrus Street.

In close proximity to the west limit, a vacant parcel midway between Valinda Avenue and Lark Ellen Avenue could be converted into a connection between the Greenway and the adjacent neighborhood with the incorporation of a small pocket park. At the east limit, the Greenway would connect to the Cortez Park complex.

AGENCY CONTEXT

The proposed Walnut Creek Greenway project falls within the City of West Covina.

LAND OWNERSHIP COORDINATION

Vacant Parcel 8476-021-049 is owned by Suburban Water Systems. It does not serve as a County access to the channel but should be considered for future easement and use.

PROPOSED GREENWAY ALIGNMENT

The extent of this project would focus on a 12 FT multi-use path with varying R/W widths along the south bank. Starting at the intersection of Glendora Avenue and Valinda Avenue, the project would continue east to Lark Ellen Avenue before connecting to an existing bike path that extends to Azusa Avenue. From Azusa Avenue to Citrus Street, a new multi-use path would be implemented.

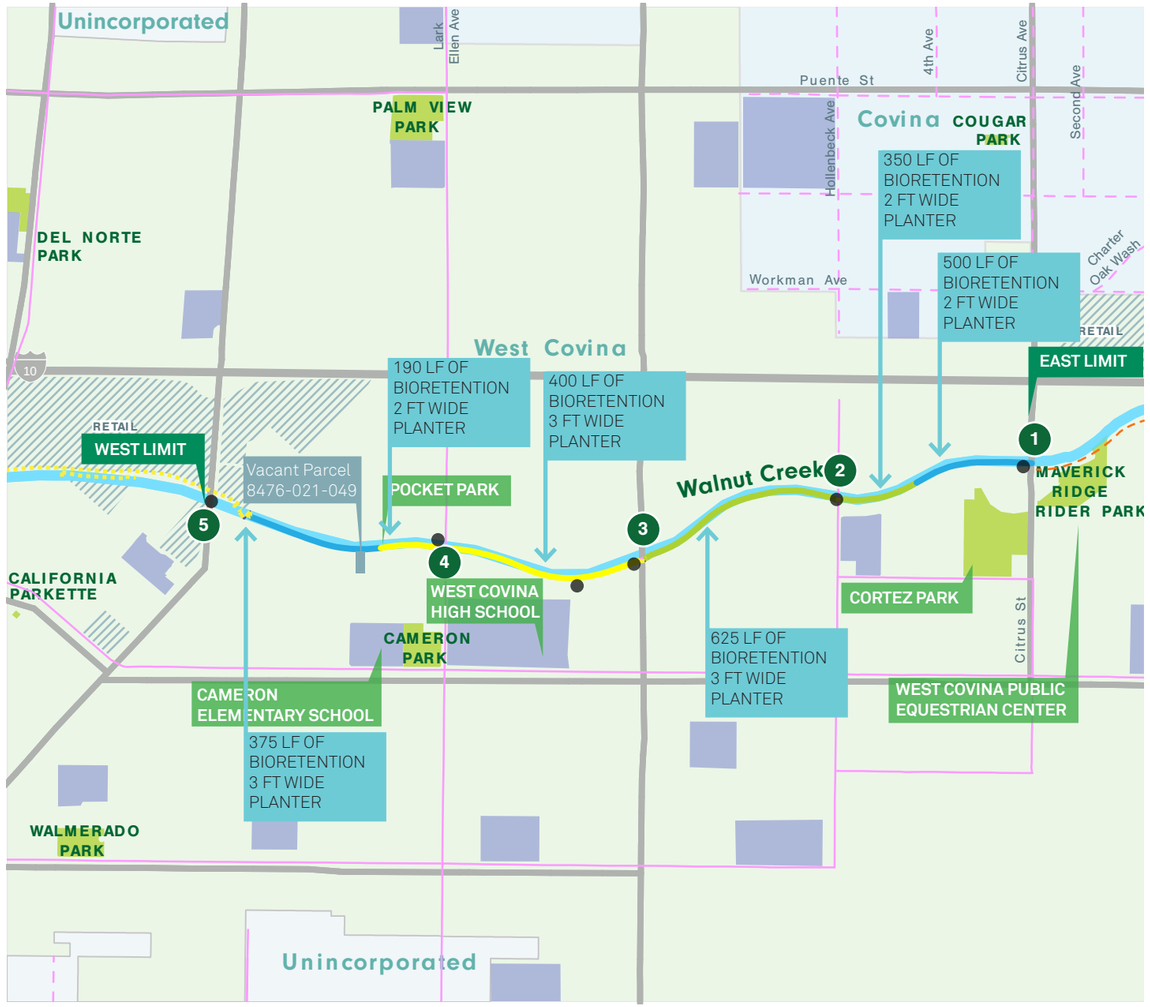
ACCESS POINTS AND CROSSINGS

See Safe Crossings in Appendix F, Attachment A crossing summaries for more detail.

1. Citrus Street
2. Hollenbeck Avenue
3. Azusa Avenue
4. Lark Ellen Avenue
5. Glendora Avenue / Valinda Avenue – Extension of the existing cantilever over the channel just east of Glendora Avenue.

GREENWAY NETWORK SCALE

WALNUT CREEK AT POCKET PARK



Available Right-of-Way
- 13-17 feet
- 17-19 feet
- 19-24 feet
- Proposed Off-channel Alignment
- Tributary Channels
- Existing Bikeways (MTA data)
- Proposed Bikeways (MTA data)
- School Property
- Retail/Commercial/Industrial Areas
- East Hills Equestrian Trail

- Stormwater Drain Diversion and/or Capture Opportunity
- Stormwater BMP for Multi-use Path
- 1 Intersection Crossing/Access Point
- Greenway/Community Destinations

GREENWAY SEGMENTS - AVAILABLE R/W

The on-channel alignment neighbors community resources and amenities, creating a real opportunity for increased connectivity and recreation space. Every effort to collaborate in future design should be explored and where feasible, widening the Greenway for additional amenities or increased connectivity should be prioritized. Each section of the proposed Greenway responds to the available R/W. The following segments are proposed:

1. Citrus Street to Hollenbeck Avenue - 1625 FT of 17-19 FT of R/W width available and 1080 FT of 19-24 FT of R/W width available.
2. Hollenbeck Avenue to Azusa Avenue - 2850 FT of 19-24 FT of R/W width available.
3. Azusa Avenue to Lark Ellen Avenue - 2680 FT of 13-17 FT of R/W width available. Existing bike path along this segment to be enhanced.
4. Lark Ellen Avenue to (5.) Glendora Avenue / Valinda Avenue - 850 FT of 13-17 FT of R/W width available and 1851 FT of 17-19 FT R/W width available.

STORMWATER APPROACH

There is limited connection opportunity of the pocket park location to stormwater infrastructure. However, there is an opportunity to manage Walnut Creek stormwater flows at the pocket park location and possibly at 19-24' R/W using nature-based stormwater controls (e.g., bioretention, subsurface infiltration, or an extended detention basin). Stormwater that is feasibly captured nearby planted vegetation may support passive irrigation.

Nature-based stormwater controls are recommended along bike paths to provide multiple benefits. Several on-channel stormwater control options include bioswales and permeable pavement, both with or without an underdrain depending on soil infiltration. All stormwater control recommendations are based on concept level estimates of rainfall, impervious area addition, and infiltration. Site-specific stormwater controls should be evaluated in detail on a case by case basis. If the infiltration rate in a given location is less than 0.3 in/hr, 1.5 times the stormwater design volume must be treated and conveyed via underdrain to a channel or location where water could be infiltrated. See the SGV Greenway Network Design Guidelines and Standards for additional information.

NEIGHBORHOOD SCALE

WALNUT CREEK AT POCKET PARK

The proposed alignment and green space establishes a strong connection between Glendora and Citrus Avenues while creating better access to the Greenway for neighborhood residents on the south side of the channel. Due to the presence of many street crossings, there is also substantial access from the north.

PROJECT POSSIBILITIES

1. EXISTING PLATFORM EXTENSION
   Extend the existing platform spanning the channel east of Glendora Avenue. Install a bulbout on the northeast corner of Glendora Avenue at Valinda Avenue to serve as the western terminus of the Greenway path. This will provide a better access point than if the path terminated on the south bank and an opportunity for overlook views of Walnut Creek.

2. NEIGHBORHOOD CONNECTION
   A vacant parcel to the west (8476-021-049) currently serves as a potential access point to the channel and could be converted into a connection between the Greenway, Pocket Park, Service Avenue, and the adjacent neighborhood.

3. POCKET PARK
   Opportunities to include public artwork, character planting, shade, interpretive signage, and a small respite area that serves Greenway users and neighborhood residents. In addition to providing amenities for people, habitat creation can work to optimize biodiversity along the Greenway as a primary objective.

Available Right-of-Way
13-17 feet
17-19 feet
Tributary Channels
Existing Bikeways (MTA data)
Rendering Camera View
1 Elements to Feature
Greenway/Community Destinations

0 50 100
Feet

PARCEL SCALE

WALNUT CREEK AT POCKET PARK

ELEMENTS TO FEATURE

1. Path connection between Greenway and Service Avenue for neighborhood access to channel R/W and pocket park. Tree-lined path using native, riparian plant community for shade and privacy
2. Pollinator garden at west entrance to pocket park and neighborhood passage
3. Public art installation to bring community character to the space and establish cultural value for the Greenway
4. Shaded structures
5. Privacy buffer / screen consisting of native, riparian plant community trees and shrubs. Stormwater capture at this location may support passive irrigation of riparian vegetation.
6. Habitat trail with interpretive signage highlighting the Walnut Creek water story and native riparian / wash ecology

IN CONCLUSION

This example greenway project concept was created to promote inspiration for future projects and coordination amongst stakeholders. This segment of Walnut Creek scored highly in our analysis of potential projects that would contribute to the Plan's overall goals. This birds-eye view level view looking east from above the channel shows an opportunity to convert a vacant parcel to new open space. This pocket park would connect the Greenway to the neighborhood, and provide respite for Greenway users. The pocket park is also an opportunity to provide habitat, public art, and trees which provide privacy and many other benefits.

Rendering of example greenway project elements.

5.5 Conceptual Design Kit of Parts

The example Conceptual Designs from Section 5.4 show what a potential greenway project could look like with a greenway path and many different combinations of subcomponents and beneficial elements. These designs were assembled using a kit-of-parts with greenway sections, subcomponents, and beneficial elements which can be used along tributary channels throughout the SGV Greenway Network.

Axonal diagrams are a key element of the kit of parts which illustrate greenway sections, subcomponents, and beneficial elements. Project proponents and readers of the SGV Greenway Network Plan should use these drawings to better visualize the future various design sections and elements, which are dependent on the available ROW width. These diagrams are meant to inspire future project proponents. Additional details related to greenway project design and subcomponents and beneficial elements are provided in the Design Guidelines and Standards (Section 6 and Appendix H).

Select greenway section axonal diagrams are shown in Section 5.1, Figures 5-2 through 5-8.

- 13-foot ROW multi-use path
- 17-foot ROW multi-use path and multi-use trail
- 19-foot ROW multi-use path and multi-use trail
- 19-foot ROW multi-use path and multi-use trail
- 24-foot ROW multi-use path and multi-use trail with planting strip
- 24-foot ROW multi-use path and multi-use trail with planting buffer between
- 13-foot ROW multi-use path on one side of channel with variable width ROW equestrian/ multi-use trail on the opposite side of the channel

Axonal diagrams of select subcomponents and beneficial elements are provided in Figures 5-12 through 5 -18.

- Pocket Park
- Spreading basin fitness loop
- Two stage crossing
- Adjacent demonstration garden
- Channel overcrossing
- Rail overcrossing
- Channel undercrossing

POCKET PARK

Pocket parks with amenities for greenway users and the surrounding community are an important part of the SGV Greenway Network. Pocket parks can provide rest areas, shade, habitat, green infrastructure, wayfinding, and other enhancements. Refer to design guidelines wfor more details.

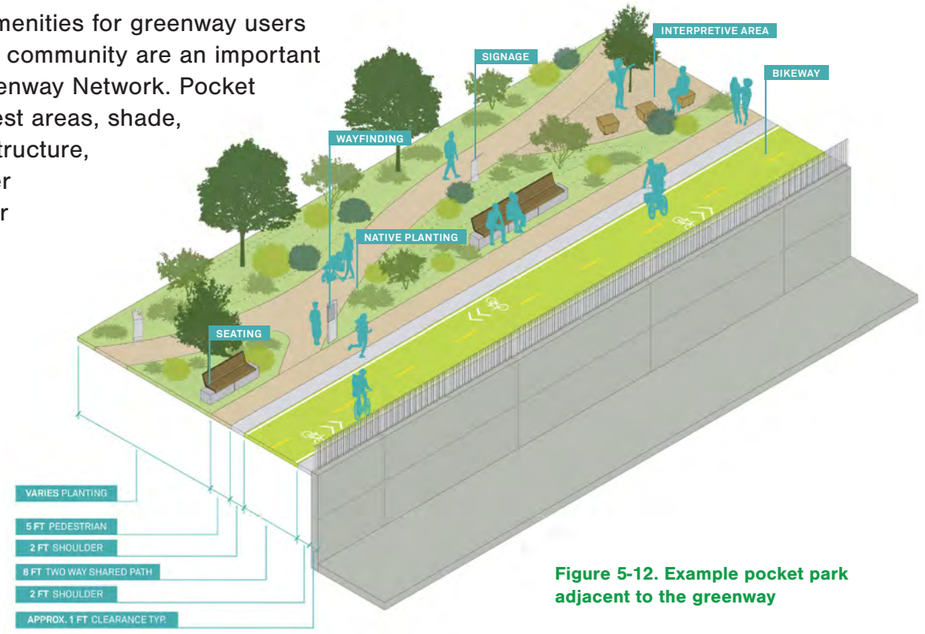


Figure 5-12. Example pocket park adjacent to the greenway

SPREADING BASIN FITNESS LOOP

Many spreading basins and other types of water infrastructure exist in the SGV adjacent to tributary channels. When possible, activating these areas can create amenities for greenway users and the surrounding community. Spreading basins and water infrastructure in general have very specific maintenance and operation requirements that should not be hindered. Refer to design guidelines for more details.

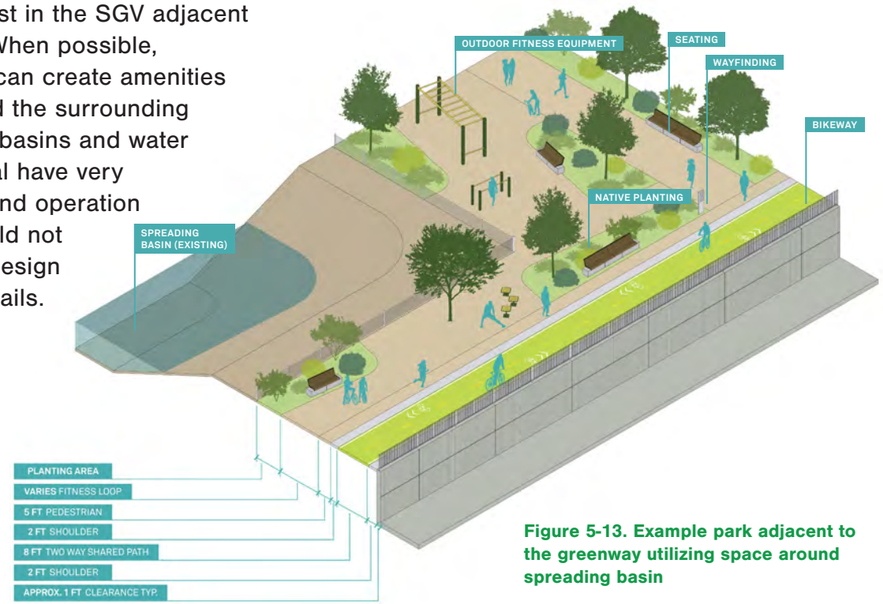


Figure 5-13. Example park adjacent to the greenway utilizing space around spreading basin

TWO-STAGE CROSSING

This diagram shows the typical configuration for two-stage, at grade crossings. Safe crossings are critical to greenway implementation. See the safe crossings appendix and design guidelines for further details.

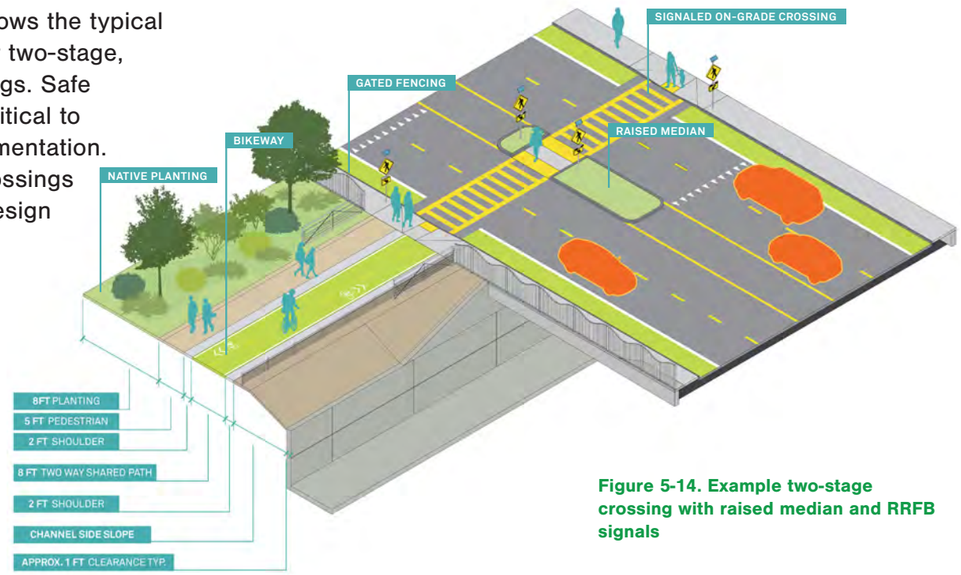


Figure 5-14. Example two-stage crossing with raised median and RRFB signals

ADJACENT DEMONSTRATION GARDEN

There are many opportunities to implement green infrastructure as part of the SGV Greenway Network. Areas that capture water can decrease runoff, educate people about water systems, and provide habitat and landscaping. Refer to design guidelines for further details.

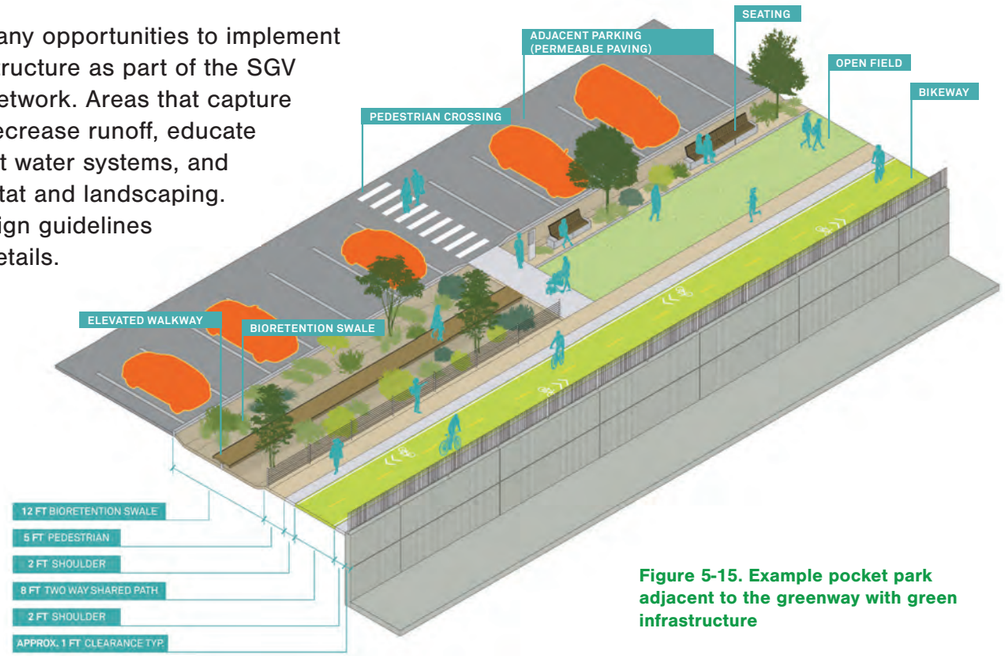
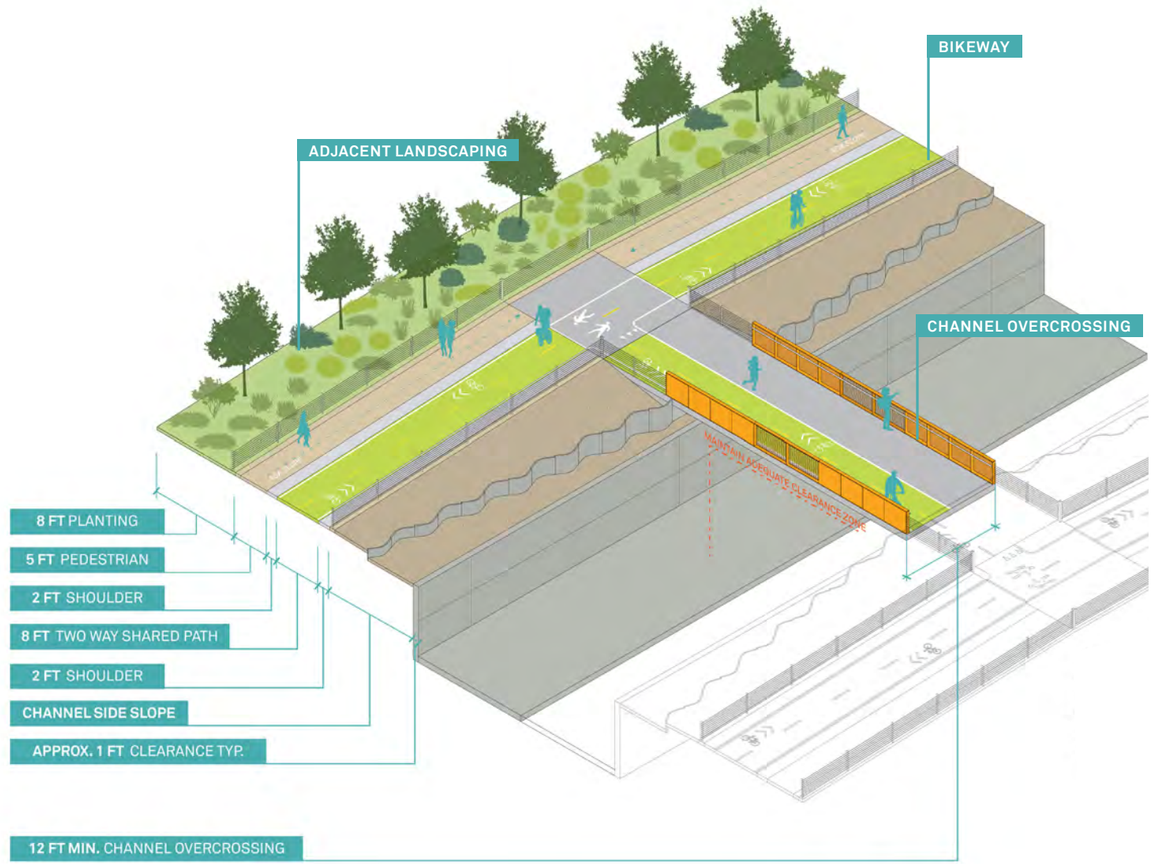


Figure 5-15. Example pocket park adjacent to the greenway with green infrastructure

CHANNEL OVERCROSSING

Tributary channels in the SGV are sometimes difficult to cross, or existing bridges are not accessible. Adding or upgrading bridge crossings can greatly enhance the Greenway Network. This diagram shows a typical crossing with requisite slope considerations. See design guidelines for further details.



Over-crossings may connect to amenties on the opposite side of channel such as greenways, trails, parks, etc. They may also be used to connect to neighborhood destinations such as schools or commercial areas.

Figure 5-16. Example channel overcrossing with accessible grading and landscaping

RAIL OVERCROSSING

There are many railways in the SGV which a greenway may need to cross. Rail crossings are subject to strict regulations and are often required to be grade separated. This diagram shows a greenway crossing over a rail line at the minimum of 23 vertical feet, while maintaining an accessible slope. Refer to design guidelines for further details.

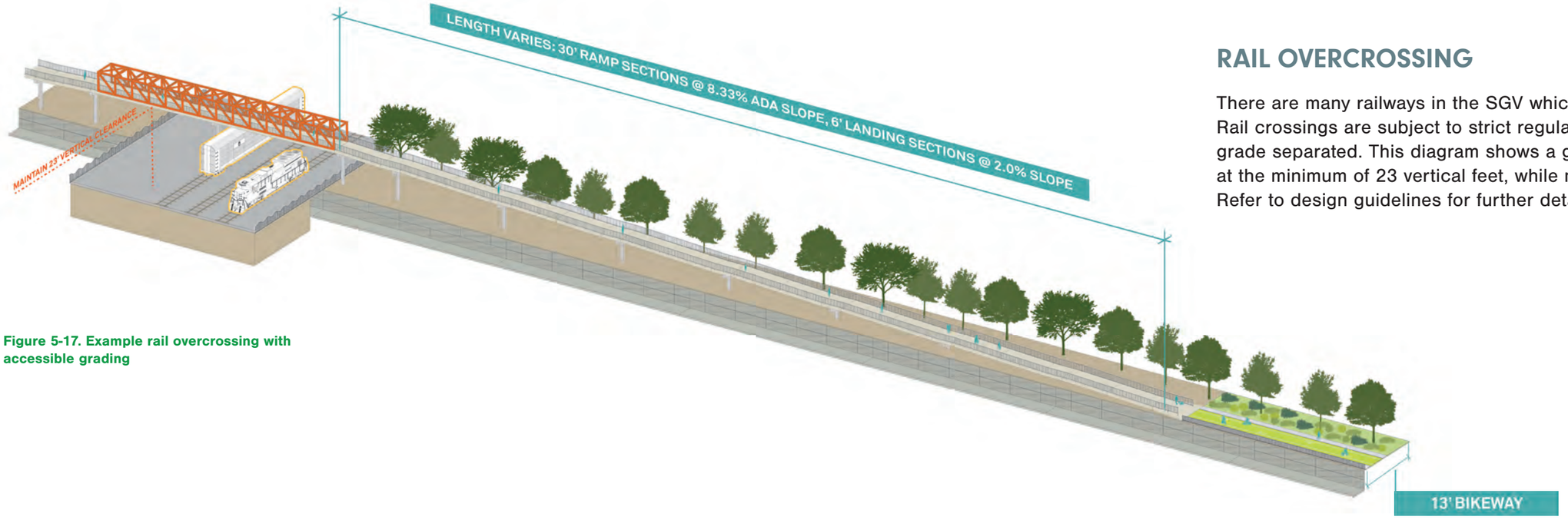


Figure 5-17. Example rail overcrossing with accessible grading

CHANNEL UNDERCROSSING

Safe crossings are critical to the SGV Greenway Network. Where possible, undercrossings can provide a safe and uninterrupted crossing of busy roadways. This diagram shows a greenway crossing under a roadway while maintaining an accessible slope. Refer to the safe crossings appendix and design guidelines for further details.

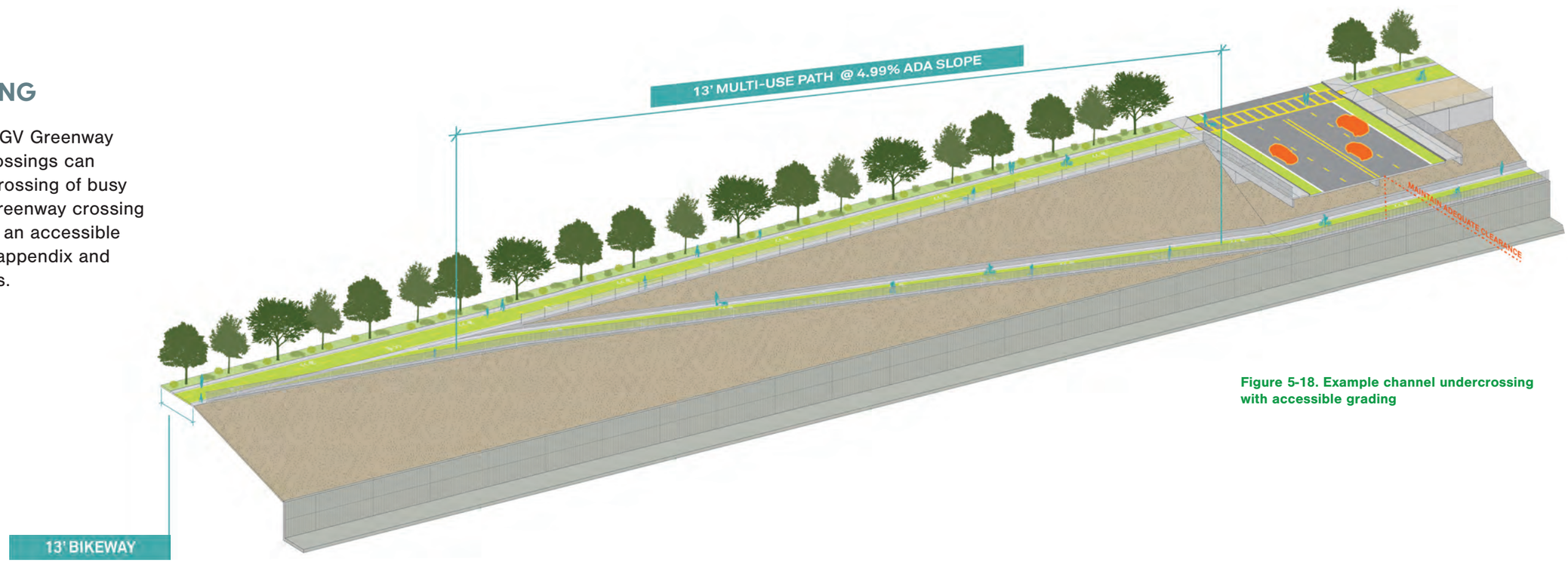


Figure 5-18. Example channel undercrossing with accessible grading

SECTION 6

IMPLEMENTATION STRATEGIES

SECTION 6. IMPLEMENTATION STRATEGIES

A ROAD MAP TO NEXT STEPS

This section provides guidance for project proponents to implement projects throughout the SGV Greenway Network. Includes key responsibilities and involved parties across five phases of project implementation: planning, design and permitting, bidding, construction, and operations and maintenance (O&M). Also provides guidance and resources for project proponents on permitting and approvals, advancing partnerships and community engagement, and local, state, and federal funding sources. The SGV Greenway Network Plan Design Guidelines and Standards are summarized and provided as Appendix H.

SGV Greenway Network Plan Implementation Strategies offers comprehensive guidance for project proponents to implement greenway projects across the SGV Greenway Network. Section 6.1 describes how the SGV Greenway Network Plan becomes a reality. A SGV greenway project is described in Section 6.2. Guidance and information related to Project Implementation is provided in Section 6.3. SGV Greenway Network Plan Resources are summarized in Section 6.4. Permitting and Approvals are discussed in Section 6.5. Advancing Partnerships and Community Engagement are presented in Sections 6.6 and 6.7 and Funding Sources are discussed in Section 6.8.

6.1 Plan Implementation

The successful execution of the SGV Greenway Network Plan and the establishment of a world-class greenway network across the SGV requires a united and collaborative effort involving LA County, cities, communities, NGOs, advocacy groups, and residents. Individual cities and communities within the SGV Greenway Network are encouraged to adopt the SGV Greenway Network Plan and implement greenway projects using the Design Guidelines and Standards and extensive resources provided by the SGV Greenway Network Plan.

To advance SGV Greenway Network Plan implementation, LA County established an Implementation Team (LA County Public Works and LA County DPR) responsible for ongoing coordination with project proponents. The Implementation Team will collaborate with cities and other project proponents offering assistance and resources (such as Design Guidelines and Standards) to facilitate the realization of the SGV Greenway Network. Ensuring uniform implementation of greenway projects, aligned with the Design Guidelines and Standards, will be strengthened through active involvement by the Implementation Team and the review process of LA County.

LA County will continue to implement greenway projects along channels in the unincorporated portions of the SGV Greenway Network as funding and staff resources are secured. Cities will be primarily responsible for implementing greenway projects within city jurisdictions in the SGV Greenway Network as shown on Figure 6-1.

Potential greenway routes along SGV flood control channels often span both unincorporated LA County areas and one or more city jurisdictions. In instances where joint efforts are beneficial, collaborative implementation by both parties might be chosen. In some cases, a crucial greenway segment could span multiple cities and for these partnering opportunities should be pursued. There are multiple successful examples of LA County and one or more SGV Cities and NGOs coming together and jointly implementing an implementation Plan such as the Emerald Necklace, as shown on Figure 6-2.

The Emerald Necklace is a 17-mile long network of existing and future parks, greenways, and trails located along the Rio Hondo and San Gabriel River. This is a tremendous example of successful collaboration between LA County, numerous cities, Watershed Conservation Authority (WCA), NGOs, corporate supporters, grant funding agencies, and residents to make the Emerald Necklace a reality.

To advance the Emerald Necklace Vision, the WCA was the lead agency for the Feasibility Study & Implementation Planning Project. This planning project identified a series of proposed trail and greening projects which would provide a continuous, looped network of bike paths and multi-use trails while providing improved connections to communities within and adjacent to the San Gabriel Valley, including Avocado Heights, Arcadia, Azusa, Baldwin Park, Bassett, El Monte, Irwindale, La Puente, Monrovia, Montebello, Pico Rivera, Rosemead, South El Monte, Temple City, and Whittier.

Figure 6-1. Summary of SGV Greenway Network LA County/City jurisdictions

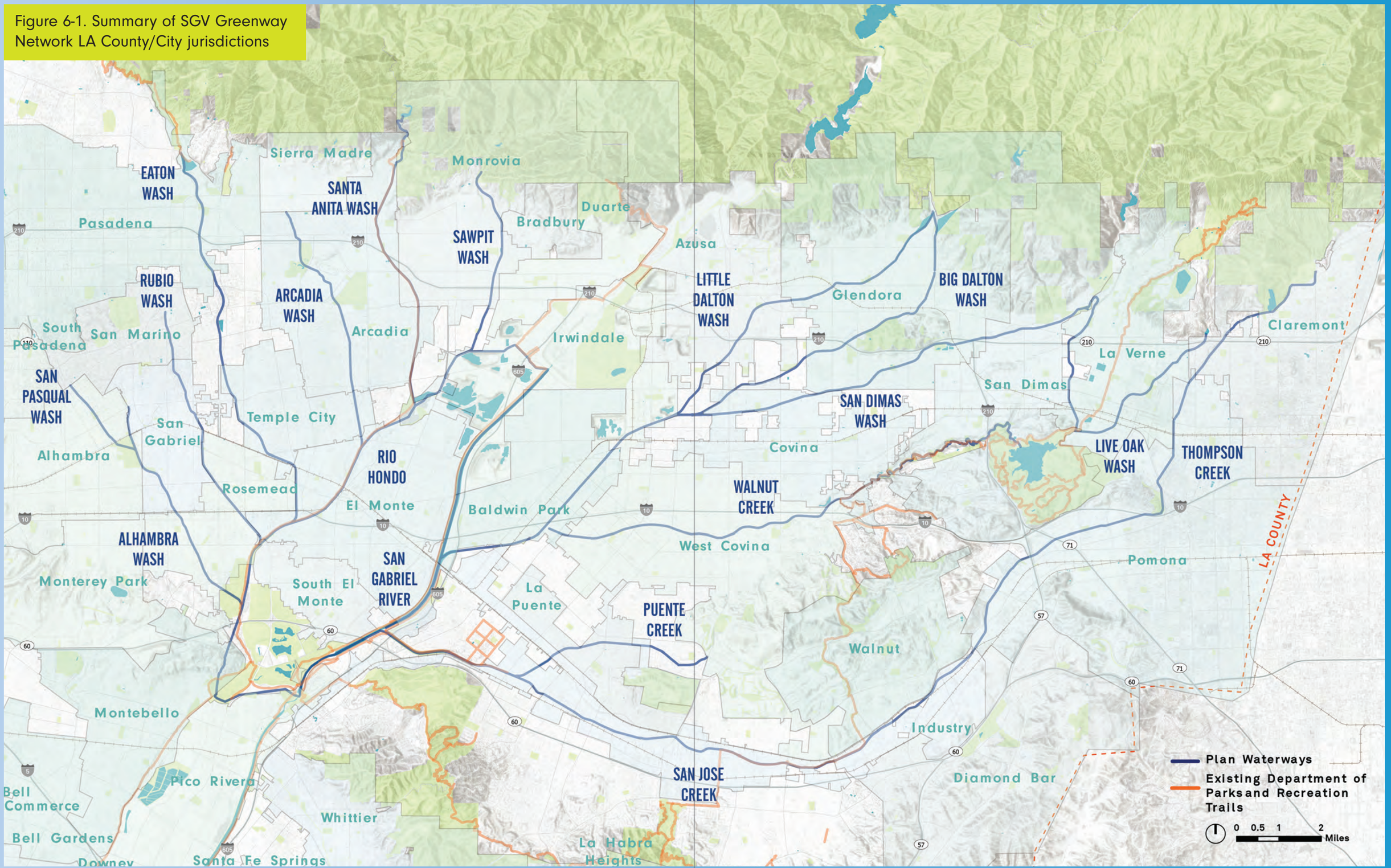


Figure 6-2. Emerald Necklace Schematic and information (Source WCA)

EMERALD NECKLACE

FEASIBILITY STUDY & IMPLEMENTATION PLAN - PHASE I

The Emerald Necklace is an extraordinary 17-mile loop of bicycle and multi-use trails which links parks and open spaces along two waterways, the San Gabriel River and the Rio Hondo. Phase I's 16 projects will close gaps in this regional recreational trails network and increase access to hundreds of thousands of constituents. Ongoing efforts will also add gateways, signage and greening. Further phases identified in the feasibility study will continue to expand the system in following years, contingent on funding and public support.

Westside Multi-Use Trail:

A Trail for All User Groups

The primary benefit of this trail would be to create a continuous loop around the Emerald Necklace for equestrians, and improve recreational potential for all user groups. The secondary benefit is improving access to the Emerald Necklace system for west side communities.

12 **Multi-Use Trail: Alhambra Wash from State Route 60 to the Garvey Community Center with Gates, Signage, etc.**

13 **Street Access Ramps at Rosemead Blvd. with Gates & Signage**

14 **Underpass at Rosemead Blvd.**

15 **Multi-Use Trail: Rosemead Blvd. to Valley Blvd.**

16 **10 Freeway Underpass Improvements**

Whittier Narrows Connectivity:

Linking Existing Park Resources

Trail connections at the southern end of the necklace involve strategic placement of Class I bike path segments and new Multi-Use Trails within the area. Internal circulation within the Whittier Narrows area will be improved so pedestrians and bicyclists can access all park areas currently inaccessible without a car.

5 **Class I Bicycle Path: Adjacent to Rosemead Blvd. to Legg Lake**

6 **Class IV Bicycle Path: From El Bosque del Rio Hondo to Lincoln Ave. on San Gabriel Blvd. with Enhanced Signalized Crossing, Signage & Wayfinding**

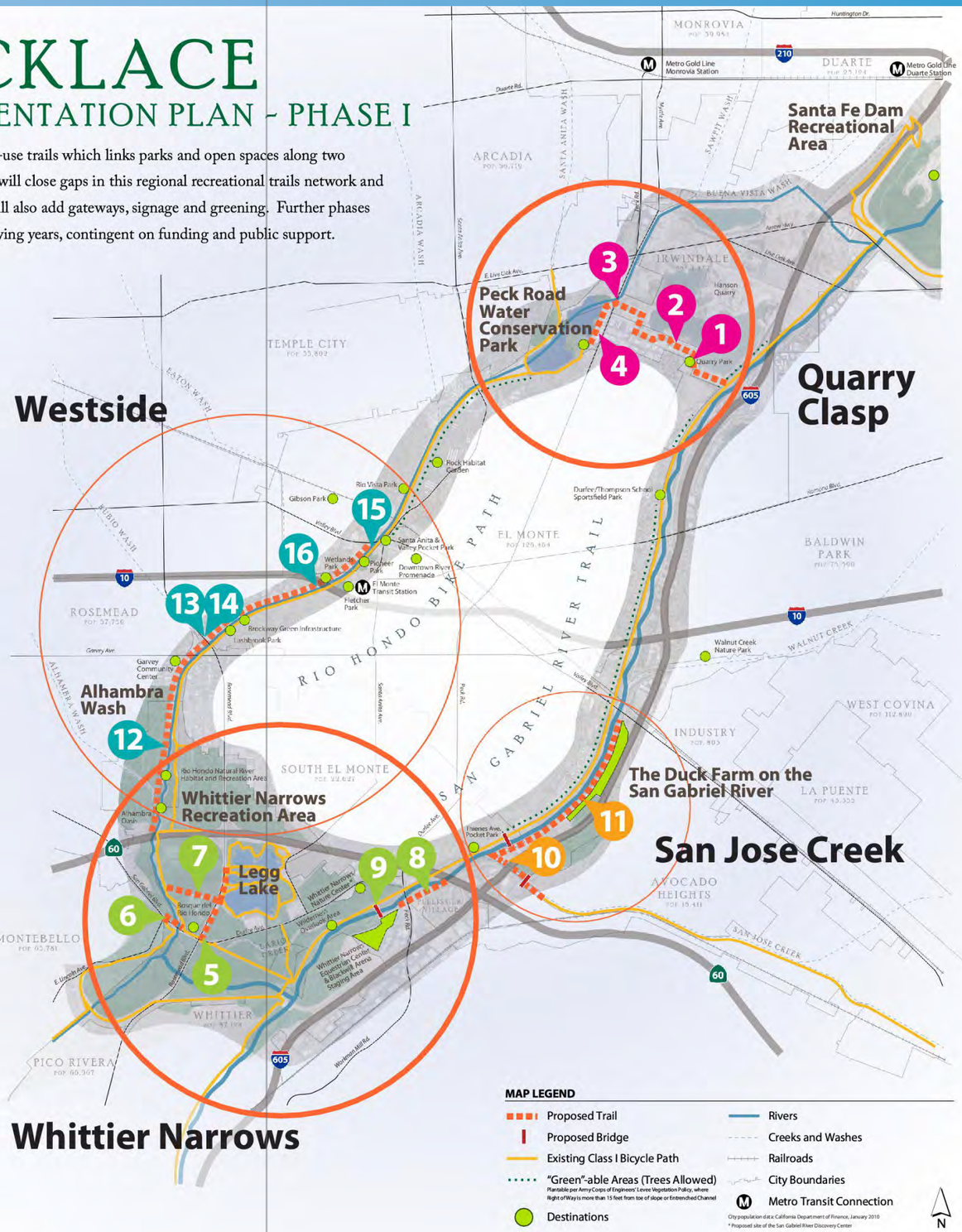
7 **Class I Bicycle Path: From the Rio Hondo to Legg Lake through the Southern California Edison Easement**

8 **Multi-Use Trail: Pellissier Village from State Route 60 to Peck Road Bridge**

9 **Multi-Use Bridge: Pellissier Bridge at Blackwill Arena Staging Area**

PROJECT COMPONENTS

Greening (per notes on map legend) · Equestrian Trail · Multi-Use Trail · Ped/Bike/Horse Bridge (to cross over waterway) · Street Crossing (Crosswalk, signal may be needed) · Bridge Underpass · Tunnel (Throughpass & Improvements)



MAP LEGEND

- Proposed Trail
- Proposed Bridge
- Existing Class I Bicycle Path
- "Green"-able Areas (Trees Allowed) — Plantable per Army Corps of Engineers' Levee Vegetation Policy, where Right of Way is more than 15 feet from toe of slope or Entrenched Channel
- Destinations
- Rivers
- Creeks and Washes
- Railroads
- City Boundaries
- Metro Transit Connection

City population data: California Department of Finance, January 2010
* Proposed site of the San Gabriel River Discovery Center

N

Quarry Clasp:

Completing the Loop

Multi-Use Trail extension projects from Peck Road Water Conservation Park east to the San Gabriel River will connect the trail gap between the Class I bike paths on the Rio Hondo and the San Gabriel Rivers.

1 **Park Development with Trail, Gates, Signage and Amenities**

2 **Multi-Use Trail and Bike Paths**

3 **Signalized Crossing at Peck Road with Signage and Wayfinding**

4 **Rio Hondo Multi-Use Trail and Class I Bicycle Path: Connection in Peck Road Water Conservation Park**

San Jose Creek Regional Access:

Connecting Communities East of the San Gabriel River

Trail completions and creek/bridge crossings will improve access to the Emerald Necklace for a significant population east of the San Gabriel River.

10 **Multi-Use Trails and 2 Multi-Use Bridges: From San Jose Creek Trail to San Gabriel River Trail**

11 **Multi-Use Trail: From San Jose Creek to the Duck Farm on the San Gabriel River**

EMERALD NECKLACE STEERING COMMITTEE:

Supervisor Hilda Solis, First District

PLANNING CONSULTANTS:

WITHERS & SANDGREN LANDSCAPE ARCHITECTURE + PLANNING · BlueGreen CONSULTING

OCT 2016

In 2005, the Emerald Necklace Vision was established by Amigos de los Rios, a California nonprofit organization, in conjunction with various cities and stakeholders. The Vision Plan presented opportunities for the development of linear greenway and trail projects and led to the formation of the Emerald Necklace Steering Committee. This Committee is led by LA County BOS First District Office and includes participation from organization with purview over project implementation, including LA County Public Works, District, DPR, San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, Amigos de los Rios, and Southern California Edison. Numerous projects have been completed and many others are in various stages of implementation. Individual projects have been led by LA County, Amigos de los Rios, and multiple cities and funding has been provided by LA County, various cities, local, state, and federal agencies, and corporate contributors. Other successful examples of collaboration between LA County, cities, and other entities in the SGV are outlined in Section 2.2 Early Implementation Projects such as Santa Anita Wash Multi-Use Path, Puente Creek Greenway, Vincent Community Bikeways, and San Jose Creek Bikeway.

SGV Greenway Network projects will be led by the project proponents, advancing the project from conception to its realization as a fully developed and maintained community resource. Primary project development phases to be completed by the project proponent include planning, design and permitting, bidding, construction, and ongoing operation and maintenance. LA County, city, stakeholder, and regulatory agency coordination are needed early and throughout the implementation process. Implementation requires committed funding and a capable project team to promote and execute the greenway project using the extensive resources provided in the SGV Greenway Network Plan.

For potential greenway projects, prior to applying for grant funding and planning, an initial meeting should be scheduled with the Implementation Team (LA County Public Works and DPR). This can be done by contacting LA County Public Works. During this meeting the greenway project idea and schedule will be discussed (location, extents, greenway users and section, project subcomponents, project proponent(s), etc.) along with adjacent existing and planned greenways and trails. The meeting may result in questions, additional coordination, or investigation that is needed prior to the greenway project concept submittal and obtaining a Flood Permit. See Section 6.5.3 for details on the Flood Permit process. Additional information on this and other requirements is provided later in this section.

6.2 Greenway Project Components

The primary Greenway project component is a greenway path. A greenway project may also include one or a combination of the following subcomponents:

- Greenway Amenities
- Pocket Parks and Greenspaces
- Safe Crossings
- Stormwater Management

Each of these project subcomponents include a recommended collection of beneficial project elements and can be implemented individually or in any combination as subsequent projects, as driven by the local jurisdiction's needs, funding, and policy decisions. Beneficial project elements are intended to contribute to habitability of the greenway network; promote safety, accessibility, and legibility; and build a cohesive identity within the greenway network. Substantial detail on greenway project subcomponents and beneficial project elements is provided in Section 1.3.

The SGV Greenway Network Plan incorporates Design Guidelines and Standards (outlined in Section 6.4 and provided in full as Appendix H). These guidelines were formulated to serve as a foundation for developing distinct design and technical strategies for future greenway projects within the SGV Greenway Network Plan. The purpose of the guidelines is to establish a consistent, harmonious character across the open space corridor, promote best practices and enhance resiliency.

Thienes Avenue Gateway Park, South El Monte

6.3 Project Implementation

Achieving successful project implementation begins with thorough planning, preparation, and active engagement during the project's initial phases. It is critical to (1) identify project goals, objectives, and critical success factors in collaboration with stakeholders, (2) define site conditions, opportunities, and constraints, and (3) coordinate with LA County, regulatory agencies, property owners, and other stakeholders, as applicable, to understand project requirements and needed approvals to develop an achievable project plan and schedule.

Multiple parties should be engaged at the appropriate stages throughout project development. Key roles that should be defined at project inception include:

- **Project proponent.** The project proponent is the lead entity responsible for project development and implementation. This will generally be either LA County or a city or community but could be an NGO or other legal entity.
- **Technical consultants.** Technical consultants include professional consultants and other service providers retained by the project proponent to assist in project development and implementation, such as planning, environmental/CEQA, survey and subsurface utility engineering, architecture, landscape architecture, engineering design, geotechnical services, and bidding and construction phase services.
- **Regulatory liaisons.** Regulatory liaisons include departments within LA County (LA County Public Works, DPR), and other local, state, and/or federal entities to ensure the project is properly planned, designed, reviewed, permitted, and approved. For more information about the roles of individual departments and agencies, refer to Section 6.5 Permitting and Approvals and Section 6.6 Advancing Partnerships.
- **Stakeholders.** Stakeholders include interested or affected parties whose support is important for project success, such as the community or residents, community organizations, local businesses, and neighboring communities. Community organizations may include national, state, or local advocacy groups related to arts and culture, education, or the environment, or interest groups composed of residents.

Project implementation is divided into five primary phases: planning, design and permitting, bidding, construction, and operation and maintenance as described in the following section. All implementation phases must be thoughtfully completed to implement a successful greenway project.

The Planning phase is critically important as it establishes the planned project and sets the stage for all remaining phases. Substantial time and effort must be provided to complete the necessary tasks and prepare for successful project completion. Key tasks include definition of the project goals and objectives, critical success factors, site conditions and constraints, opportunities, and other information needed to develop the project vision and scope of work. Preparing a feasibility study/preliminary engineering analysis/concept plan (with expected greenway alignment and section/users and desired subcomponents) and initial environmental assessment is highly recommended in the planning phase to accurately determine viable and desired project components and the associated regulatory requirements, construction and O&M costs, and implementation schedule. The project proponent should assess the necessary regulatory approvals and permits the project will require to inform the development of the project schedule. Potential funding sources should be investigated including grant applications.

Channel ROW and ownership should be verified and coordination with the ROW owner is needed to verify the ability to use the ROW to implement the greenway project. ROW can either be fee-owned, a quitclaim or an easement, and projects proposed on easement areas may require the acquisition of property rights from the underlying fee owner in addition to authorization from LA County and the District. If other property is to be used for the project (city park, LA County park, utility parcel, etc.), coordination with the property owner(s) is also needed to verify the ability to use for the project. All stakeholders should be identified, and engagement should begin to share information, coordinate, gather input, build advocacy, and plan for continued engagement throughout project implementation.

The Design and Permitting phase includes the selection, preliminary and final design, and permitting of the final greenway alignment and section(s), along with additional desired project subcomponents and beneficial elements (as described in earlier sections). Projects must adhere to the Design Guidelines and Standards (see Section 6.4 and Appendix H).

Preliminary design normally includes obtaining project area survey, subsurface hydrogeological testing and analyses, subsurface utility engineering, environmental assessment, and any other work needed to design and permit the greenway project. Preliminary project design analyses, necessary modeling, drawings, O&M plan, construction and annual O&M cost estimates, and other required documentation and reports are prepared using this information (depending on project jurisdiction and project site conditions). Virtual or in-person meetings with all regulatory agencies are recommended to discuss the project and obtain feedback on project design and guidance on preparing and submitting permit applications.

Final design generally includes the preparation of final construction drawings, technical specifications, O&M plan, construction and annual O&M cost estimates, and other required documentation and reports (depending on project jurisdiction and project site conditions). The project proponent will need to prepare and submit permit applications to the regulatory liaisons and coordinate as needed to compile the required documentation and address comments. With the exception of greenway projects completed by LA County Public Works, the project proponent must obtain a Flood Permit from the District. Additional information is provided in Section 6.5.

Project proponents will need to continue coordination with project ROW/property owners and any public agency that operates or maintains

existing facilities within or connecting to the proposed Plan area. Routine stakeholder engagement should continue to share information, coordinate, gather input, and maintain advocacy. Funding sources are typically secured no later than the completion of final design.

Resources are provided throughout the SGV Greenway Network Plan as summarized in Section 6.4 to support the design of greenway alignments and sections, project subcomponents, and beneficial elements but do not prescribe the ultimate use and/or approach to implementing specific greenway improvements.

Bidding refers to the process of advertising for and selecting a qualified and responsive Contractor to construct the proposed greenway project. In most cases, a bid package will be developed including final construction documents (plans and technical specifications) along with bidding documents (instructions to bidders, bidder qualifications, general requirements, example contract documents, construction quantities, construction schedule, and more). Following public bid advertisement, a pre-bid meeting is usually hosted by the project proponent (Owner) after which there is a set time for contractors to submit questions. Questions are answered through a bid addendum. Proposals submitted by the required deadline are reviewed for responsiveness to the bid requirements, contractor qualifications, and proposed construction cost. Following acceptance, a Notice of Award is issued to the selected contractor. It's important to note that while many projects will require public bidding to select a contractor for project construction, some may not depending on local and state requirements and project size and construction cost.

Construction includes the implementation of the final design and any modifications that may be required during construction. Periodic meetings with the contractor, technical consultants, regulatory liaisons, and stakeholders are needed to provide regular updates on progress and address potential concerns. The project proponent (or their contracted technical consultant) is responsible for construction administration and regular inspections, including coordination with regulatory liaisons. The project proponent will also need to review and approve contractor submittals, requests for information, pay applications for completed construction work, and design amendments if needed. The project proponent/contractor will need to adhere to all permit conditions, including the District Flood Permit and coordinating with LA County Public Works' project inspector, as applicable. If grant funding is secured, periodic reporting may be required for compliance and release of funds. At the end of construction, a substantial completion, final inspection, and project close-out activities will be required. All necessary permit clearances should be submitted and received.

Operations & maintenance (O&M) refers to post-construction activities to operate and maintain the greenway project to an established level of service. The established level of service typically includes maintaining aesthetic quality (e.g., maintenance of trash, vegetation, mulch, removal of sediment accumulation) and safety and functionality (e.g., paved surfaces, trails, hardscape, structures, fencing and barriers, signage and markings, drainage system and stormwater management).

The project proponent is typically responsible for all maintenance. In cases with multiple proponents including LA County and one or more other project partners, O&M responsibilities will be discussed and decided upon during Planning or Design and Permitting. With the exception of greenway projects completed by LA County Public Works, maintenance responsibilities are formalized in a Use Agreement developed during the Flood Permit process by the District. Also, see additional O&M information provided in the Design Guidelines and Standards in Appendix H.

The importance of having a well-established and committed O & M program cannot be overstated. This includes having committed sufficient funding for O & M each year. Greenways are located immediately adjacent to large concrete channels, many with vertical walls, which convey flood event flows. Proper O & M ties directly to public safety and providing a long-term usable community asset. It also protects and sustains a substantial public investment in the building of the greenway project.

Community and stakeholder engagement should be an integral element throughout every phase of project development and implementation. In the planning phase, community input should guide the project's priorities and objectives and inform the elements incorporated in the design phase. Similarly, stakeholders should have an opportunity to shape or provide comments on the proposed design alternatives. The bidding and selection process should be open and transparent. The construction phase should include community meetings and engagement before construction begins and during construction to discuss schedule, progress, and address issues. O&M requires community and stakeholder engagement to understand any issues on O&M and general feedback about how the project is functioning.

Figure 6-3 provides a summary of the key elements in the project implementation steps and the involved parties. This is not a comprehensive list and key elements will vary depending on project and permitting complexity, ROW and property owners, project greenway path and subcomponents, connection to existing or other planned projects, extent of partner and stakeholder involvement, and funding sources.

For example, funding (further discussed in Section 6.8), another critical element of greenway project implementation, may include additional requirements throughout project implementation for the project proponent depending on the funding source. These could include applications, inspections, monitoring, reporting, close-out, or other tasks not included on Figure 6-3.

PHASE	KEY ACTIVITIES	INVOLVED PARTIES
PLANNING	• Partner/roles identification • Goals and objectives definition, critical success factors • Data collection, identify data gaps • Opportunities and constraints analysis • Stakeholder and agency engagement • Feasibility analysis, concept development and cost estimating ROW/property ownership/use • Permitting and approval requirements and engagement	• Project proponent responsible with technical consultants assisting • Key regulatory liaisons engaged to understand approval requirements • Early stakeholder engagement essential to project success • LA County Implementation Team
DESIGN AND PERMITTING	• Finalize greenway alignment/sections • Project subcomponent and beneficial elements selection/configuration • Conceptual design • O&M plan/use agreement, and cost estimating • Permit applications (including LACFCD Flood Permit) and environmental documentation submitted, respond to comments • Plan Design Guidelines and Standards Used	• Project proponent responsible with technical consultants assisting • Adjacent projects/communities coordination • Regulatory liaisons for project review and approval • Stakeholder coordination on design (public and advocacy groups)
BIDDING	• Bid package preparation (final construction and bid documents) • Bid advertisement and pre-bid meeting • Bid addenda issued • Bid opening • Bid assessment and award	• Project proponent responsible with assistance from technical consultants • Adjacent projects/communities coordination • Stakeholder coordination on construction expectations and support (public and advocacy groups)
CONSTRUCTION	• Construction • Administration and inspections • Submittal and pay application reviews • Periodic meetings • Design amendments/change orders, if needed • Final inspections and close-out • Permit clearances	• Project proponent is Owner • Technical consultants provides services per Owner • Adjacent projects/communities coordination • Regulatory liaison coordination • Stakeholder coordination, progress and addressing issues
OPERATIONS & MAINTENANCE	• O&M Plan finalized with responsibilities • Post-construction activities maintain greenway project to level of service • O&M reporting as required • Follows LACFCD Flood Permit Use Agreement (Except LACPW projects)	• Project proponent responsible • Project partners if performing some O&M activities • Contractors, if responsible for O&M • Regulatory liaisons if permitting requirements • Stakeholder feedback on O&M needs or general issues

Community and stakeholder engagement should occur throughout the project life.

Figure 6-3. Summary of Plan greenway project implementation phases; key activities and involved parties

6.4 Plan Resources for Project Implementation

Extensive resources were prepared to aid project proponents in executing greenway projects. A summarized overview is presented below offering details such as relevant project phases, geographic relevance, and Appendices with further details. Below are summaries for the following SGV Greenway Network Plan resources:

- 6.4.1 Design Guidelines and Standards
- 6.4.2 Tributary Narratives and Opportunities and Constraints
- 6.4.3 Greenway Alignments
- 6.4.4 Project Subcomponent Opportunities
- 6.4.5 Safe Crossings
- 6.4.6 Example Conceptual Designs and Kit of Parts
- 6.4.7 GIS Datasets
- 6.4.8 Summary of the Plan's Technical Resources

Additional resources are provided in the following Appendices:

- Appendix A: Compilation of Efforts and Studies
- Appendix B: GIS Analysis, Database, and Mapping
- Appendix C: Tributary Narratives
- Appendix D: Steering Committee Meeting Materials
- Appendix E: Community Engagement Plan and Report
- Appendix F: Channel Adjacent and Safe Crossing Subcomponent Opportunities
- Appendix G: Greenway Alignment Alternatives
- Appendix H: Design Guidelines and Standards

6.4.1 Design Guidelines and Standards

Applicable project phases:

Geographic applicability:
SGV Greenway Network

Section with more information: N/A

Appendix with more information:
Appendix H (Design Guidelines and Standards)

The SGV Greenway Network Plan Design Guidelines and Standards is a companion document that provides greenway project requirements and guidance. Following the guidelines will enable project proponents to customize their initiatives to match the community's needs and the District requirements. The overall goal is to build smart projects that provide a secure and uniform visual identity and user experience across the SGV Greenway Network. The purpose of the Design Guidelines and Standards is to describe the types of greenway projects and subcomponents to be considered, and to provide a framework for good and consistent project development. Most project proponents will require a Flood Permit from the District and following the Design Guidelines and Standards will help streamline and simplify the Permit process. See Section 6.5.3 for details on this permit process.

Design priorities documented in the Design Guidelines and Standards intentionally incorporate community values and priorities identified through the community engagement process described in Section 3. Based on the feedback received from the public, the following design considerations are priorities: safety, vector control, comfort, welcoming and inclusive, community engagement, connectivity, and environmental benefits.

The Design Guidelines and Standards are organized by design topics and associated standards. Each section compiles applicable requirements and guidance for bikeways and multi-use greenways, subcomponents and beneficial elements from local, state, and federal sources. They also draw from similar plans and best practices developed locally, including the LA River Master Plan and LA County Public Works Green Streets Design Standards, and examples from around the country. All of the resources were used to develop the required SGV Greenway Network standards, community character opportunities for customization, and design precedents.

Figure 6-4 provides an overview of the Design Guidelines and Standards by section. The following also provides a summary of the design topics addressed in the Design Guidelines and Standards:

- **Section 2, Greenway Uses and Project Design:** This section summarizes the design priorities for the SGV Greenway Network, technical resources, and project success factors.
- **Section 3, Potential Users:** This section documents design considerations for potential users of greenways, including pedestrians, different types of bicyclists, equestrians, and maintenance/emergency vehicles, and considerations for greenway design based on users, continuity, destinations, and traffic.
- **Section 4, Class I Bikeway and Multi-Use Greenway Design Criteria:** This section includes design criteria for Class I bikeways and multi-use greenways, including horizontal and vertical clearance, surface types, drainage and slopes, and alignment characteristics. It provides examples of greenway configurations in narrow (13 to 19 ft), medium (19 to 24 ft), and wide (greater than 24 ft) ROW areas. It also includes guidance for greenway grade-separated overpasses and underpasses, railroad crossings, and cantilever sections.
- **Section 5, Class II Bikeway Design Criteria:** For off-channel segments, this section summarizes the Caltrans design criteria for Class II bikeways, which create dedicated space for bicyclists on roadways with a marked separation between motor vehicle and bicycle traffic.
- **Section 6, Class III Bikeway Design Criteria:** For off-channel segments, this section summarizes the Caltrans design criteria for Class III bikeways, in which bicyclists and motor vehicles share the street or roadway with no striping or physical barrier for separation.
- **Section 7, Class IV Bikeway Design Criteria:** For off-channel segments, this section summarizes the Caltrans design criteria for Class IV bikeways, also referred to as separated bikeways or cycle tracks, that include a physical barrier between bicyclists and motor vehicles.
- **Section 8, Bikeway Signage and Markings:** This section includes guidelines for informational graphics and text displays in the SGV Greenway Network, including guidance for color, branding, symbology, and language. It also addresses the types of pavement markings that should be present.
- **Section 9, Safe Crossing Design:** This section describes the recommended treatments where a greenway or bike path intersects a street or highway, including uncontrolled mid-block crossing, crossing an uncontrolled approach at an intersection, and crossing at a signalized intersection.
- **Section 10, Architectural and Safety Elements:** This section presents details on key architectural and safety elements, including fencing, guardrails, privacy screens, gates, lighting, seating, bicycle parking, equestrian amenities, landscaping, and gateways.
- **Section 11, Stormwater Management:** This section describes stormwater management requirements, BMP design criteria and standards, subsurface requirements and setbacks, and necessary regulatory coordination. This is for treatment of the greenway impervious surface, and for treatment of off-site runoff, if included with the greenway project.
- **Section 12, Operations and Maintenance (O&M):** This section documents O&M responsibilities, including litter control, hardscape elements, greenway features, restriping, and stormwater BMP maintenance.

Project proponents should review the Design Guidelines and Standards prior to the start of project implementation and incorporate them throughout implementation to ensure the project aligns with applicable requirements and guidelines. A summary of the Design Guidelines and Standards sections organized by applicable project phase is provided in Figure 6-4.

Proposed greenway projects may have additional requirements for planning, design, permitting, and construction that are not included in the Design Guidelines and Standards. These could include local, state, or federal requirements and permits. Communities/cities may have their own specific local requirements and permits that project proponents need be aware of and address while developing their projects. Specific project sites may also have unique characteristics that require additional environmental due diligence and permitting.

Project proponents are responsible for ensuring that all greenway project implementation and local, state, and federal permitting requirements are met regardless if they are listed in the Design Guidelines and Standards. For more information about project permitting and approvals, refer to Section 6.5.

PLANNING, DESIGN, & PERMITTING

Section 2: Greenway Uses and Project Design:
- 2.2 Design Priorities
- 2.3 Design Guidelines and Technical Resources
- 2.4 Project Success Factors

Section 3: Potential Users
- 3.2 Pedestrians
- 3.3 Bicyclists
- 3.4 Equestrians
- 3.5 Access for Emergency and Maintenance Vehicles
- 3.6 Proposed Greenway Usage

Section 4: Class I Bikeway and Multi-Use Greenway Design Criteria
- 4.2 Class I Bikeways
- 4.3 Multi-Use Greenways
- 4.4 Potential Greenway Configurations
- 4.5 Bikeway Characteristics
- 4.6 Multi-Use Greenway Characteristics
- 4.7 Grade-Separated Crossings
- 4.8 Rail Crossings
- 4.9 Cantilever and Elevated Sections

Section 5: Class II Bikeway Design Criteria
- 5.2 Definition
- 5.3 Potential Configurations
- 5.4 Standard Characteristics
- 5.5 Pavement Markings
- 5.6 Intersections

Section 6: Class III Bikeway Design Criteria
- 6.2 Definition
- 6.3 Standard Characteristics

Section 7: Class IV Bikeway Design Criteria
- 7.2 Definition
- 7.3 Potential Configurations
- 7.4 Standard Characteristics
- 7.5 Pavement Markings
- 7.6 Intersections

Section 8: Signage Graphics and Markings
- 8.2 Standard Design Features
- 8.3 Informational Signage
- 8.4 Confirmation Signage
- 8.5 Regulatory Signage
- 8.6 Interpretive Signage
- 8.7 Directional Signage
- 8.8 Pavement Markings
- 8.9 Installation & Maintenance

Section 9: Safe Crossing Design
- 9.2 Uncontrolled Mid-Block Crossing
- 9.3 Crossing of an Uncontrolled Approach Adjacent to an Intersection
- 9.4 Crossing at a Signalized Intersection

Section 10: Architectural and Safety Elements
- 10.2 Fencing
- 10.3 Guardrails/Railings/Barriers
- 10.4 Privacy Screens
- 10.5 Gates
- 10.6 Lighting
- 10.7 Seating
- 10.8 Bicycle Parking
- 10.9 Equestrian Amenities
- 10.10 Landscaping and Irrigation
- 10.11 Gateways

Section 11: Stormwater Management
- 11.2 Stormwater Management Requirements
- 11.3 BMP Elements and Design Considerations
- 11.4 Subsurface Requirements and Setbacks
- 11.5 Coordination with District and/or USACE

OPERATIONS & MAINTENANCE

Section 12: Operations & Maintenance
- 12.2 Operations & Maintenance Responsibilities
- 12.3 Landscape Improvements
- 12.4 Fencing & Gates
- 12.5 SGV Greenway Network Operating Hours
- 12.6 Graffiti
- 12.7 Litter Control
- 12.8 Hardscape
- 12.9 Multi-Use Greenway Features and Landscape Improvements
- 12.10 Restriping and Signage
- 12.11 Stormwater BMP Operation & Maintenance

Figure 6-4. Design Guidelines and Standards sections organized by applicable project phase

6.4.2 Tributary Narratives and Opportunities and Constraints

Applicable project phases:

Geographic applicability:
SGV Greenway Network

Section with more information:
Tributary Narratives – Section 2.6;
Opportunities and Constraints - Section 4.2

Appendix with more information:
Appendix C (Tributary Narratives)

Tributary narratives were developed for all SGV Greenway Network tributaries and are a resource for planners, designers, and community members to understand key aspects of each tributary and inform future revitalization efforts and greenway projects. The Tributary Narratives were developed as a first step in understanding the tributaries and the communities which surround them. The Plan Team collected data and compiled "tributaries narratives," which aim to tell the story of each tributary through the following key lenses: Community, Circulation, Environment, Synergy, and Equity.

"Opportunities" and "Constraints" maps are provided for LA County tributary ROW and adjacent potential project component areas. The maps characterize potential project elements within Tier 1 reaches and identify potential issues that need to be evaluated by the project proponent in the design phase. The opportunity and constraints maps are included in Section 4.2.2. The approach used to develop opportunities and constraints for Tier 1 segments is provided and is useful in developing opportunities and constraints for any tributary segment throughout the SGV.

Tributary opportunity diagrams visualize the locations of current bike paths and EIP and potential greenway alignment opportunities on the left bank, right bank, or off-channel (if required to provide continuity), as well as crossing opportunities.

Physical and regulatory constraints, such as utilities, bridges, geotechnical conditions, land use, and available access points, can limit the opportunity area. The constraints diagrams visualize the available ROW width for a greenway after constraints are accounted for, including areas where no ROW is available adjacent to the channel. Where more ROW or adjacent parcels are available, additional project subcomponents, such as a pocket park or stormwater treatment for off-site areas, may be considered to complement the greenway and provide amenities for potential users. The constraints diagrams also provide the number of lanes at major road, street, and railway crossings.

Together, these resources can assist the project proponent to define the limits of a greenway project and develop a preliminary alignment based on the available ROW and other constraints. While there is no specified minimum greenway project length, it is recommended that the greenway project extends to connect with other existing or planned greenway projects and/or extends to desirable community destinations. Project proponents should avoid tributary areas with less than 13 ft of available ROW next to the channel, which is the minimum width required. However, off-channel bike routes can be used if necessary to connect greenway segments. Typical SGV greenway project lengths are in the range of 1 to 3 miles.

6.4.3 Greenway Alignments

Applicable project phases:

Geographic applicability:
SGV Greenway Network

Section with more information:
Section 5.1

Appendix with more information:
Appendix G (Greenway Alignment Alternatives)

The SGV greenway alignment maps show greenway alternatives (Tier 1 areas), including potential alignments in areas with limited ROW where significant investment (e.g., cantilever greenway) would be required and off-channel alignments, as well as connectivity with other greenway segments. The proposed greenway alignments did not factor in constraints (except for ROW width available), such as ease of implementation, desirability, or other feasibility-based criteria, such as maintenance or construction. Further evaluation of parcel-specific or segment-specific constraints and opportunities were included as part of the tools discussed in Section 5 that focuses on project subcomponent opportunities.

Whenever possible, greenway alignments should be located in areas where the ROW width is at least 13 ft, which is the required minimum width to still allow maintenance and emergency vehicle access. If less than 13 ft of ROW width is available, the project proponent may consider a cantilever section, a crossing (if sufficient ROW is available on the opposite bank), or an off-channel route to provide connectivity and extend the greenway.

The greenway alignments (Appendix G: Greenway Alignment Alternatives) may be directly utilized by the project proponent to inform the project design if the site is along a Tier 1 segment. The approach used to develop greenway alignments for Tier 1 segments is provided and is useful in developing greenway alignments for any tributary segment throughout the SGV Greenway Network Plan area.

6.4.4 Project Subcomponent Opportunities

Applicable project phases:

Geographic applicability:
SGV Greenway Network

Section with more information:
Section 5.3

Appendix with more information:
Appendix F (Channel Adjacent and Safe Crossing Subcomponent Opportunities)

As described in Section 1.3, greenway projects include a greenway as the primary component and can include other complimentary subcomponents and beneficial elements. Design Guidelines and Standards (summarized in Section 6.4.1 and included in their entirety as Appendix H) were developed to support the development of specific design and technical solutions for subsequent greenway projects to be implemented under the SGV Greenway Network Plan while presenting a unified, cohesive identity along the open space corridor and promoting best practices and resiliency. These should be used to select and design project greenways, subcomponents, and beneficial elements.

Depending on the available channel ROW, and adjacent publicly owned vacant or open space, these may be added in the ROW and/or on a separate public parcel. In the planning and design phase, the project team should identify potential enhancement opportunities along the proposed greenway alignment. Following an assessment of the potential costs and benefits, the project proponent can select the most necessary, desired, and feasible options for implementation. Depending on the selected project configuration, substantial coordination with other stakeholders, agencies, or interested parties may be required and the additional time for coordination should be factored into the project schedule.

As discussed in Section 5.3, through an in-depth analysis of Tier 1 channel ROW, adjacent parcels, and land uses, 268 potential channel adjacent project subcomponent opportunities were identified for further evaluation. Applying a prioritization methodology, the number of potential channel adjacent project subcomponents was reduced significantly from 268 to 64. The 64 opportunities were evaluated for their potential to achieve multiple benefits. There was also a strong desire to create a relatively uniform geographic distribution of project subcomponents along Tier 1 channels. The final 35 channel adjacent project subcomponent opportunities are provided in the SGV Greenway Network Plan and should be considered with future greenway projects. For areas that are not part of a Tier 1 segment, these examples demonstrate opportunities to include subcomponents on greenway projects along all tributaries throughout the SGV Greenway Network. A Technical Memorandum summarizing the project subcomponent opportunities is provided in Appendix F.

6.4.5 Safe Crossings

Applicable project phases:

Geographic applicability:
SGV Greenway Network

Section with more information:
Sections 4.2 and 5.2

Appendix with more information:
Appendix F (Channel Adjacent and Safe Crossing Subcomponent Opportunities)

In the SGV Greenway Network, greenways may need to cross driveways, streets, roads, freeways, and railroad spurs and tracks. Due to the potential hazards for pedestrians and bicycles created by conflicts with motor vehicles, intersections should be carefully evaluated during planning and design for user safety, constructability, and construction cost. Where possible, a grade-separated underpass or overpass should be considered. However, if an underpass or overpass is not possible, a transition to street level may require a substantial change in grade, and therefore distance, to moderate the greenway slope. This may entail a more elaborate design and higher cost.

A California-licensed civil engineer must design a crossing that involves fixed works. In addition, all crossing designs are subject to the approval of the owner of the roadway or railroad being crossed, which could be LA County, a city, or a private entity. Each jurisdiction will need to design specific crossing treatments at the time of implementation that consist of crosswalk markings, flashing beacons, traffic signals, and/or other elements.

As part of the opportunities and constraints analysis, a summary of potential crossing treatment descriptions for vehicular roadway and railroad intersections within each Tier 1 wash is provided in Section 4.2. These include a crossing number, street crossing name, side of channel, and crossing description.

Appendix F: Channel Adjacent and Safe Crossing Subcomponent Opportunities provides guidance for each of the 121 potential Tier 1 crossings. Developing efficient and safe crossings are essential to creating a desirable and continuous greenway system. Tier 2 and 3 segments include the same categories and types of crossings and project proponents may use the 121 example crossings as references to specify their own crossings. Each crossing summary includes an aerial figure, description of the proposed location, jurisdictions, transit service, the number of lanes to be crossed, speed limits, and a suggested treatment for the crossing. Crossing treatments are suggestions generated by a conceptual review of the sites based on current field conditions and design standards, and the assumed bank of the channel that will be selected for the greenway. Each jurisdiction will need to design specific crossing treatments at the time of implementation that consist of crosswalk markings, flashing beacons, or traffic signals. At some locations, potential opportunities for new overcrossings, cross-channel bridges, and cantilevered platforms have been identified.

If a railroad crossing of any type is proposed to be included for a greenway project, the project proponent should meet with the railroad owner very early in the planning process. Crossings may or may not be allowed and if allowed, may be very costly and time consuming to obtain final approvals and construct. These details should be determined early so the full scope, schedule, and cost of the project can be known and necessary modifications properly addressed in design and permitting, bidding, and construction.

6.4.6 Example Conceptual Designs and Kit of Parts

Applicable project phases:

Geographic applicability:
SGV Greenway Network

Section with more information:
Sections 5.1, 5.4, and 5.5

Ten example Conceptual Designs were developed to showcase the opportunities and benefits provided by different greenway project configurations throughout the SGV. Various combinations of greenways and project subcomponents and beneficial elements were used to illustrate the multitude of opportunities and benefits available to communities. Conceptual Designs are provided to demonstrate what greenway projects could look like throughout the SGV, and LA County Public Works is not funding nor constructing the ten Conceptual Designs. As described in Section 5.4, the selected segments are intended to be geographically diverse and to represent the values and objectives of the SGV Greenway Network Plan described in Section 1.

The Conceptual Designs demonstrate the type of information and data that should be included as part of the project development process, as well as examples of possible project subcomponents and beneficial elements that may be considered. The project goals and objectives identified in the planning phase should be referenced in the development of the Conceptual Design to identify destinations and important features that will appeal to potential users of the greenway.

Connectivity to existing and proposed greenways and trails, both on and off channel, is a key success factor in the pursuit of the creation of a connected system throughout the SGV. In many cases, another key determinant of the final greenway alignment will be the available ROW. In an area with limited ROW, a Class I bikeway may be the only feasible configuration, whereas in a wide ROW area, the project proponent may be able to consider additional elements, such as shade structures and pocket parks. The available ROW may also determine where a crossing is needed to connect to an existing greenway, EIP, or another area with sufficient ROW.

The project budget will also influence the Conceptual Design. More costly design configurations, such as underpasses, overpasses, and cantilever sections, will not be feasible for many projects. During the design phase, the project cost estimates may determine what can be included in final Conceptual Design.

SGV Greenway Network Plan stakeholder feedback was incorporated into the Design Guidelines and Standards as well as the example Conceptual Designs. Conceptual Designs can leverage funding from the Safe Clean Water Program to capture and infiltrate dry weather flows and stormwater runoff. Conceptual Designs align with existing greenway and park infrastructure and create new paths and access points to expand the network. Additional opportunities are created for equestrian use, walking, running, biking, to support community recreation, and physical and mental health. Conceptual Designs consider the adjacent uses and infrastructure to align, enhance and extend Greenway access through various modes of travel including vehicles, public transit, bicycles, and on foot. Planting drought tolerant native plants along greenways and adjacent project enhancements provide numerous benefits including restoring and creating native habitats. Conceptual Designs include educational opportunities for adjacent schools, public art from local artists, and community gathering spaces to attract connectivity and local use.

The example Conceptual Designs from Section 5.4 were assembled using a kit-of-parts with greenway sections, subcomponents, and beneficial elements which can be used along tributaries throughout the SGV Greenway Network. Axonal diagrams are a key element of the kit of parts which illustrate greenway sections, subcomponents, and beneficial elements. Various greenway sections are illustrated in Section 5.1 and select project subcomponents and beneficial elements are shown in Section 5.5. Project proponents and readers of the Plan should use these drawings to better visualize the future various design sections and elements, which are dependent on the available ROW width. These diagrams are meant to inspire future project proponents. Additional details related to greenway project design and subcomponents and beneficial elements are provided in the Design Guidelines and Standards (Section 6.4.1 and Appendix H).

6.4.7 GIS Datasets

Applicable project phases:

Geographic applicability:
SGV Greenway Network

Section with more information:
Sections 2.5 and 2.6

Appendix with more information:
Appendix B (GIS Analysis, Database, and Mapping)

GIS datasets developed during SGV Greenway Network Plan development and listed in Table 6-1 are available to assist project proponents with project development, in particular during the planning and design phase. The datasets are divided into categories: Community, Circulation, Transit, Environment, Constraints, Scoring, and Base Layers. These datasets can provide valuable information and context to inform project planning and design.

Table 6-1. Available GIS Data Resources

Category	Layer Description	Layer Name
Community	Population Density (2010 Census)	Population_Density_Census 2000
Community	Park Need (DPR Parks Needs Assessment)	Park_Need_Codes_PNA2014
Community	CalEnviroScreen Raw Percentile Scores	CalEnviroScreen2018
Circulation	Activity Generators - Land Use	Circulation_Activity_Generators_landuse
Circulation	Activity Generators - Community Centers	Activity_Generators_Community_Centers
Circulation	Number of Schools	Activity_Generators_Schools
Circulation	Existing Bikeways (miles) within the Buffer	Circulation_Existing_Bikeways_ATSP2016
Circulation	Trails (miles) in the Buffer	Circulation_Existing_Trails_DPR2015
Transit	Rail Stations	Circualtion_Transit_Rail_Stations
Environment	Significant Ecological Area	Environment_Significant_Ecological_Areas
Constraints	LACFCD Parcels - ALL	Constraints_LACFCD_Parcels_All
Constraints	Tier 1 Project Areas by Ownership - other	Constraints_Tier_1_Project_Areas_by_ownership_other
Constraints	Tier 1 Project Areas by Ownership - quitclaim	Constraints_Tier_1_Project_Areas_by_ownership_quitclaim
Constraints	Tier 1 Project Areas by Ownership - fee	Constraints_Tier_1_Project_Areas_by_ownership_fee

The source data is a unique compilation of publicly available records, information, and data mostly provided by various departments within LA County. The mapping features include District ROW, channels, parcel easements and fee, Los Angeles County parcels, highlighting government owned parcels but excluding District ROW, specific types of land use (at a parcel level), storm water and sewer facilities. There were three types of land use designations used in the base maps, Vacant, Recreation and Open Space. The LA County parcel data included land use type and description for many types of land uses including Vacant and Recreation but did not include Open Space. The parcels listed as Open Space were derived from the 2019 Annual Land Use Dataset provided by SCAG. This SCAG data included Open Space and Recreation together but since the LA county parcel data was deemed more accurate the parcels with land use designation of Recreation by the County was used instead.

Mapping features include most of the features shown in the basemap series excluding storm water and sewer facilities but includes the proposed bike path alternatives, EIP, countywide DPR multi-use trails, impediments and existing and proposed bike paths (LADPW). Proposed bike path alternatives provide information on channel adjacent ROW availability. EIP are various planned greenway and bikeway projects within the SGV that have advanced into design, construction, or have been recently completed; see Section 2.2 for further detail. Impediments were developed using aerial photography to locate possible impediment structures used in determining bike path alternative ROW availability.

These data are publicly available to view and download from the LA County data website (County of Los Angeles Open Data). More information about development of the data is included Section 2.4. Additional GIS Data, Mapping and Analyses are provided in Appendix B: GIS Analysis, Database, and Mapping.

6.4.8 Summary of the Plan's Technical Resources

Figure 6-5 shows the phases of project implementation with the resources available in the SGV Greenway Network Plan for project proponents.

Figure 6-5. Summary of Plan resources available for each phase of implementation

6.5 Permitting and Approvals

Greenway projects will have different local, state, and federal permitting and approval requirements based on their location, scope, project limits, and existing physical and environmental conditions throughout the project site. Projects within District ROW, including fee property and easements, will require a Flood Permit issued by LA County Public Works. See Section 6.5.3 for details on this.

The SGV Greenway Network Plan Design Guidelines and Standards include pre-construction considerations for project proponents, such as construction access and permanent site access for maintenance, applicable municipal/local permits, coordination with County/State/railroad entities, utility coordination, site remediation requirements, pest/vector control measures, and more. Additionally, the Design Guidelines and Standards includes a list of permit types that may be applicable based on the project location and scope. Project teams should review the Design Guidelines and Standards and the latest information available from each permitting agency at project inception and throughout project planning to confirm applicable requirements. Permits or consultation may be required by these and other agencies:

- LA County Flood Control District
- LA County Public Works
- LA County Department of Parks and Recreation
- LA County or City Building and Safety
- USACE
- United States Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service
- California Department of Fish and Wildlife
- California Fish and Game Commission
- CPUC
- Caltrans
- LA Regional Water Quality Control Board
- Individual Cities
- LA County Public Works, the District, and DPR should be engaged on all projects. Other LA County departments that should be included in relevant project discussions include DPR, Planning and Development Agency – Trails Planning Section

The project proponent must work with a number of entities to receive the necessary permits and approvals. Early consultation with these groups will help ensure the project team properly plans the time and effort to meet all applicable requirements within the proposed scope, schedule, and budget. Ongoing coordination can also ensure that the project stays on track for successful implementation and that the resources and interagency agreements are in place to maintain the greenway after construction is complete. Project proponents should coordinate with their counterparts throughout project planning and implementation.

If any portion of the proposed greenway project is located near or crosses jurisdictional boundaries, project proponents are strongly encouraged to engage the neighboring community to review potential connectivity with existing or planned projects in the adjacent jurisdiction, as well as potential destinations that may appeal to greenway users.

6.5.1 Project Initiation

LA County Public Works should be engaged by the project proponent from project inception. DPR has a parallel engagement and review process for SGV greenway projects during implementation. Prior to applying for grant funding and planning, an initial meeting should be scheduled with the Implementation Team (LA County Public Works and DPR) as described in Section 6.1. This can be done by contacting LA County Public Works. During this meeting the greenway project idea will be discussed (location, extents, greenway type, users and section, project subcomponents, project proponent(s), etc.) along with adjacent existing and planned greenways, trails, and other project components. Potential sources of funding should also be discussed along with possible schedule. The meeting may result in questions, additional coordination, or investigation that is needed prior to the next step, greenway project concept submittal to LA County Public Works as described in Section 6.5.3.

During Implementation Team engagement, DPR will be part of the initial coordination meeting and will advise the project proponent on specific coordination, submittal, and review requirements to be completed during the implementation process.

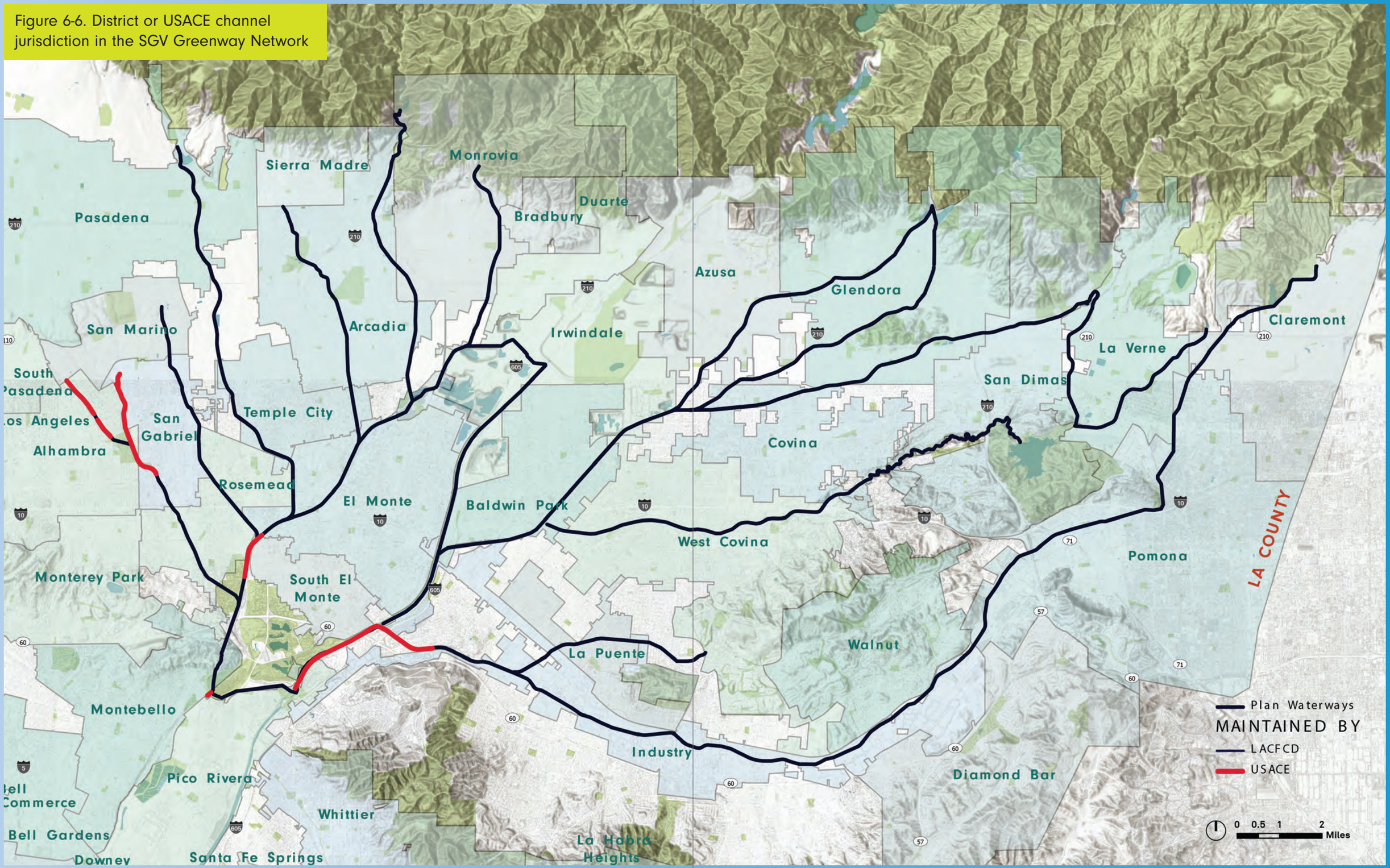
Additional information on these and other requirements is provided later in this section and in the Design Guidelines and Standards.

6.5.2 Approval of ROW Use

One of the primary considerations with a greenway project is the owner of the channel ROW being used for the greenway. In some cases, the ROW is owned by the District by fee property. In other cases, the District has an easement on the ROW, but the ROW is owned by another entity or individual. In all cases, formal approval for use of the ROW must be obtained from the ROW owner. District approval will be done via a Flood Permit. See Section 6.5.3 for details on the Flood Permit process. If there are proposed greenway project subcomponents on property beyond the channel ROW, approval must also be obtained from those owners. Because a greenway project can only proceed with formal approval to use the ROW (e.g., through Use Agreement), confirming the ability to use should be done early in the project development process.

Project proponents must also determine if the proposed greenway is adjacent to a channel owned and maintained by the District or USACE. Figure 6-6 shows the approximate extent of the District and USACE ROWs. Project teams should verify the ownership entity early in the project planning process. With the exception of limited segments of channel ROW on Alhambra Wash, San Pasqual Wash, Rio Hondo River, San Gabriel River, and San Jose Creek, SGV channel ROW has District ownership or easement.

Figure 6-6. District or USACE channel jurisdiction in the SGV Greenway Network



6.5.3 Flood Permit Process

Projects within District ROW, including fee property and easements, will require a Flood Permit issued by the LA County Public Works. This is accomplished by coordinating with and submitting information and permit application electronically to LA County Public Works' online Permit Center. Greenway project plans are required to be submitted for permitting and concept review using the LA County Public Works Permit Center at https://pw.lacounty.gov/ldd/lddservices/floodpermits.shtml.

Submitted plans are distributed to all required reviewers, including operations and maintenance divisions, which review all elements of the project.

The Flood Permit process typically starts with a concept review to assess primary project elements such as footprint, planned improvements, channel ROW ownership, channel maintenance impacts etc. Following the review, comments are provided to applicant. Once the concept is approved more developed engineering plans are submitted for review and approval. This takes multiple months depending on how much additional info needed and number of permit iterations. Permit iterations are reduced when the project applicant address comments to the expectation of the District. Greenway project maintenance responsibilities are formalized in a Use Agreement developed during the Flood Permit process.

If the greenway project channel is in a USACE ROW, then the project is submitted first to LA County Public Works online Permit Center as described above, and then after initial review LA County Public Works submits to USACE. USACE has their own application and approval process which can take substantial time to complete depending on complexity and public notice. https://www.spl.usace.army.mil/Missions/Section-408-Permits/ The 408 permit is issued to the District. A published public notice is required, and the project proponent must also sign a Third-Party Agreement.

Additional information related to permitting through LA County Public Works, including the Flood Permit and Use Agreement process, is provided in the SGV Greenway Network Plan Design Guidelines and Standards in Appendix H.

6.5.4 CEQA Requirements

The California Environmental Quality Act (CEQA) requires a lead agency (public agency that has the primary responsibility for carrying out or approving a project, State CEQA Guidelines Section 15367) to disclose significant environmental effects of proposed actions to decisionmakers and the public. Project proponents are responsible for addressing and complying with all CEQA requirements and other local, state, and Federal requirements. CEQA compliance is a requirement for issuance of a District Flood Permit.

A Program Environmental Impact Report (PEIR) has been prepared in compliance with CEQA requirements to describe any significant environmental effects, identify possible mitigation measures to mitigate those effects, and describe reasonable alternatives. The PEIR is available to be utilized by the project proponent for future projects proposed from the SGV Greenway Network Plan and located within the SGV Greenway Network.

6.6 Advancing Partnerships

Partnerships are an essential element of project success. Meaningful coordination with LA County departments, as discussed in previous sections of Section 6 is essential. Coordination with neighboring cities, communities, public, and community organizations builds consensus around a shared vision, enhances project outcomes, and avoids unnecessary delays and costs in project implementation.

Furthermore, where possible, greenways in the SGV Greenway Network should be coordinated and connected with projects implemented through other planning efforts, such as the EIP in various stages of implementation (See Section 2.4), LA River Master Plan, Community Parks and Recreation Plans, and other long-range plans, as well as individual projects that may act as destinations for greenway users. The following subsections describe key partnerships project proponents should establish and maintain throughout the project.

6.6.1 Community Involvement

The community includes all residents within the SGV of LA County and those that work or may use the SGV Greenway Network when completed. An important subset of the community is those who live and work near the proposed alignments, which represents the likely users of the completed greenways. Citizen groups composed of community members united by a common goal or interest, such as hobby groups, are also included. To encourage use of the greenway, the project development process should be informed by community preferences related to greenway alignment and section, project subcomponents and beneficial elements, and safety. Section 6.7 includes recommendations for how to engage the community in the project development and implementation process.

6.6.2 Advocacy and Non-Governmental Organizations

Advocacy organizations can be meaningful project partners and contribute unique knowledge and enthusiasm to the project development process. They can bring specialized experience and insight to project planning and design and may have specific concerns and desires that need to be thoughtfully addressed to maintain their support.

Advocacy organizations may be incorporated in the project development process during the public process or as a stakeholder alongside with technical consultants, regulatory liaisons, or management authorities. Potential advocacy organizations should be sought out by project proponents and meaningfully engaged early and throughout project planning and implementation.

Multiple organizations that were involved in plan development and may want to engage on greenway project implementation throughout the SGV Greenway Network are provided in Sections 1 and 3.

6.7 Community Engagement Mechanisms

Public involvement should employ a range of materials and platforms to build awareness and encourage participation in the project implementation process. Examples are provided on Figure 6-7. The process should be accessible to a diverse array of audiences throughout the community and feature different outreach methods in terms of time, location, language, and digital/non-digital platforms. As part of an equity-focused public involvement process, project proponents should intentionally include activities to address historically underserved communities.

The form, frequency, and primary audience of public participation will shift during the project implementation process with the most engagement during planning and construction (Great Rivers Greenway, 2018). Project proponents should develop a community engagement plan to set expectations with the Plan Team, identify key partners in the community, and develop a schedule for community engagement activities. The community engagement plan should account for the time it will take to plan and execute events, develop materials, and secure additional resources. Incorporating community needs and wants into the project is an extremely important part of the planning process along with publicizing back to the community how that was accomplished.

Planning phase outreach should include at least some of the community engagement activities conducted during Plan development, as described in the Community Engagement Plan, and documented in Section 3. The planning phase should also include project-specific events, informational materials, and workshops to gather additional information about potential destinations, desired routes and uses, and project goals (Great Rivers Greenway, 2018). In the planning phase, community engagement should focus both on sharing information with the public as well as gathering input to inform subsequent decisions, using the items in the engagement toolbox shown in Figure 6-7. An example of a social media post developed for the Plan can be found in Figure 6-8.

Structuring solicitations for feedback in a format that can best impact outcomes is most effective. As the final alignment and project elements are selected in the **design phase**, communications may shift to project updates with digital and in-person opportunities for community feedback and comment. Major changes in the proposed project direction, design, or schedule should be shared broadly with the community. It is recommended that project proponents show how community engagement feedback collected in the planning phase have been incorporated into the design. Updates can be easily conveyed to the community and other stakeholders through a project website.

During **construction**, the community will be interested in understanding the major work elements and estimated schedule for project completion. It's important for them to understand that there will be temporary impacts and disruption during construction, and safety is a primary concern. Regular progress updates should be provided by the project proponent along with opportunities for the community to provide feedback on issues or concerns. If any residences or businesses will experience temporary impacts during construction, plans for actively mitigating those issues should be included on the construction documents. Close coordination with those impacted should be initiated during planning and design and continue throughout construction.

Once project construction is complete and the **O&M** phase has begun, project proponents should continue to share greenway news and events and provide channels for the community to provide feedback on greenway observations. Planned events at the greenway can help to bring people to the greenway and continue to build user interest.

Engagement Toolbox

- Charrettes
- Community mapping
- Community advisory committees
- Emails
- Focus groups
- Mailers
- Media releases
- Meetings
- Neighborhood events (planned)
- Newsletters
- Online feedback tools
- Pop-up events
- Postcards/ doorhangers
- Posters/fliers
- Public exhibits
- Social networks
- Surveys
- Street teams
- Virtual meetings
- Website posts
- Workshops
- Yard signs

Figure 6-7. Engagement Toolbox

Figure 6-8. An example social media post for a community workshop related to development of the Plan

6.8 Funding Sources

Promoting equitable funding to improve environmental justice outcomes was specifically mentioned in the BOS motion and must be maintained throughout plan implementation. Many of the SGV Greenway Network Plan tasks related directly to understanding the people and communities of the SGV and distributing the benefits of greenway project implementation throughout. Example Conceptual Designs and the components and elements included in the SGV Greenway Network Plan and the Design Guidelines and Standards are applicable to areas throughout the SGV Greenway Network Plan. The SGV Greenway Network Plan was also developed to allow flexibility to meet diverse needs and priorities of the communities.

Creation and maintenance of an extensive greenway network throughout the SGV will require substantial and sustained financial resources. Project proponents will need to leverage a range of local, state, and federal funding sources to achieve the goals of the plan.

Grants are an excellent opportunity for a one-time influx of funds to enable project implementation. Due to their proximity to the Los Angeles population center and the innate relationship of the greenways with flood control channels, SGV Greenway Network projects are inherently multi-benefit. The strategic selection of project subcomponents including pocket parks and greenspaces, stormwater management, and greenway amenities can further strengthen the argument that in addition to recreation and transportation, greenway projects provide a broad range of environmental, health, social, and climate resilience benefits. These benefits can be used to apply for grant funds from a variety of agencies and programs.

Examples of potential local, state, and federal funding sources for SGV Greenway Network projects are provided in Figure 6-9 and the following subsections. Before preparing an application, project proponents should first meet with the Implementation Team as discussed in Sections 6.1 and 6.5. They should also review the individual grant program criteria requirements with respect to their project, and verify funding is available and proposed project alignment and/or subcomponents are eligible. Specific grant funding will often be tied to specific project subcomponents. An example is including stormwater management improvements as part of the greenway project for stormwater that currently discharges to the wash.

Local	Measure W (also known as the Los Angeles County Flood Control District's Safe Clean Water Program): Funds stormwater projects that increase capture and reuse and reduce stormwater pollution.
	Measure A: Safe Clean Neighborhood Parks and Beaches Protection Measure
	Measure M: Funds mobility and transportation projects, including active transportation
	Agency funds from LACFCD, LA County Board of Supervisors, Congressional representatives
	Net Toll Revenue Grant Programs to fund active transportation projects.
	Measure H: Funds services, rental subsidies, and housing to help people experiencing homelessness in LA County
State	Proposition funds: Propositions 1 and 68 to fund ecosystem and watershed protection and parks.
	Active Transportation Program (ATP) to encourage biking and walking.
	State conservancies administer additional grant programs that benefit climate resilience and waterways.
	Affordable Housing and Sustainable Communities Program to support walking, biking, and use of public transportation.
	Caltrans grants
	Recreational Trail Program
	CAL FIRE Urban and Community Forestry Program
	Wildlife Conservation Board
Federal	US Army Corps of Engineers
	US Fish and Wildlife Service
	National Parks Service
	US Bureau of Reclamation WaterSMART
	USDOT grants, including new grant programs from the Bipartisan Infrastructure Law

Figure 6-9. Potential SGV Greenway Network funding options at the local, state, and federal scale

6.8.1 Local Options

Projects are often funded by the project proponent as part of their Capital Improvement Program. LA County measures that may be leveraged to support implementation of greenway projects in the SGV include:

Measure W.

- Measure W, also known as the Los Angeles County Flood Control District's Safe Clean Water Program, is funded by a tax on paved property in LA County to raise money for stormwater projects that build water self-sufficiency.
- The funds are used to increase stormwater capture and reuse, recharge groundwater, reduce stormwater pollution, and invest in disadvantaged communities.
- Greenways require stormwater capture and treatment for the project additional impervious surfaces and provide opportunities to capture and treat stormwater from outfalls that currently discharge directly to an SGV tributary.
- Costs associated with these stormwater management improvements qualify for partial funding from the Safe Clean Water Program (Measure W).
- Each year, 50 percent of the Safe Clean Water Program revenues are used to fund projects at the watershed level, including the Upper and Lower SGV. Another 40 percent are allocated to municipalities, including those in the SGV. In Fiscal Year (FY) 2022, over $280 million in revenue was collected. More information about the Safe Clean Water Program is available on the program webpage.

Measure H.

- Measure H was created as a revenue stream to fund services, rental subsidies, and housing to help people experiencing homelessness in LA County.
- It is funded by a ¼-cent sales tax and is expected to raise $355 million each year until it expires in 2027.
- Some projects may be eligible depending on the project elements incorporated along the greenway or additional services provided to assist persons experiencing homelessness. More information is available on the LA County Homeless Initiative website.

Measure A.

- Measure A is also known as the Safe Clean Neighborhood Parks and Beaches Protection Measure, and provides funding to maintain parks, beaches, recreation, and open space in LA County.
- Funds are used for the protection, enhancement and maintenance of LA County's neighborhood and regional parks, open space, greenways, multi-use trails, beaches, natural habitat, rivers, streams, and the urban tree canopy by implementing an annual parcel tax of 1.5 cents per square foot of development.
- This measure also prioritizes parks that reduce the urban heat island effect. The resolution states that of the funds allocated to these programs, "multi-benefit projects should seek to leverage public and private funding from water conservation and supply; water and air quality improvements; flood risk management; climate pollution reduction or adaptation; carbon sequestration; heat-island reduction; habitat protection and biodiversity; public health; and environmental justice benefit programs." Greenway projects provide many of these benefits.
- Tax revenue is distributed as annual allocations to defined grant programs and as additional competitive grants. After the end of the LA County fiscal year, the funding amounts for each annual allocation grant program are announced to eligible agencies by September 15th.
- Funds for competitive grant programs are accrued over time; it is estimated that competitive grants will be available approximately every 1 to 4 years. Figure 6-10 from the LA County Recreational Parks and Open Space District's Grants Administration Manual shows how Measure A funds are allocated to each program.
- Detailed information about the funding programs through Measure A and the specific project eligibility requirements are included in the latest LA County Recreational Parks and Open Space District's Grants Administration Manual, which may be accessed from the Measure A Grants Administration webpage.

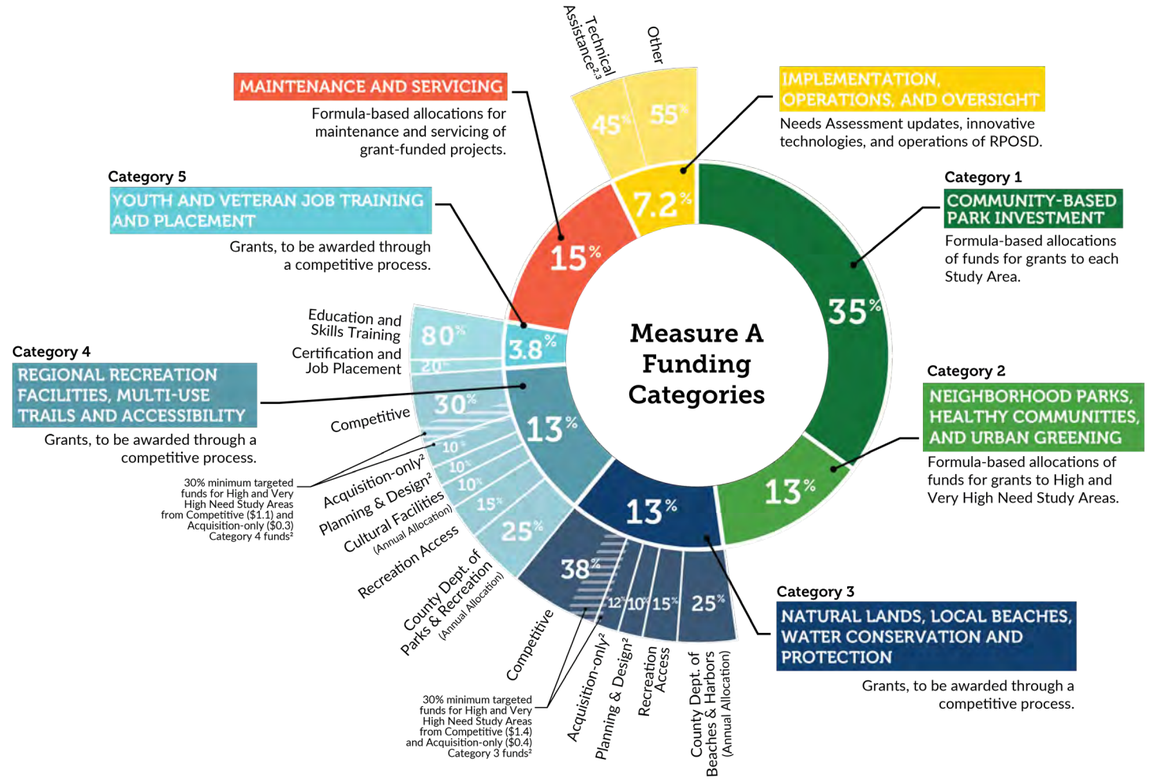


Figure 6-10. Use of Measure A funds by category

Source: LA County Recreational Parks and Open Space District

A community bike ride in the SGV

Measure M.

- Measure M is also known as the LA County Traffic Improvement Plan.
- It is funded by a ½-cent sales tax, and the funds from this measure are to be used to improve mobility and transportation options throughout LA County.
- Some Measure M funds are available to local communities through the Metro Multi-Year Subregional Program (MSP), which includes the SGV region; the Metro Active Transportation, Transit and First/Last Mile Program; and Local Return.
- Funding from the MSP is allocated in cycles. For the FY 2022-2025 cycle, Metro made $22.7 million available for active transportation, bus system improvement, and first/last mile projects through the San Gabriel Valley Council of Governments. Applications are made available to cities and agencies to apply for funds from each MSP cycle.[1]

Net Toll Revenue Program Grants use excess toll revenue to fund projects that enhance transit, active transportation, and capital investments in the I-10 and I-110 corridors. The program is administered by LA Metro.

LA County Board of Supervisors (BOS) Discretionary Funding can provide some discretionary funding for projects upon request depending on the proposed project. Similarly, project proponents may work with local and advocacy organizations and their local Congressman to advocate for Congressional appropriations for community projects.

Additional local funding may be available from other sources, including LA County, LA County Public Works, District, DPR, cities, NGOs, or state or national political representatives.

[1] https://www.sgvcog.org/msp-projects

6.8.2 State Options

State bonds and state-administered grant programs can also be leveraged to fund greenway projects. Some organizations, like SCAG, compile grant opportunities from around the state in a single resource for members. State-level funding sources for projects with environmental benefits include, but are not limited to:

- **Proposition 1 Water Bond (2014)** allocated $7.5 billion for ecosystems and watershed protection and restoration, water supply infrastructure projects, and drinking water protection. Multiple agencies administer programs to distribute funds from Proposition 1, including the Wildlife Conservation Board, State Coastal Conservancy, and the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy. As of January 2023, almost $7.4 billion of the $7.5 billion have been committed.
- **Proposition 68 Parks and Water Bond,** which passed in June 2018, allocated $4 billion in general obligation bonds for projects to benefit state and local parks, environmental protection and restoration projects, water infrastructure projects, and flood protection projects. The available funding for grants varies by round, but for FY 2020-2021 (Round 4), $395.3 million were available for the Statewide Parks Program, $23.1 million for Regional Parks Program, and $23.1 million for the Rural Recreation and Tourism program. The Regional Parks Program includes trails as eligible projects.
- **The San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC)** administers several grant programs funded by Proposition 1, Proposition 68, and non-bond grants, including the Climate Resilience Grant Program and Lower Los Angeles-Urban Streams and Rivers Program.

- **California Department of Forestry and Fire Protection (CAL FIRE) Urban and Community Forestry Program:** The Urban and Community Forestry Grant Program strives to increase the long-term benefits trees provide, improve the public's understanding and appreciation of urban trees, and advance urban forest management and tree care. Special consideration is given to projects serving disadvantaged and/or low-income communities, which SGV Greenway Network projects could potentially qualify for.

Project proponents may also leverage grant programs for transportation projects, in particular those that promote active transportation, trails and greenways, and other multi-modal forms of transit.

- **SCAG Go Human Mini-Grants Program** provides funds to community-based organizations, non-profits, and social enterprises to increase the safety of vulnerable and disadvantaged populations from vehicle collisions. In 2022, grants up to $15,000 were available.
- **The Active Transportation Program** receives $100 million annually to encourage active modes of transportation, including biking and walking. Of its annual allotment, 50 percent is allocated for statewide competitive programs, 40 percent for Metropolitan Planning Organizations with populations greater than 200,000, and 10 percent to small and rural regions. Funds can be used for infrastructure, non-infrastructure, and planning projects.
- **Affordable Housing and Sustainable Communities** supports healthy communities and lower carbon emissions by funding projects that promote walking, biking, and use of public transportation. It can be used for projects to create new sidewalks, bike lanes, and transportation-related amenities. The project may need to be within a stated distance of an affordable housing development to be eligible.
- **Caltrans** administers grants that may fund greenway projects and stormwater management.
- **Recreational Trail Program:** RTP is a state administered local assistance program of the FHWA (Federal Highway Administration), administered by the State of California. The Bipartisan Infrastructure Law of 2021 reauthorized the Recreational Trails Program through Federal fiscal years 2022 through 2026 as a set-aside from the Transportation Alternatives Set-Aside under the Surface Transportation Block Grant. Various SGV Greenway Network projects could potentially qualify for this program.
- **Wildlife Conservation Board:** The Wildlife Conservation Board funds projects that implement the construction of restoration and enhancement projects and/or projects that will enhance public access, which SGV Greenway Network projects could qualify as. Examples of relevant programs that the Wildlife Conservation Board has funded previously include projects to improve open-space corridors and trail linkage and projects to increase flood protection.

6.8.3 Federal Options

There are also national grants from private organizations and federal agencies that can be considered as potential funding sources. Examples of potential grant sources for projects that provide benefits for flood management and the environment include the USACE, USFWS, National Park Service (NPS), and United States Bureau of Reclamation (USBR) WaterSMART program. Additional transportation grant programs for bikeways and pedestrian infrastructure are also available.

The Bipartisan Infrastructure Law authorized a number of grant programs for transportation-related projects. Examples of those that SGV Greenway Network projects may be eligible for include:

- **Reconnecting Communities Pilot (RCP)** Program to fund projects where a transportation facility, such as an interstate, is a barrier to community connectivity.
- **All Stations Accessibility Program** is a federal competitive grant to fund projects to upgrade the accessibility of legacy rail fixed guideway public transportation systems for people with disabilities. This program may be applicable for projects near Metro stations.
- **Carbon Reduction Program** is a broad program focused on reducing carbon emissions. Eligible projects can include on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation.
- **Railroad Crossing Elimination Program** may be a funding option for pathway-rail crossing improvement projects that are intended to improve the safety and mobility of people and goods.
- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE)** allows project sponsors at the State and local levels to obtain funding for multi-modal, multi-jurisdictional projects that are more difficult to support through traditional United States Department of Transportation (USDOT) programs.

SECTION 7

RESOURCES

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7.2 Tables

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7.4 Acknowledgments

The Los Angeles County Board of Supervisors first proposed a plan to develop the underutilized rights-of-way along San Gabriel Valley's flood control channels in 2017. With leadership from LA County Public Works and support from DPR and other departments within Los Angeles County, municipalities, organizations, Steering Committee members, stakeholders, and the community the San Gabriel Valley Greenway Network Strategic Implementation Plan was developed.

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