





# WALNUT CREEK WATERSHED OPPORTUNITY ATLAS

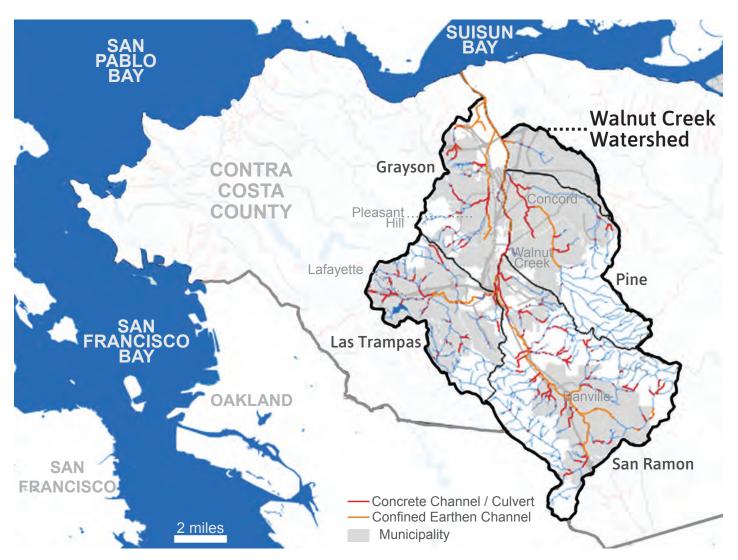
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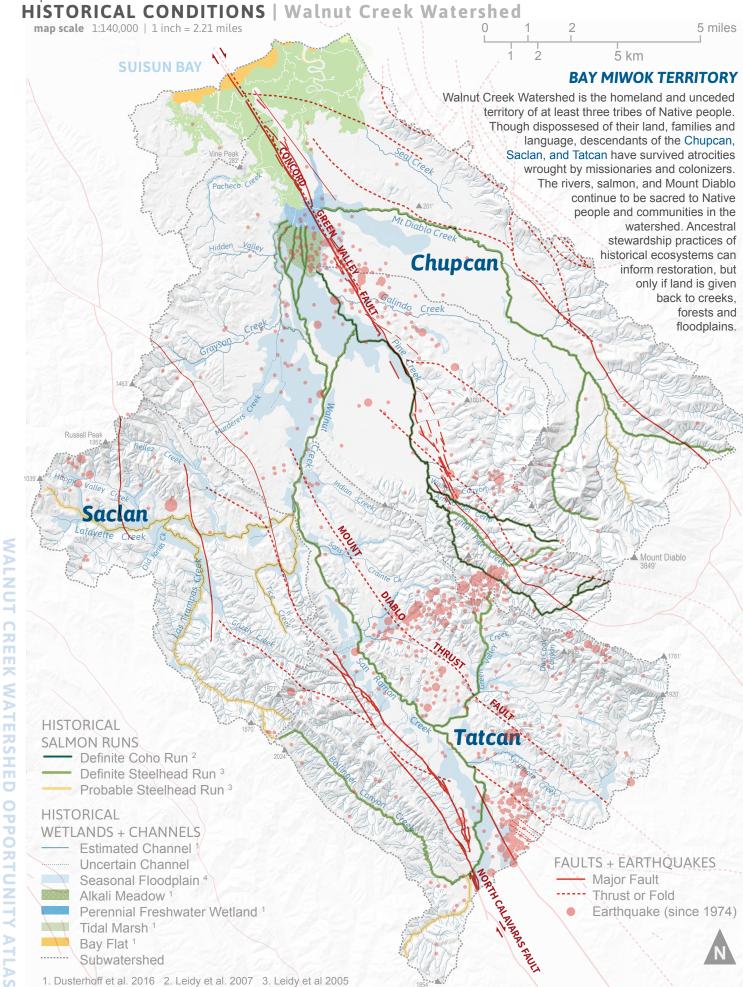
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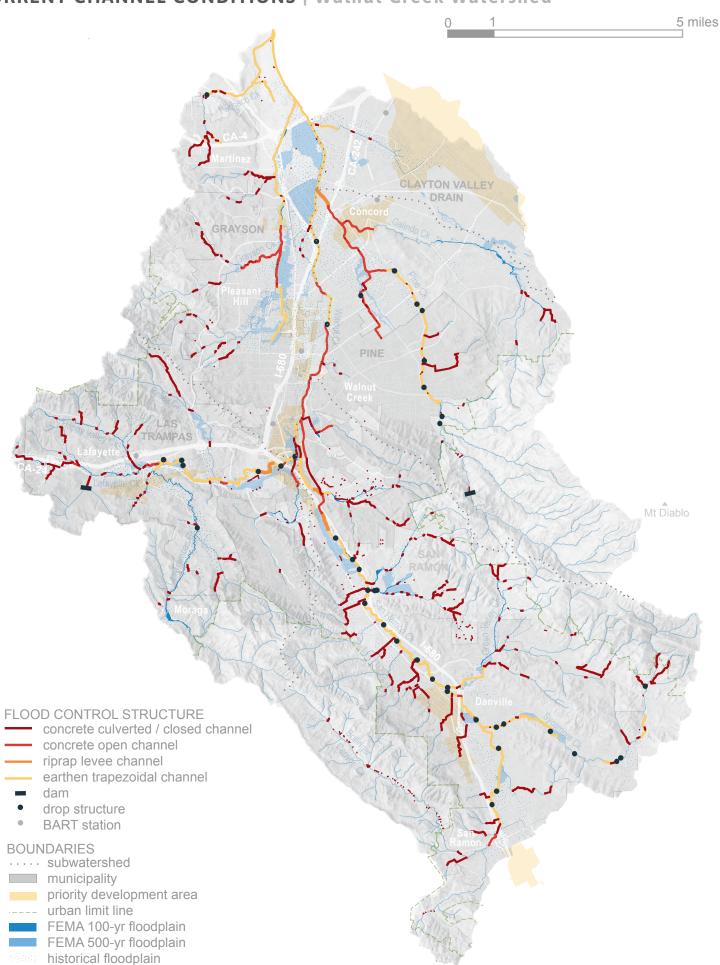
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# SAN FRANCISCO BAY CONTEXT | Walnut Creek Watershed







# **CURRENT WATERSHED CONDITIONS | Walnut Creek Watershed** 5 miles **CLAYTON VALLEY DRAIN 41% Impervious Cover GRAYSON Impervious Cover PINE 22%** Impervious Cover Mt Diablo LAS **TRAMPAS** 27% **Impervious Cover** Thresholds of stream quality by percent impervious cover Stream Quality SAN RAMON 13% Fair Impervious Cover 40% 60% 8 Watershed Impervious Cover 100% (Schueler 2004) LEGEND · · · subwatershed line PERCENT IMPERVIOUS SURFACE ----- priority development area 1 to 10% 11 to 20% 21 to 30% 31 to 40% 41 to 50% ---- urban limit line

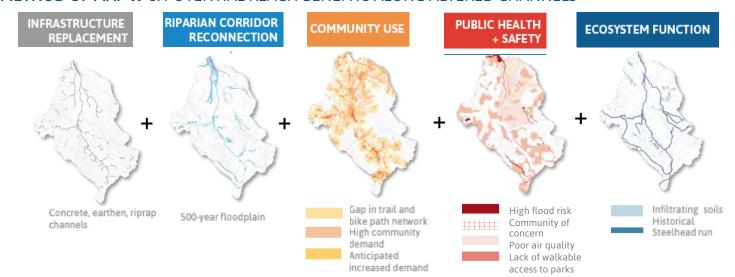
1 51 to 60% 1 61 to 70% 1 71 to 80% 1 81 to 90% 1 91 to 100%

(U.S. Land Cover Database 2011)

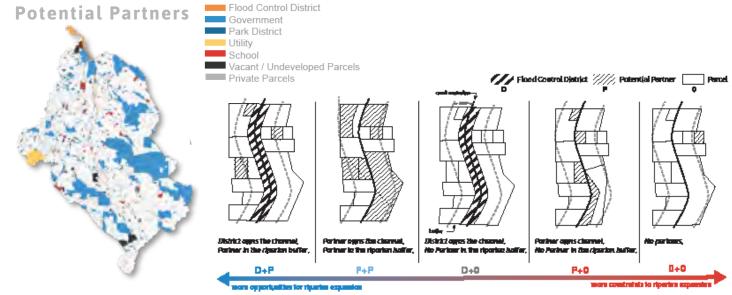
# INFILTRATION OPPORTUNITIES | Walnut Creek Watershed **map scale** 1:126,700 | 1 inch = 2 miles 5 miles 5 km **GRAYSON CREEK** CLAYTON VALLEY DRAIN CONCORD PLEASANT HILL WALNUT CREEK **PINE CREEK** ▲ Mt Diablo LAS TRAMPAS CREEK MORAGA **INFILTRATION ZONES** No Infiltration (Hazard Area) shallow infiltration 2% **SAN RAMON CREEK** limited infiltration deep infiltration limited and deep infiltration SAN RAMON 53% **BOUNDARIES** subwatershed line ---- urban limit line municipality priority development area

## **IDENTIFYING RESTORATION OPPORTUNITIES | Methods**

### METHOD OF MAP W-6: POTENTIAL REACH BENEFITS ALONG ALTERED CHANNELS

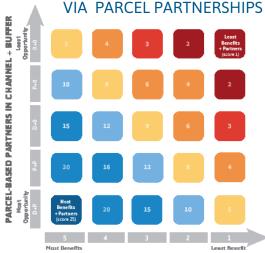


### METHOD OF MAP W-7: OPPORTUNITIES TO PARTNER WITH LANDOWNERS ALONG ALTERED CHANNELS



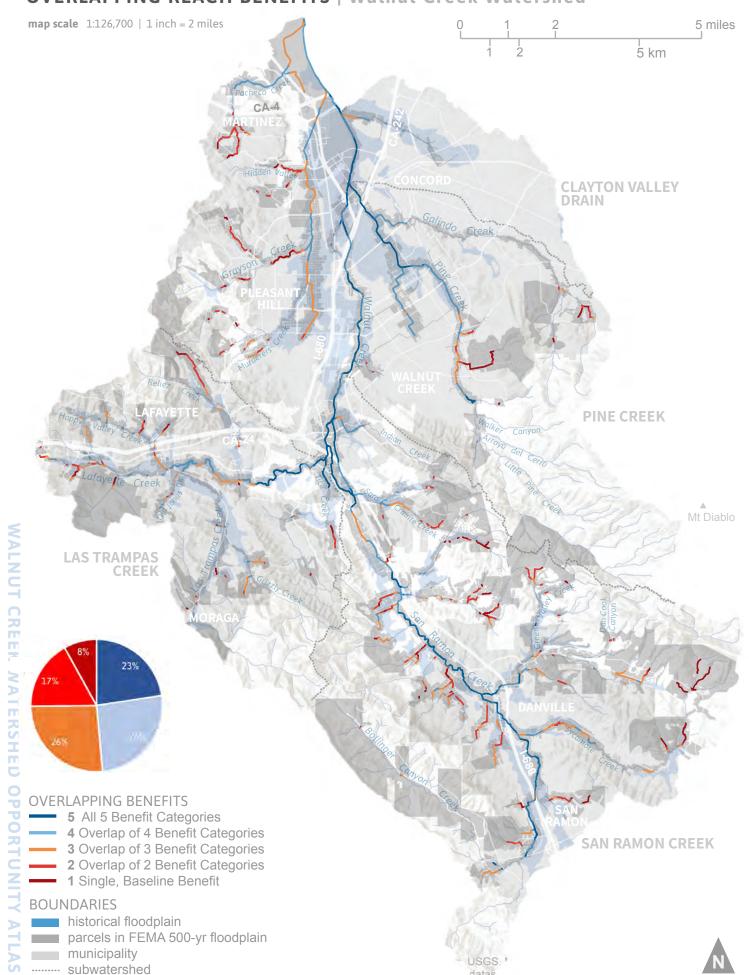
# **METHOD OF MAP W-8**: RESTORATION OPPORTUNITIES TO ACHIEVE REACH BENEFITS



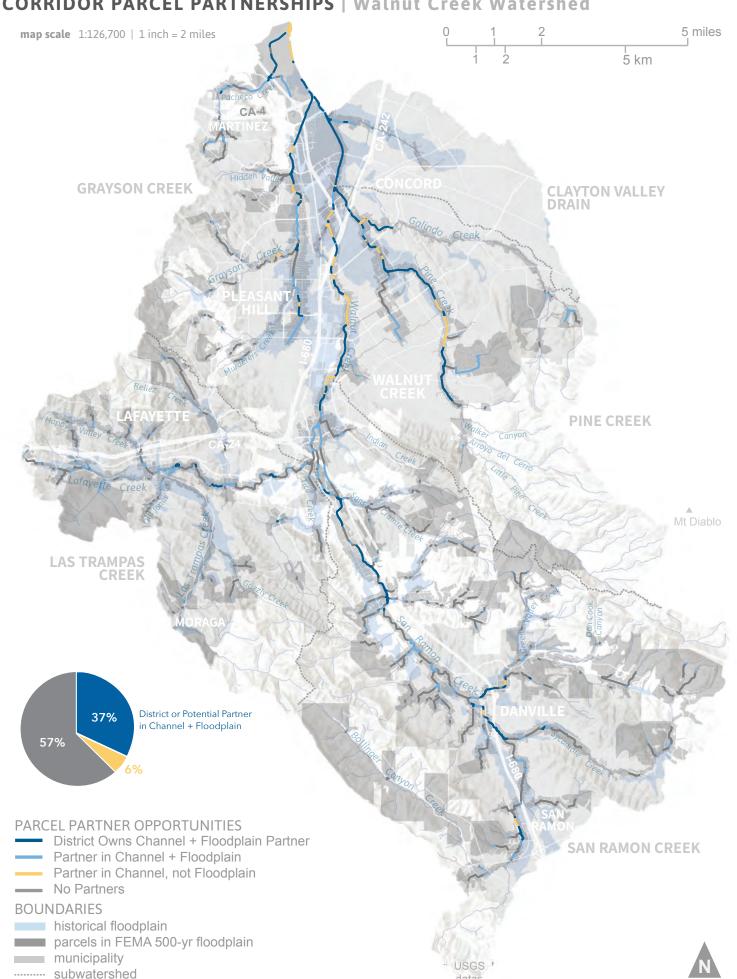


REACH-BASED BENEFIT OVERLAP

# OVERLAPPING REACH BENEFITS | Walnut Creek Watershed



# CORRIDOR PARCEL PARTNERSHIPS | Walnut Creek Watershed

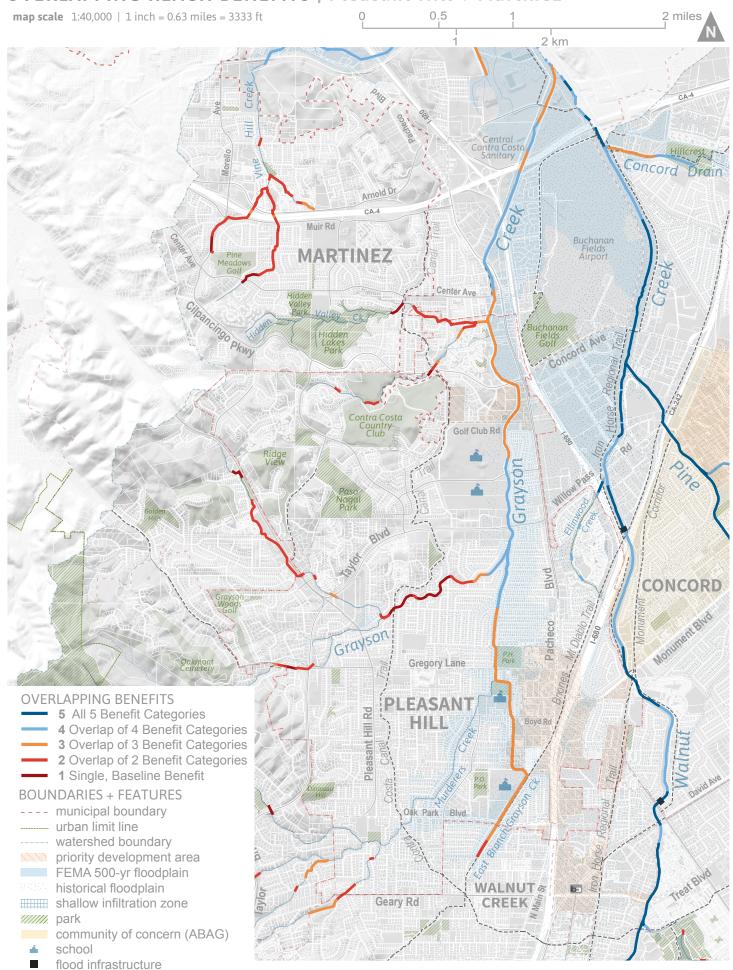


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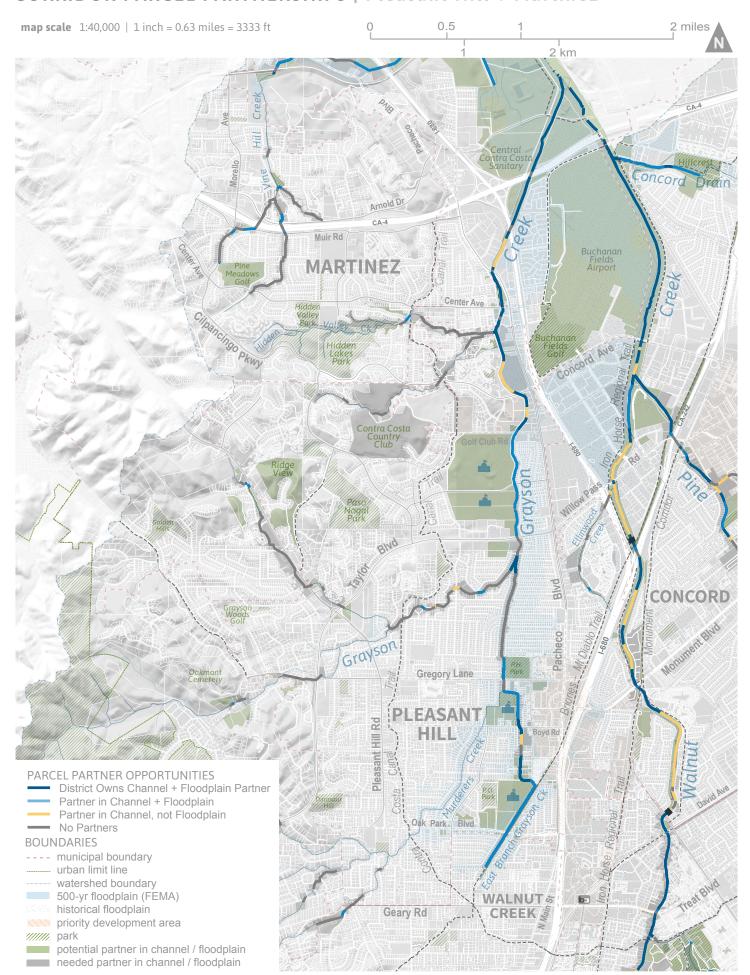
municipality

..... subwatershed

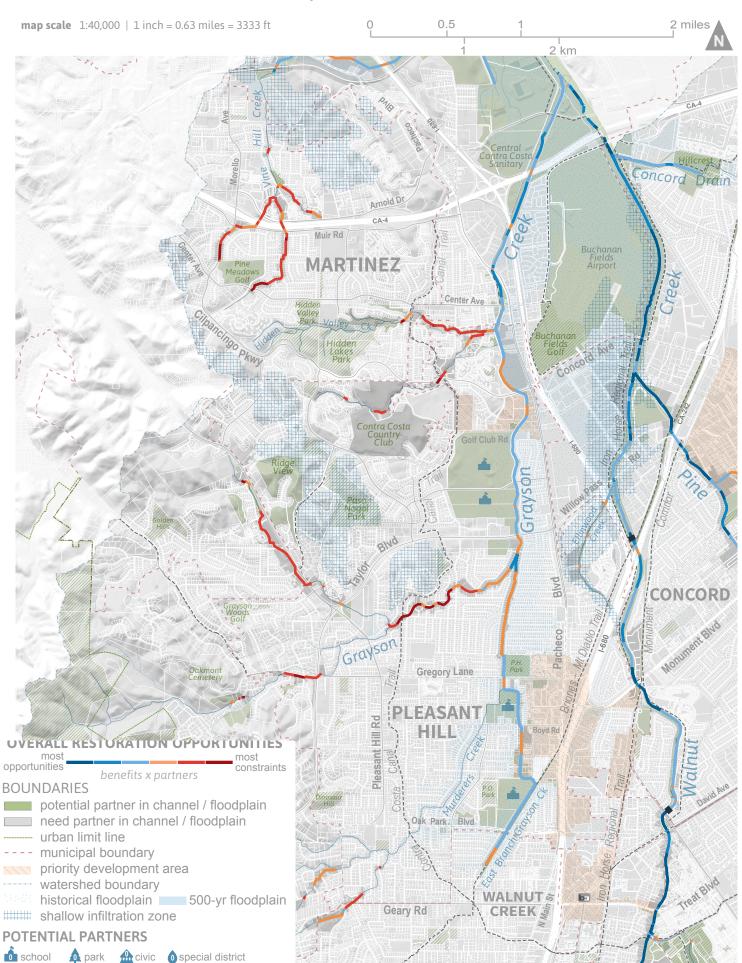
# OVERLAPPING REACH BENEFITS | Pleasant Hill + Martinez



### CORRIDOR PARCEL PARTNERSHIPS | Pleasant Hill + Martinez

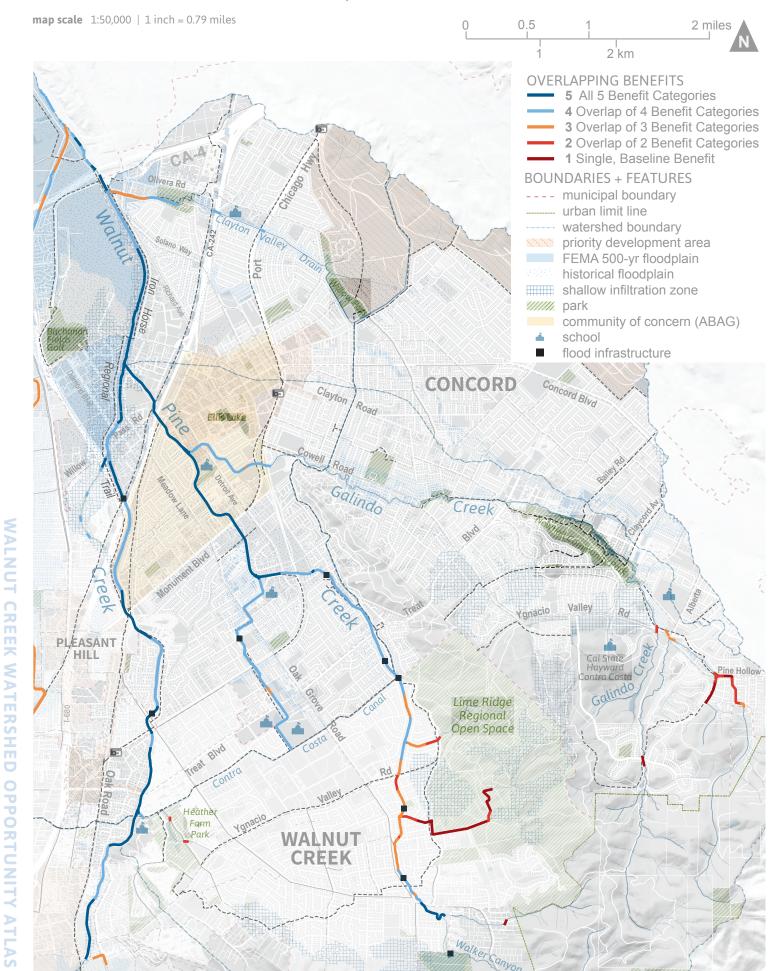


## **RESTORATION OPPORTUNITIES | Pleasant Hill + Martinez**

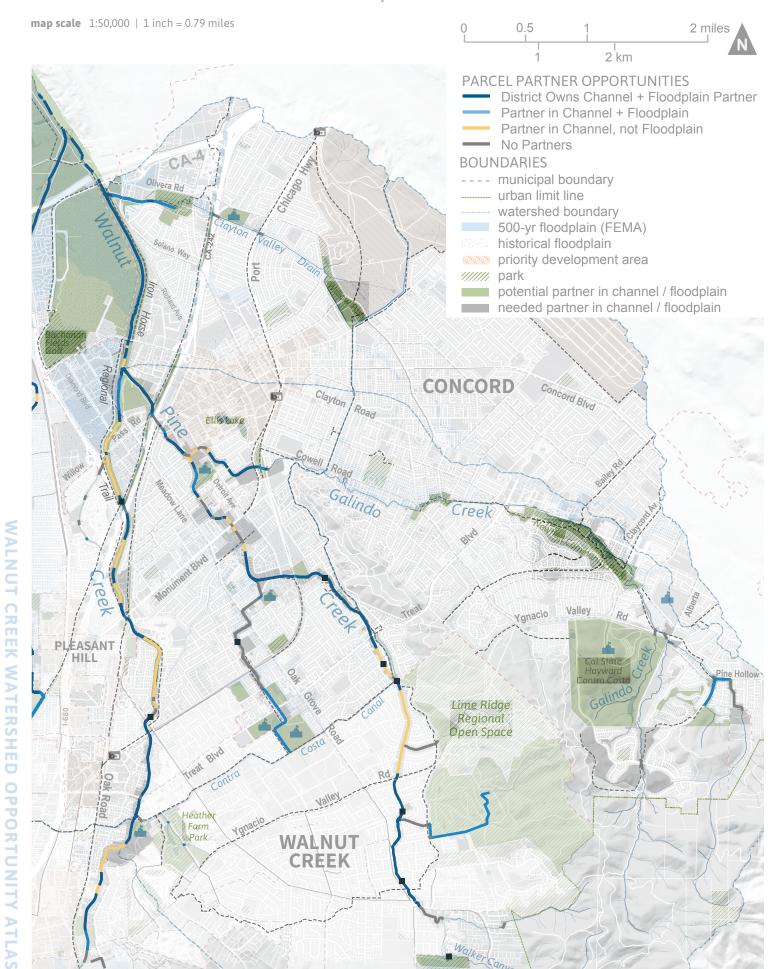


WALNUT CREEK WATERSHED OPPORTUNITY ATLAS

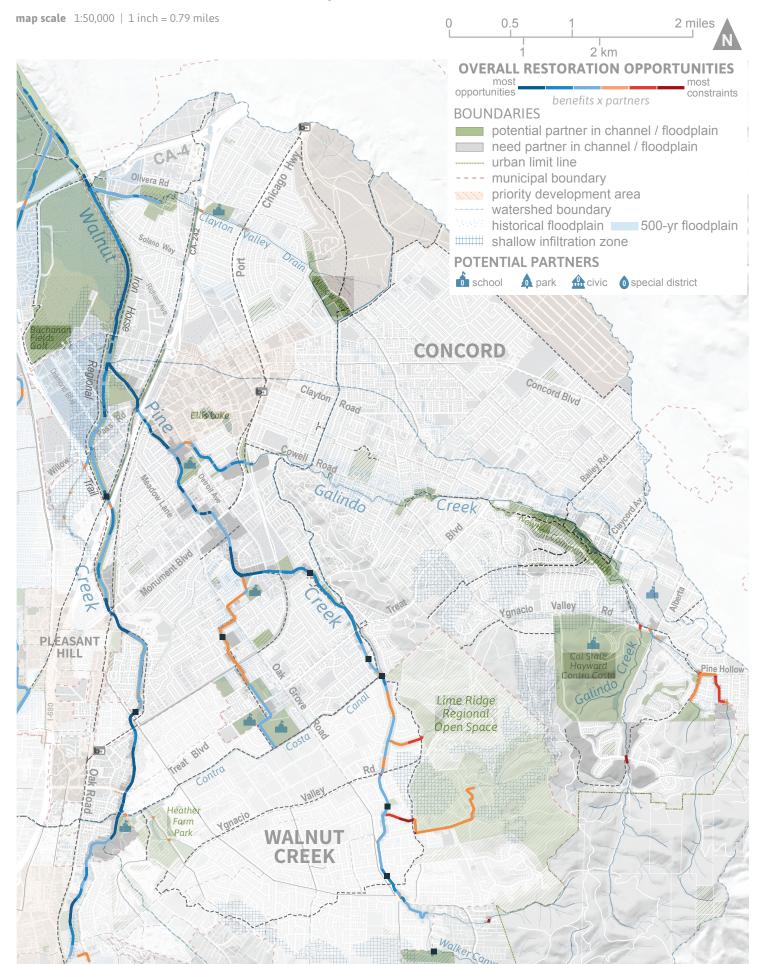
# **OVERLAPPING REACH BENEFITS | Concord**



# CORRIDOR PARCEL PARTNERSHIPS | Concord

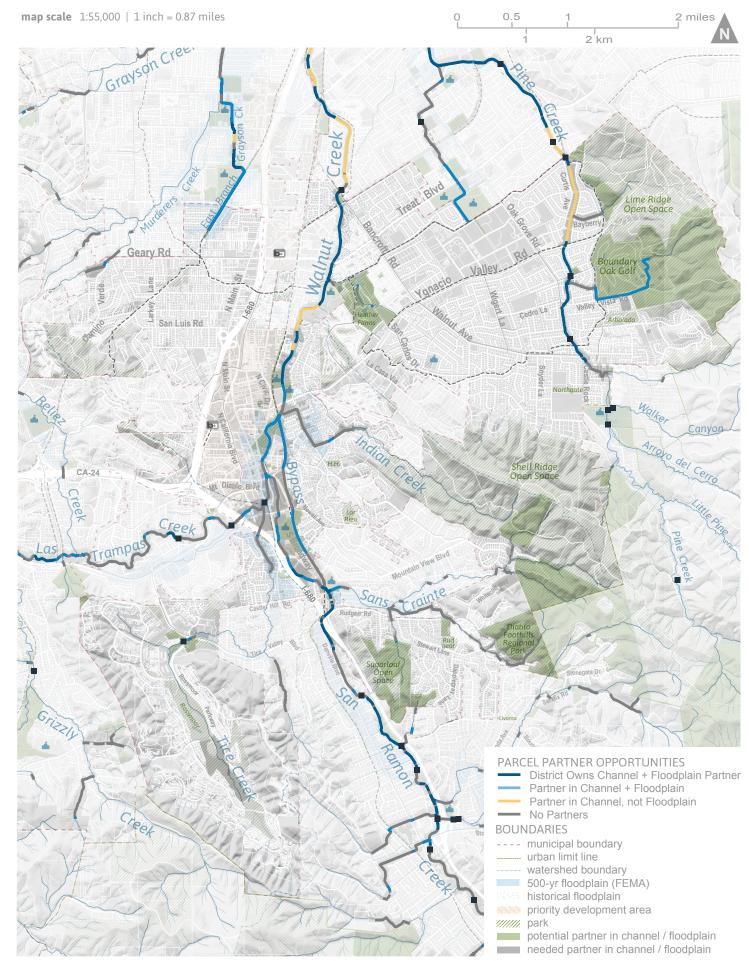


# **RESTORATION OPPORTUNITIES | Concord**

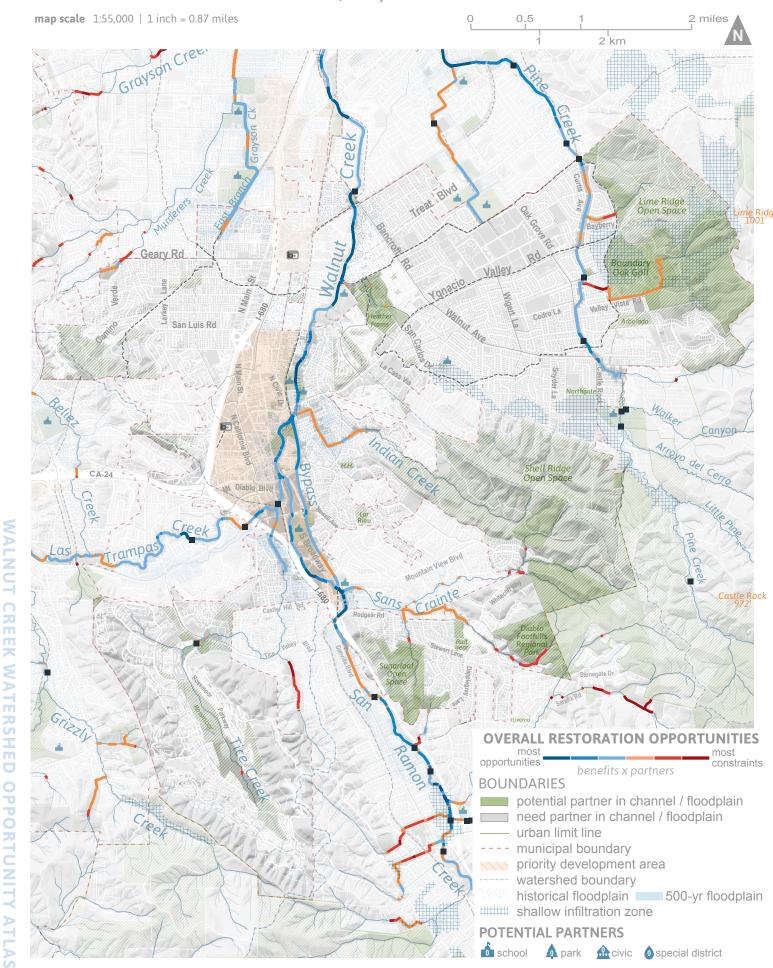


WALNUT CREEK WATERSHED OPPORTUNITY ATLAS

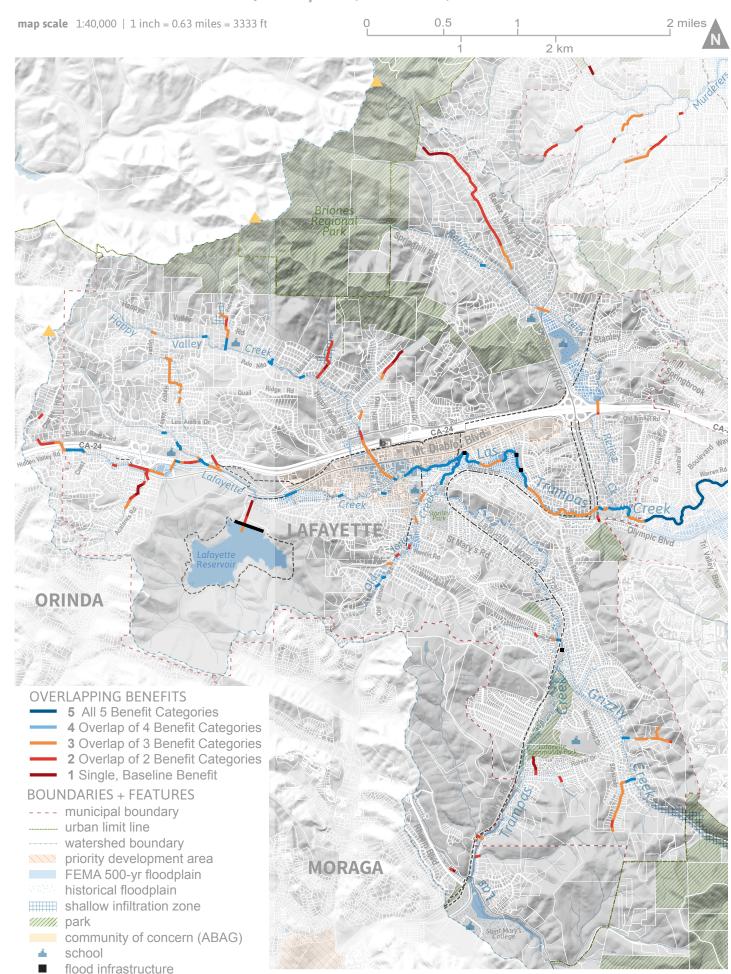
# **CORRIDOR PARCEL PARTNERSHIPS** | City of Walnut Creek



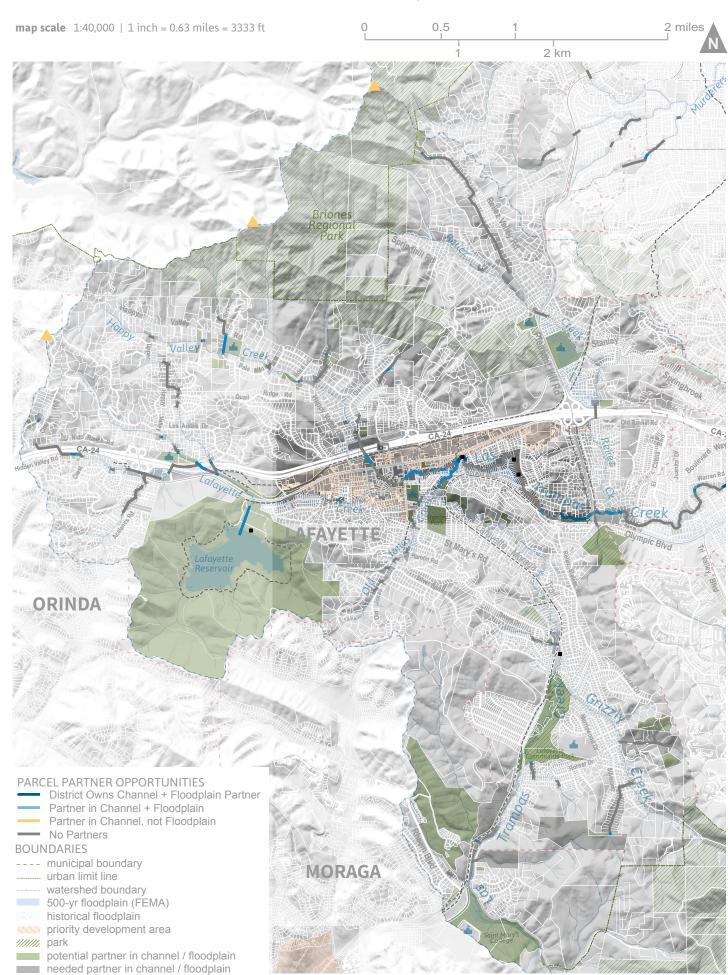
# **RESTORATION OPPORTUNITIES | City of Walnut Creek**



# OVERLAPPING BENEFITS | Lafayette, Morinda, + Orinda

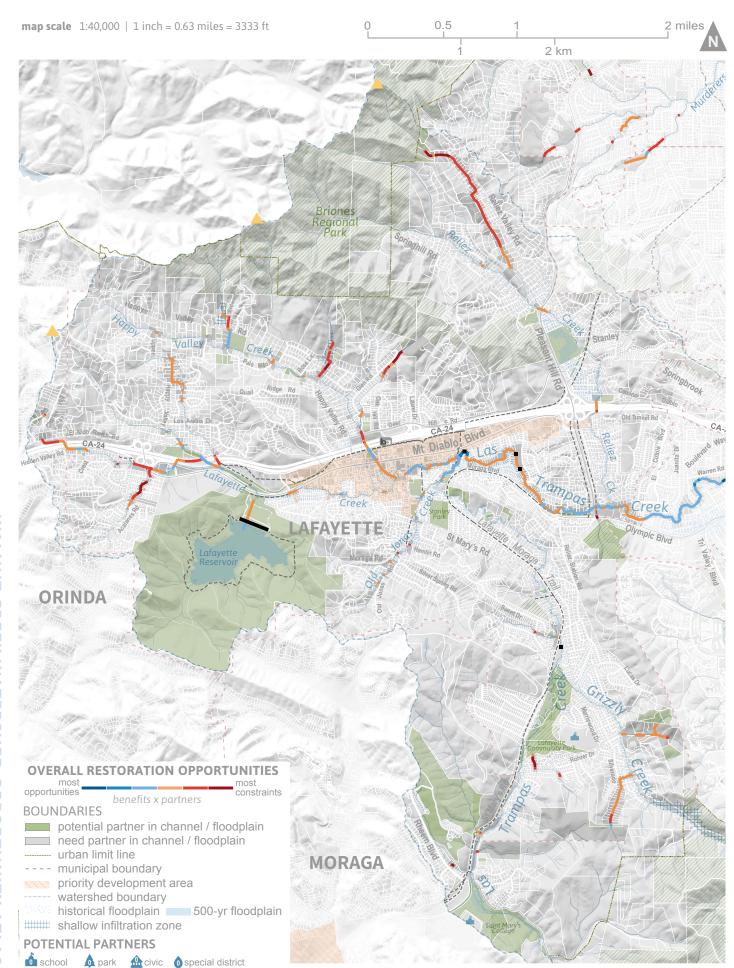


# CORRIDOR PARCEL PARTNERSHIPS | Lafayette, Morinda, + Orinda



# WALNUT CREEK WATERSHED OPPORTUNITY ATLAS

# RESTORATION OPPORTUNITIES | Lafayette, Morinda, + Orinda



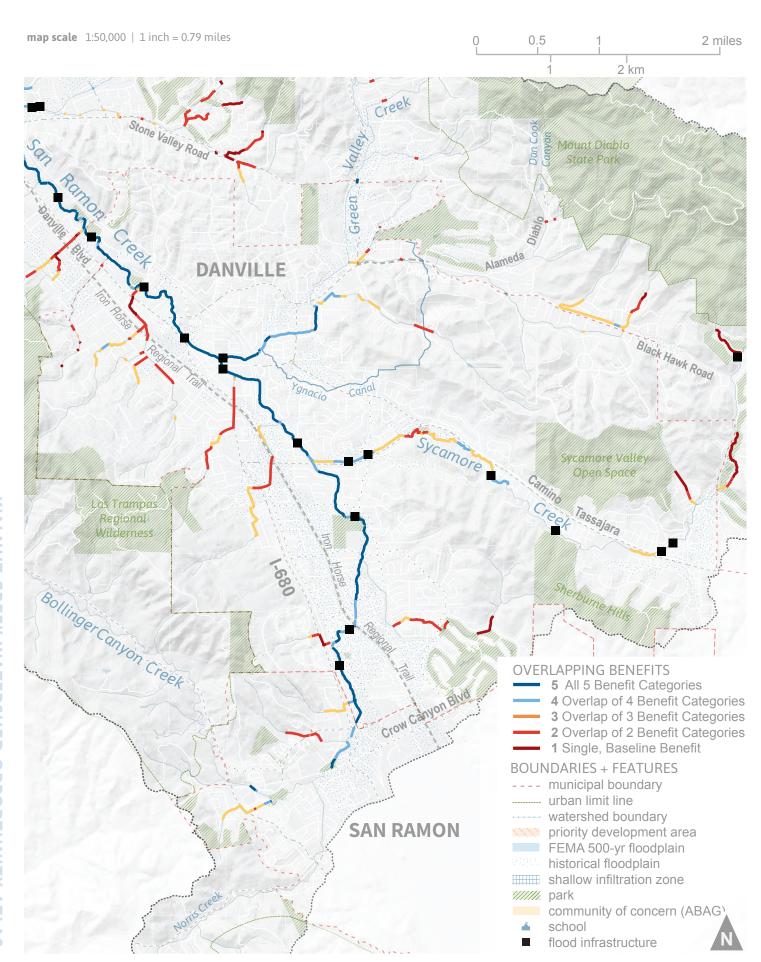
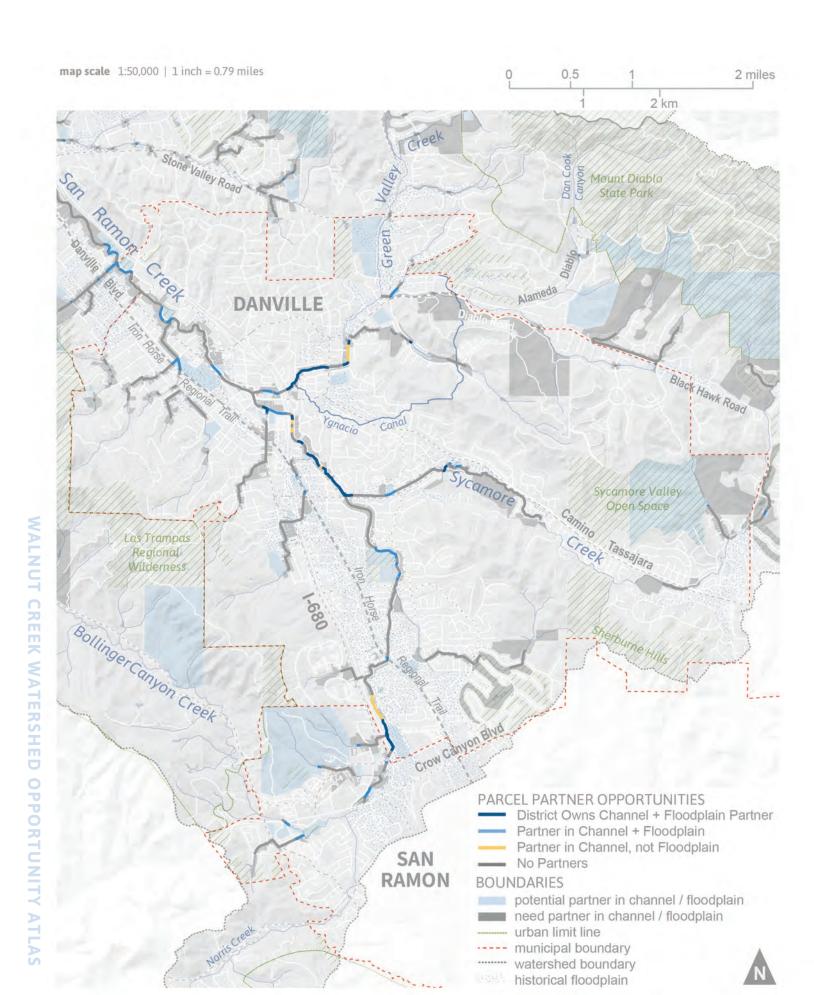


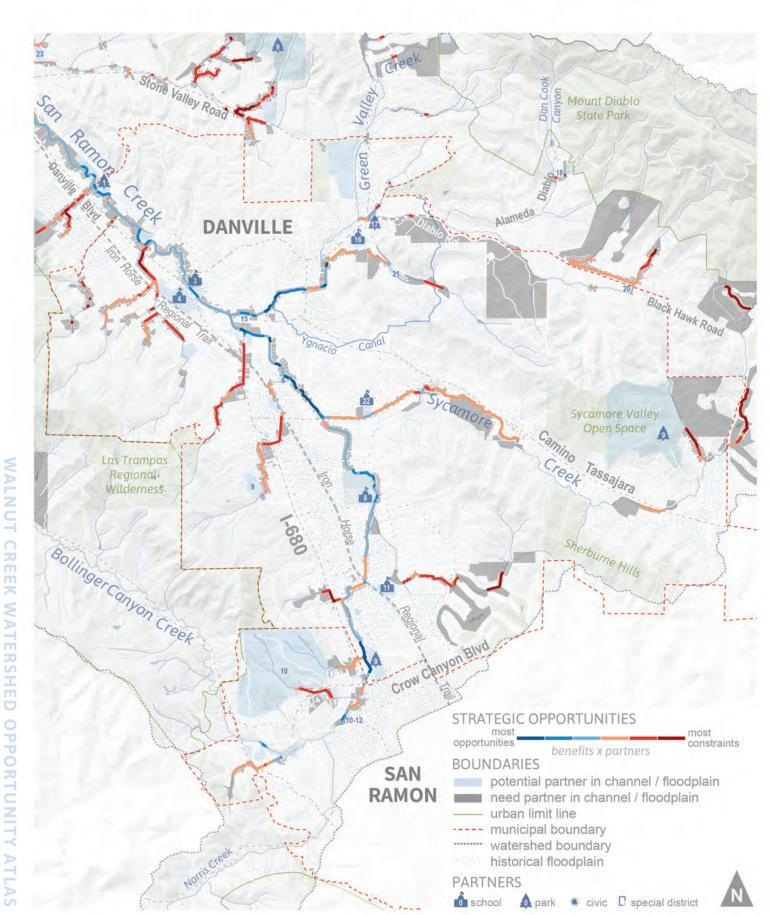
Fig M-14

## CORRIDOR PARCEL PARTNERSHIPS | Danville + San Ramon



map scale 1:50,000 | 1 inch = 0.79 miles





### **RESTORATION OPPORTUNITY CATALOG | Reach Scale**

Catalog of opportune reaches for riparian corridor expansion with potential partners identified in geospatial analysis. The column labeled (L) represents an estimate of the reach length in miles. A map for each site is available in the Walnut Crerek Watershed Opportunity Atlas. Maps are identified by Site ID. We abbreviate Drop Structure as DS, School District as SD, Priority Development Area as PDA, Contra Costa County as CCC, East Bay Regional Park District at EBRPD.

SITE	L			
ID	(mi)	LOCATION	JURISDICTIONS	POTENTIAL PARTNERS
		GRAYSON CREEK		Central CC Sanitary District
		Pacheco Blvd to mouth at		CalTrans
G1	1.8	Walnut Creek.	Contra Costa County	Others: private landowners
		•	ed due to lower ecological po ter quality is poor. Historical s, a public riparian greenway bughout Grayson Creek's sha es to open and connnect pu	otential. The watershed is highly steelhead runs were possible, but not promises social benefits and fish do ared floodplain with W1 and W2, blic access while seeking creative
W1	0.7	WALNUT CREEK		Caltrans
		between confluence with	City of Concord	Contra Costa Water District
		Grayson Creek + Clayton	Contra Costa County	EBRPD
		Valley Drain.	,	CCC Board of Education
				Others: Southern Pacific Transport Co, among other smaller landholders
		Reaches W1, W2, G1, and G2 sho	hort, tidal reach. Consider po uld be considered simultane neir shared floodplains, the fu	Orive) complicate the strong otential water access for kayak, canoe. Fously in partnership with Contra Costa uture influence of sea level rise, and
W2	1.6	WALNUT CREEK		Mount Diablo Unified SD
		along Buchanan Fields (see W1) to Pine Creek Confluence, upstream to Diamond Blvd Crossing.	City of Concord	SF BART District
			Contra Costa County	EBMUD
				Others: Conco Storage, Concord Airport Plaza, CBC Properties, HD Development of MD, Montecito Properties, Pur Sterling LLC

The confluence of Walnut and Pine creeks offers strong public benefits and adjacent parcels have potential partners (airport, theme park). Other adjacent parking lots and light industrial land uses have low-investment built structures. Consider job and manufacturing displacement in concert with nearby PDAs in Concord and Pleasant Hill. Site W1 and W2, along with Grayson Creek, should be considered simultaneously. An initial opening of public loop trails along these reaches (where currrently gated) could raise awareness of the Fifty-Year Plan. See Appendix B for detailed studies.

Site

L

# **RESTORATION OPPORTUNITY CATALOG | Reach Scale**

ID	(mi)	LOCATION	JURISDICTIONS	POTENTIAL PARTNERS
W3	1.3	WALNUT CREEK + ELLINWOOD CREEK	City of Concord	Caltrans
		at <b>DS W-1</b> . If include	City of Pleasant Hill	EBRPD
		connectivity with Ellinwood Creek add 1.1 miles to project length.	Contra Costa County	Others: private owners
		•		ek and Ellinwood Creek for aquatic off- edestrian and bike crossing beneath
		I-680; requires tight partnership wit 2020 could open opportunities for	_	
W4	0.6	WALNUT CREEK		EBRPD
		at Monument Boulevard to Fair Oaks Elementary School. Consider integrated planning with Pleasant Hill PDA	City of Concord	Mount Diablo Unified SD
				CCC Redevelopment Agency
			City of Pleasant Hill	Others: Lisa Lane HOA, J Hanson
			Contra Costa County	(large parcel on right bank) + other private owners, especially in PDA
		Iron Horse Trail beneath Monumen	ners or willing sellers emerg at Blvd (with a widened bridg	ge. Re-aligning the crossing of EBRPD
W5	1.1	WALNUT CREEK		Seven Hills School
		at <b>DS W-2</b> , upstream to	City of Concord	City of Walnut Creek
		Seven Hills School + Heather Farm Park.	City of Walnut Creek	SF BART District
			City of Walliut Creek	Contra Costa Water District
			Contra Costa County	EBRPD
				Caltrans
				On right bank between BART and Treat Blvd: Countrywood Homeowners Assn, Rancho Dorado
				Homeowners Assn, + other private parcel owners, especially in PDA
				along Treat Blvd.

With proximity to Pleasant Hill BART and PDA plus Heather Farm Park, restoration of the 1.1 mile reach presents strong social benefits including ecological potential of longitudinal connectivity. Upstream of DS W-2, District and BART property (in green, Map R-W5) cover a 3-4 acre area between Bancroft Rd and the BART tracks. Seven Hills Ranch, on the upstream eastern bank, is a ~30-acre parcel of oak savannah habitat with a minor tributary, potential wetland habitat, and source of cool summer water. The ranch site offers valley vistas; public access to views can promote sense of safety along the creek. If the site is conserved and connected with restoration of Walnut Creek, the combined area has potential to anchor wildlife habitat. Creek restoration is constrained by private parcels on the left (west) bank.

Site ID	L (mi)	LOCATION	JURISDICTIONS	POTENTIAL PARTNERS
SR3	1.4	SAN RAMON CREEK  Green Valley Creek confluence upstream to Sycamore Creek confluence, including DS SR-9 + DS SR- 10 (30-60 yr service life) and DS GV-1.  Consider Danville PDA as an opportunity for partnership and collaboration.	Town of Danville	CalTrans Contra Costa County Danville Development Agency Danville Community Development Agency Others: Diablo Park LLC, Catholic Diocese of Oakland, San Ramon Valley Christian Academy, Whispering Creek LLC

In the reach between I-680 and Sycamore Creek (includes DS SR-10) the District owns or has easements for channel or adjacent parcels. Few parks exist nearby and I-680 presents a barrier to pedestrian or bike into downtown Danville; a riparian greenway would offer strong community benefits. Danville's PDA opens opportunities for integrated plannning downstream of the I-680 crossing. At DS SR-8, large schools on each bank offer potential for restoration partnerships. Between DS SR-8 and SR-10, residential parcels and I-680 crossing constrain the creek. The confluence at Green Valley Creek presents opportunities for an urban park within the PDA.

### SR4 0.8 SAN RAMON CREEK

From I-680 crossing at Fosteria Way downstream to Camino Ramon PI, including **DS SR-13** (65-100 yr service life). Possibly to **DS SR-12** (60 yr service life) and Iron Horse Trail (+0.22 mi)

Town of Danville

City of San Ramon

EBRPD CalTrans

Others: M. Adam (~4 acre pacel downstream of DS SR-13) + private landowners

The Borel Homestead property, owned by EBRPD, and channel parcels owned by the District anchor opportunities at this multi-benefit reach and the surrounding historical floodplain. Here, San Ramon Creek forms broad alluvial fan downstream of the North Calavaras Fault. Tributaries from the east also cross the fault onto fans. All are potential sites for shallow or deep infiltration to offset increased stormwater runoff from urbanization. I-680 and residential parcels constrain the channel in this reach, which lies in Danville. Connecting a restored riparian greenway to the Iron Horse Regional Trail, downstream of DS SR-12 (60 yr service life), would greatly expand the offstreet trail network for locals and connect regional cyclists to destinations in San Ramon.

### **GV1 1.0 GREEN VALLEY CREEK**

I-680 crossing to Diablo Rd; consider connectivity with Danville PDA Town of Danville

Caltrans Green Valley Shopping Center

Danville Park RE LLC Danville Grange No 85 San Ramon Unified SD

A historical steelhead run with some conserved uplands, Green Valley Creek's mouth lies in Danville's PDA and includes large, creekside parcels. Upstream, the creek flows beneath I-680 and rises through a residential neighborhood within a FEMA-designated floodplain. The Green Valley Shopping Center on the left (south) bank is in Danville's PDA. Integrated planning with the PDA in the confluence area could open opportunities for an actively-used urban park with connected riparian greenway to serve the growing downtown and into suburban communities along Green Valley Creek.

Site ID	<b>L</b> (mi)	LOCATION	JURISDICTIONS	POTENTIAL PARTNERS
W6	0.4	walnut Creek from Walnut Creek Intermediate School to Ygnacio Valley Blvd. Possibly extend to Civic Center Park (+0.5 mi) or DS LT-1 (20-50 yr service life) (+0.7 mi)	City of Walnut Creek Contra Costa County	Walnut Creek School District EBRPD + Iron Horse Regional Trail State of California Central CC Sanitary District Others: private parcels.
		The reach ranks as a strong opportunity because of potential partership with Walnut Creek School District and EBRPD. With Walnut Creek PDA throughout the western floodplain, more opportunities for integrated planning emerge. A long-term vision for transforming DS LT-1 into an urban confluence park could be integrated into PDA plans, perhaps in partnership with Kaiser Medical Center. For people and wildlife, consider restoration in current and historical floodplains at Indian Creek with connectivity to open space at Shell Ridge (e.g. via Howe Homestead Park, 0.6 miles from		

### SR1 0.6 SAN RAMON CREEK

at confluence of San Ramon and Sans Crainte creeks. From I-680 crossing downstream to Murwood Elementary School. Possibly extend to Los Lomas High School (+0.7 miles)

strong community and political support.

City of Walnut Creek

Walnut Creek downtown, and along Indian Creek to Joaquin and Shell Ridges). Off-street trail connection to Mt Diablo, a hiking and biking mecca, from downtown Walnut Creek could garner

Contra Costa County

CalTrans

Walnut Creek SD Las Lomas High School Acalanes Union High SD State of California

Central CC Sanitary District

Others: Kaiser Foundation Hospitals, Retreat Apartments, Ontario Mountain Associates, Creekside Terrace LLC, 14000 Creekside Apt Owners Assn, WCSI

Properties LLC, Change Income Partnership,+ other private owners

Murwood Elementary sits at the confluence of Sans Crainte and San Ramon creeks. FEMA-designated floodplain extends upstream. Flood risk may influence potential partnerships in this reach. Downstream of the confluence, Walnut Creek's PDA holds promise for integrated planning, partnerships, and public benefits to a growing community. Under-utilized Kaiser properties, Los Lomas High School, and Murwood School anchor partnership opportunities in the historical floodplain.

### SR2 0.6 SAN RAMON CREEK

Downstream of Stone Valley Creek confluence to **DS SR-3** (40 yr service life). Possibly extend to **DS-2A** (+0.3 miles).

Contra Costa County

CalTrans
State of California
Others: G.F. Ludden (Stone Valley

Ck), private landowners

In unincorporated Contra Costa County, this reach has high potential benefits due to a historical steelhead run and current lack of parks and trails. Adjacent parcels are largely residential. I-680 currently constrains the right (east) bank and presents a barrier to bike and pedestrians. Caltrans is a needed partner. The District and the state of California own parcels along the channel in this reach.

Site ID	<b>L</b> (mi)	LOCATION	JURISDICTIONS	POTENTIAL PARTNERS
P1	1.8	PINE CREEK		Cal Trans
		Mouth at Walnut Creek to		Mt. Diablo Unified SD
		Meadow Homes Park and		EBMUD
		Monument Blvd.	City of Concord	Concord Redevelopment Agency
			,	Others: CBC Properties, Wing Four-
				Corners LLC, PG&E, Uhaul Real
				Estate, and other private
				landowners
		The alignment of Lower Pine Cr	rook with Concord's PDA or	oons an opportunity for land use

The alignment of Lower Pine Creek with Concord's PDA opens an opportunity for land use change to support restoration, and for restoration to offer public benefits to a growing community. The city-owned land at Walnut Creek's confluence, the combined parcels of Meadow Homes Elementary School and Park, and the highway crossing at Route 242 anchor opportunities for partnership to widen the riparian corridor. The reach bisects a Community of Concern (MTC/ABAG 2017), a rare area of affordable housing in the watershed. Opportunities of 'underutilized land use' should be considered along with concerns of community displacement from jobs and affordable housing. Marginalized communities may disproportionately benefit from access to nearby riparian greenways, but only if paired with access to jobs, affordable housing, public transit and services. Integrated planning with Concord PDA should consider solutions with and for the existing local community.

### P2 0.7 PINE CREEK

Monument Blvd to to Detroit Ave. Possibly extend restoration to the BART line (+0.6 mi), DS P-1 (+0.3 mi) or San

Miguel Rd (+0.4 mi).

City of Concord

Mt. Diablo Unified School District

Oak Grove School District

PG&E

**Public Storage Properties** 

Wing Four Corners LLC

SF BART District

A former salmon run with conserved uplands and no downstream migratory barriers, reaches P1 + P2 have high ecological potential for restoration. A city-owned park, SF BART (maintenance yard), Flood Control District parcels and Ygnacio Elementary School anchor parternship opportunities. Big box stores, parking lots, low-rise commercial and light industrial uses line the reach from Monument Blvd to the BART tracks. The channel transitions from concrete to earthen upstream of BART where the District owns easements and parcels, but residential homes line the creek and gates block access to the creek. Connections from a restored riparian greenway to Lime Ridge trails could expand access to natural habitat for people and wildlife.

Site ID	(mi)	LOCATION	JURISDICTIONS	POTENTIAL PARTNERS
LT1	0.2	LAS TRAMPAS CREEK	Contra Costa County	Caltrans
		at <b>DS LT-2</b> at Bridge Rd,		private parcel owner
		possibly connecting to Boulevard Way (upstream) or Newell St Class II Bike Lane (downstream)		potential interest from <b>Olympic Boulevard Corridor Trail Project</b> <sup>1</sup> (led by Contra Costa Transportation Authority with EBRPD, Cities of Lafayette + Walnut Creek)

Within a short bike ride of downtown Walnut Creek, a restored riparian greenway would offer multiple public benefits. Upstream of DS LT-2, the District owns parcels along the channel for ~530 feet. Otherwise, residential parcels within unincorporated Contra Costa County line the entire reach. Some (in green, Map R-LT1) have no built structures. Neighborhoods in this reach are isolated by I-680 except for busy Olympic Blvd, which had a recent trail study, but did not acknowledge opportunities of the Fifty-Year Plan. Integrated planning with Caltrans would support both efforts and perhaps open a safe, off-street I-680 crossing along Las Trampas Creek. Downstream of this site, DS LT-1 has a 25-50 year service life.

### LT2 0.3 LAS TRAMPAS CREEK

at Lafayette Creek confluence, including **DS LT-3** (<25 year service life), + full meander around 4<sup>th</sup> St; possibly to **Carol Lane DS** (5-25 year service life). City of Lafayette EBRPD

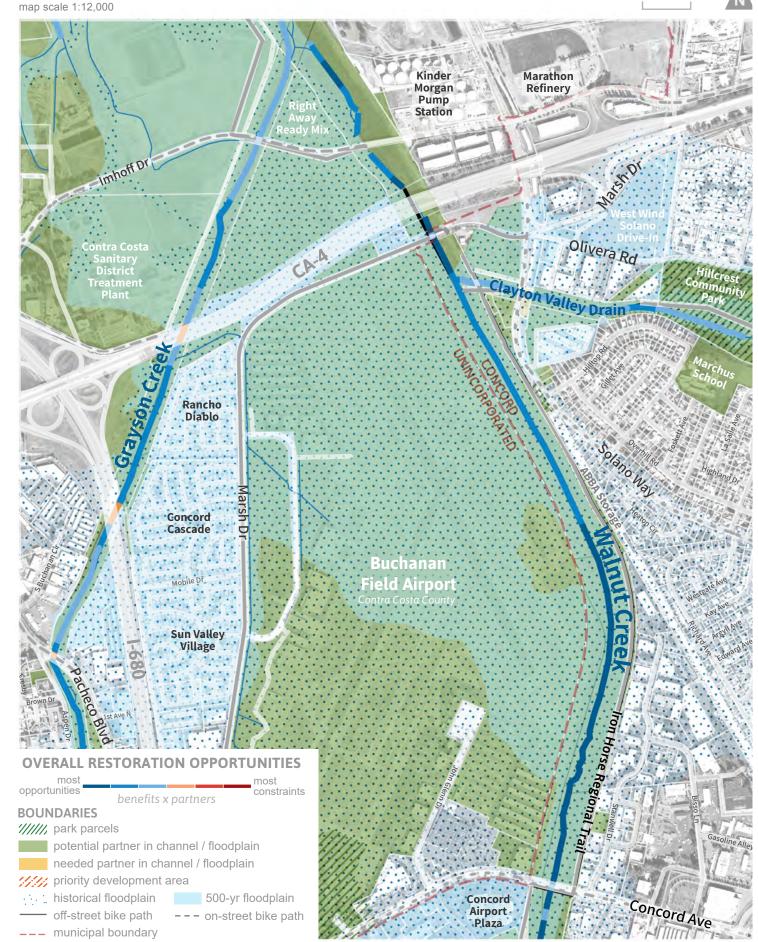
Las Trampas School properties along Mt Diablo and Golden Gate in PDA

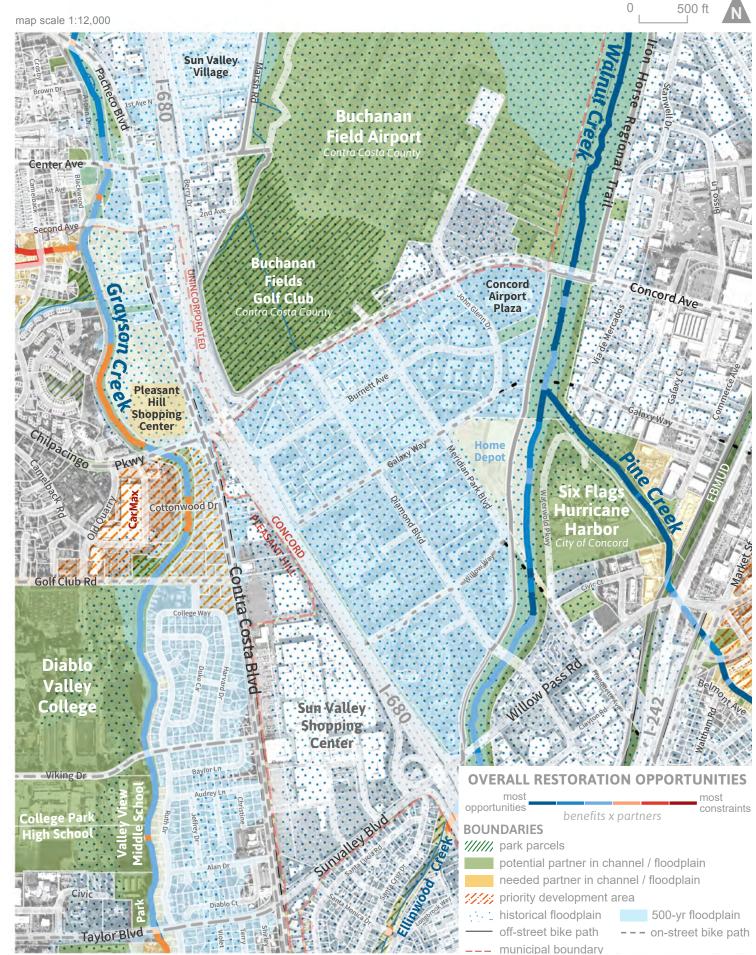
EBRPD and the City of Lafayette own parcels (in green, Map R-LT2) along Las Trampas Creek's left (south) bank from Moraga Blvd to DS LT-3. The District owns parcels at the drop structure, accessed from 4<sup>th</sup> St. The Lafayette PDA includes Lafayette Creek and the meander loop portion of Las Trampas Creek. Consider expanding restoration upstream through Lafayette Creek with integrated PDA planning. The Carol Lane DS (0.54 miles downstream from DS LT-3) has more strategic importance than opportunity due to its limited service life and lack of potential for partnering landowners. Between the two drop structures, residential parcels cover the channel and both banks.

<sup>&</sup>lt;sup>1</sup> The Olympic Boulevard Corridor Trail Project's Preferred Alignment Report from 2015 considered a route along Las Trampas Creek. See *Appendix A1*, Figure 2 for a map of preferred alignments. As of September 2021, the full report by Alta Planning and Design was available at

500 ft

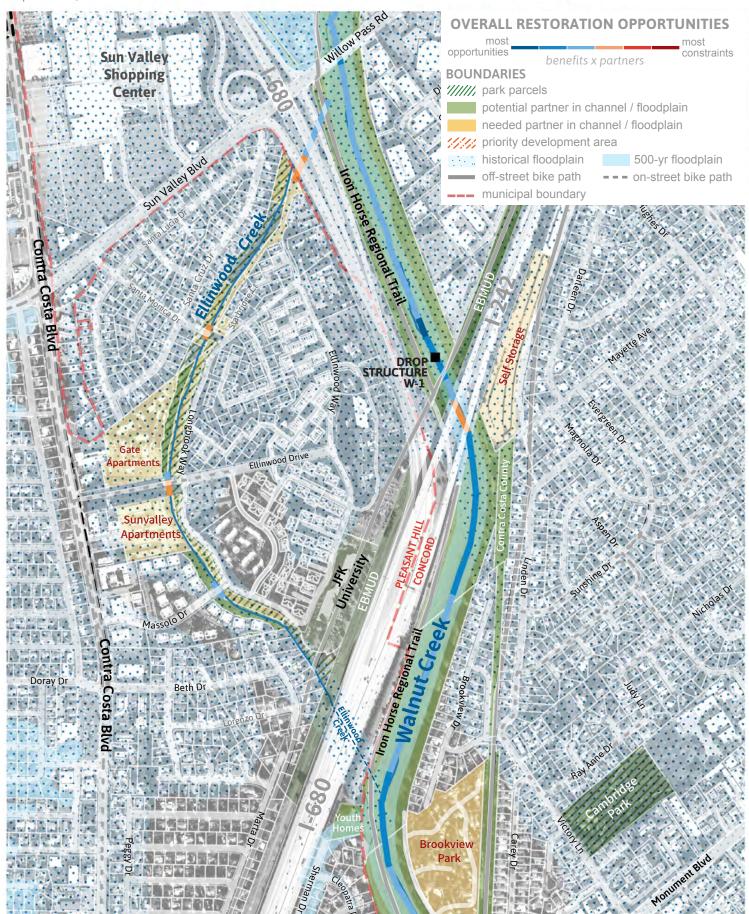
# Reach W1 + G1 | Walnut Creek + Grayson Creek Confluence





# Reach W3 | Walnut Creek + Ellinwood Creek

0 500 ft N

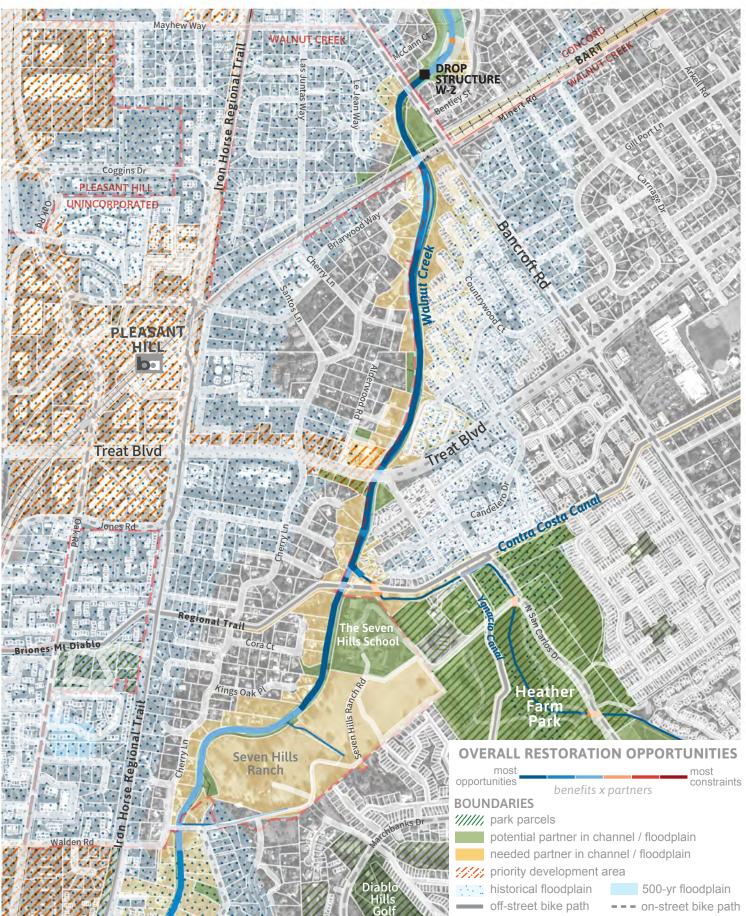


WALNUT CREEK WATERSHED OPPORTUNITY ATLAS

map scale 1:8,000 **OVERALL RESTORATION OPPORTUNITIES** most opportunities constraints benefits x partners **BOUNDARIES** //////, park parcels potential partner in channel / floodplain needed partner in channel / floodplain ///// priority development area historical floodplain 500-yr floodplain off-street bike path --- on-street bike path **Brookview** municipal boundary Park Mohr Ln Dupre Ct Dumain St

### Reach W5 | Walnut Creek at Drop Structure #2 + upstream

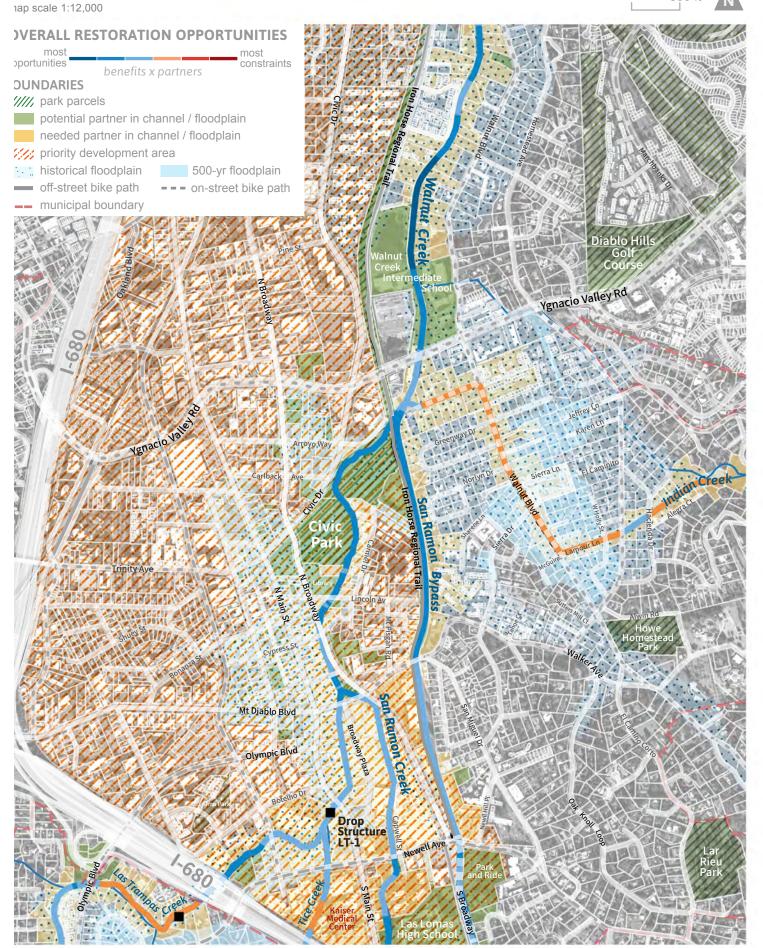
map scale 1:10,000



--- municipal boundary

# Reach W6 | Walnut Creek at Ygnacio Boulevard



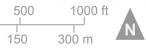


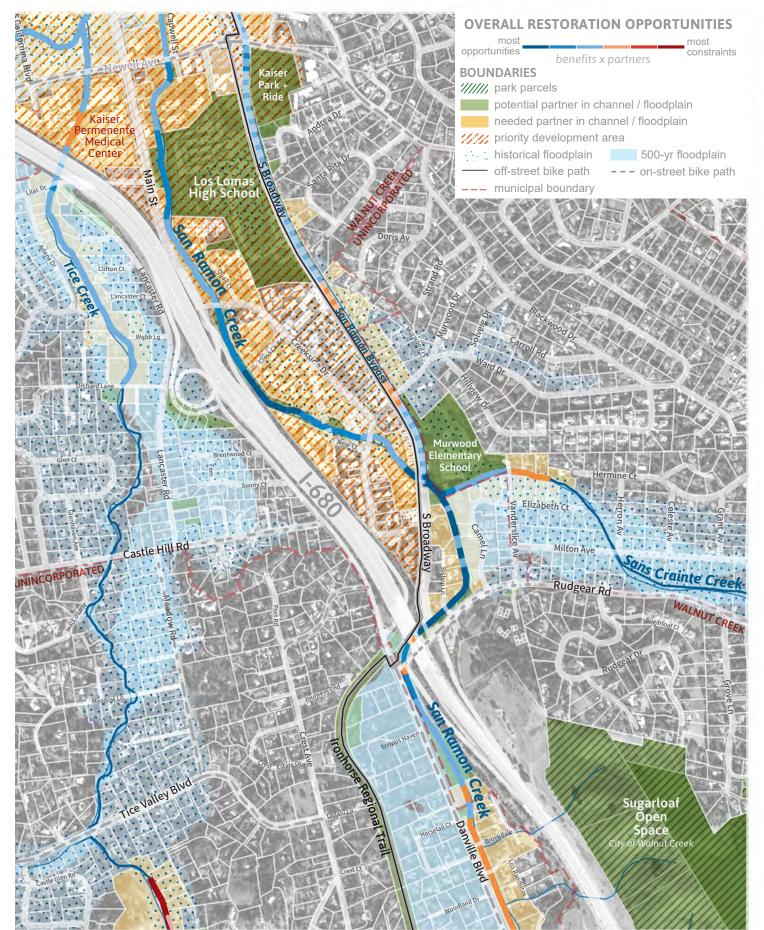
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## Reach SR1 | San Ramon Creek at Murwood Elementary

map scale 1:10,000



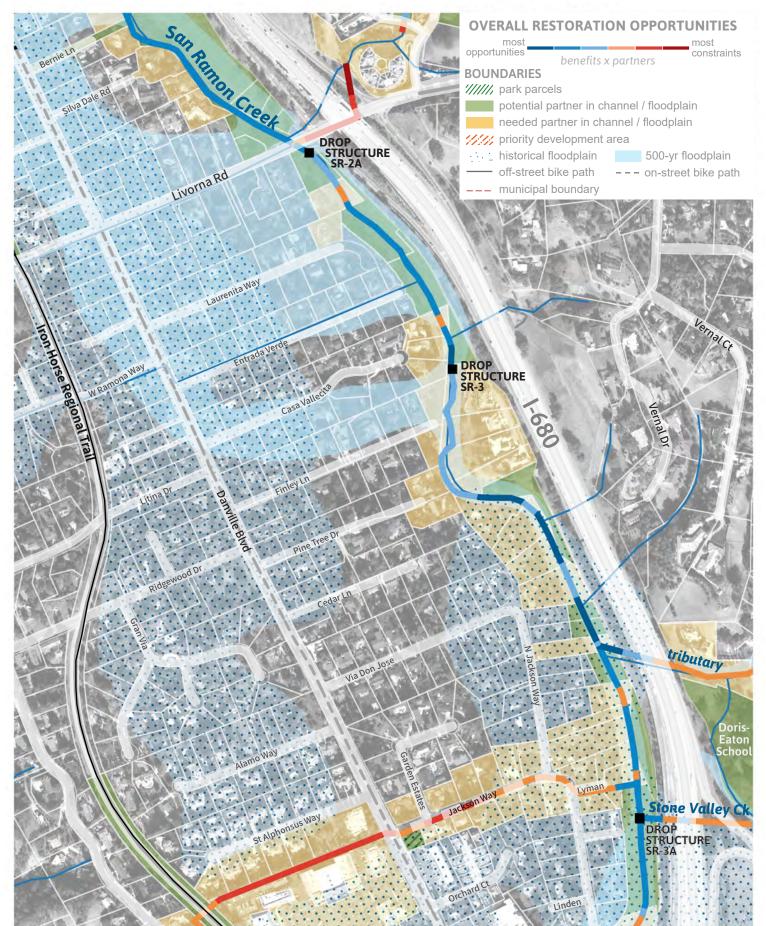




map scale 1:6,000

250





historical floodplain

off-street bike path

--- municipal boundary

500-yr floodplain

-- on-street bike path

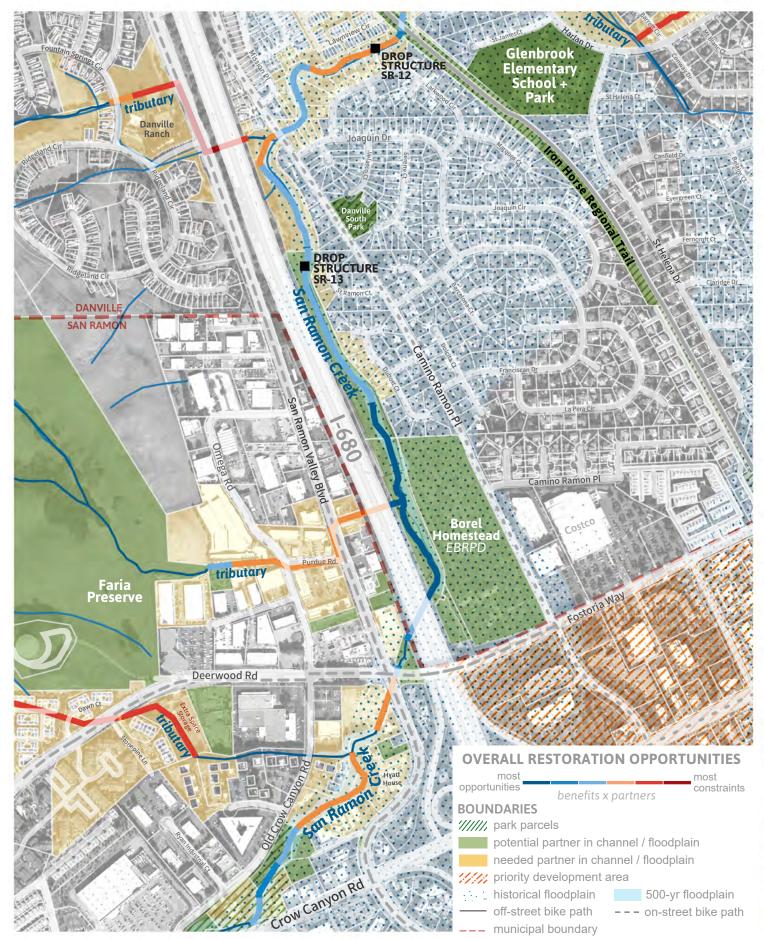
ŀU

map scale 1:8,000

WALNUT CREEK WATERSHED OPPORTUNITY ATLAS

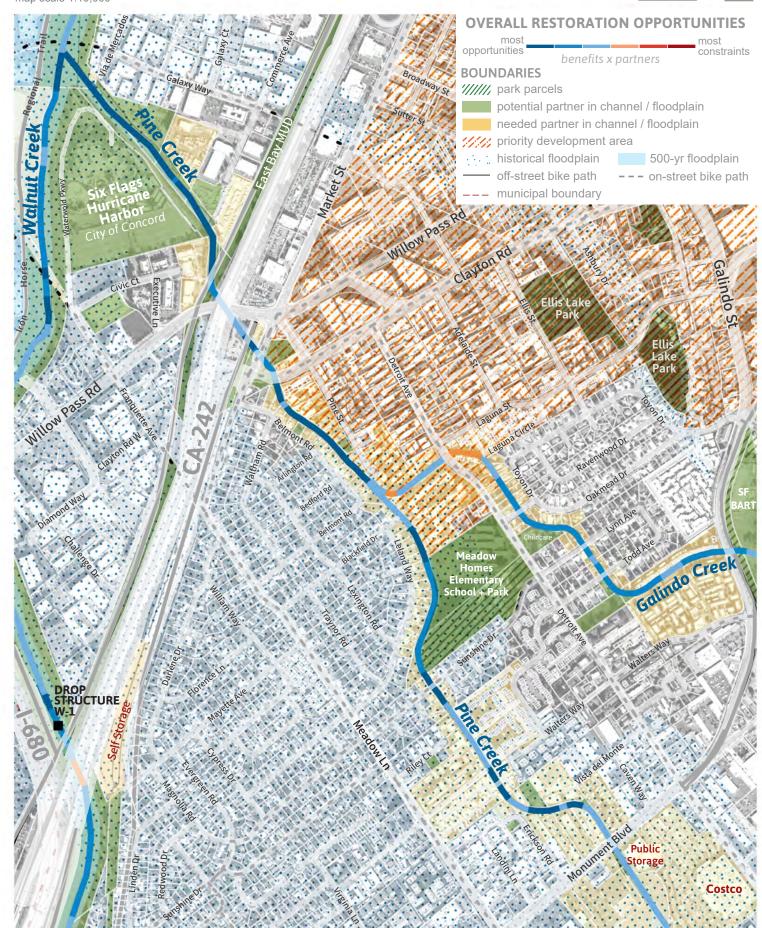
0 250 500 ft





**NALNUT CREEK WATERSHED OPPORTUNITY ATLAS** 

map scale 1:10,000



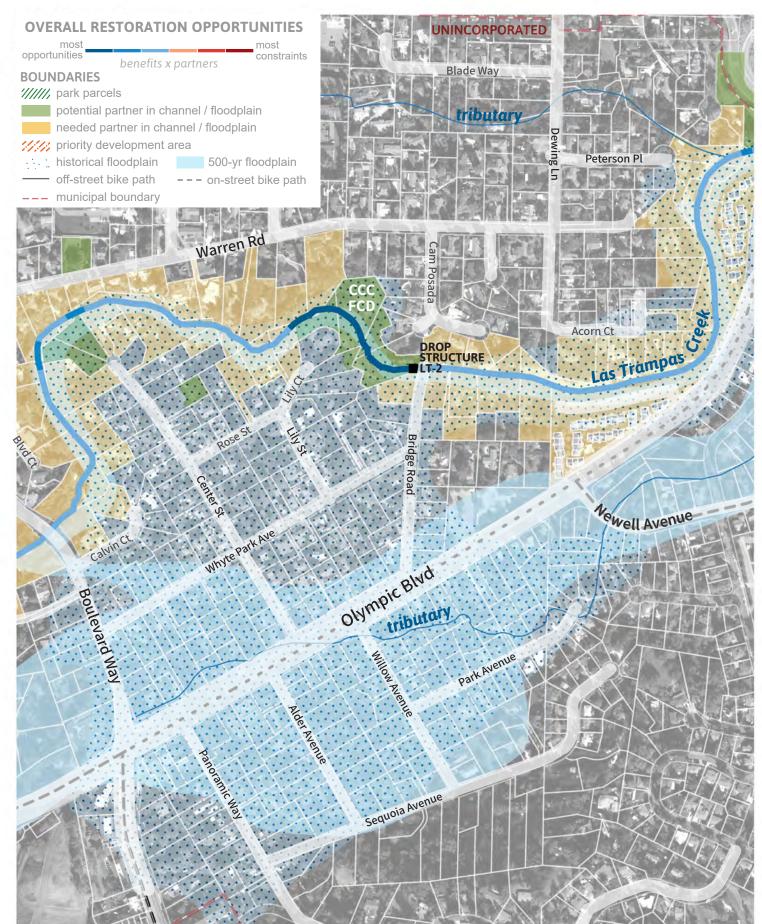
### Reach P2 | Pine Creek Upstream of Monument Boulevard

0 250 500 ft L L L

map scale 1:5,000

500 ft





## Reach LT2 | Las Trampas Creek at Lafayette Creek Confluence

