

# SPUR

**Ideas + Action for a Better City**

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# Re-envisioning the Guadalupe River Park Digital Discourse Webinar

San Jose, CA  
30 June 2020



“**Urban parks and green space** provide significant tangible and intangible benefits for cities and their residents. Quality parks **support mental and physical health**, serve critical green infrastructure functions, **contribute to economic development**, act as **links in transportation networks**, host cultural and social activities, and help **give communities a sense of place**. **In short, they are treasured community assets.**”

- **Urban Institute**, Investing in Equitable Urban Park Systems

# THE ECONOMICS OF PLACEMAKING



*What is the human experience of place?*

*What makes us choose the places we return to again and again?*



**Connect** assets to each other

**Create** vibrant communities

**Unlock** real estate value

**Capture** value created

**Redirect** captured value to achieve goals





# The Highline

New York, NY

\$123 million City investment

\$1.4 billion incremental tax revenue 2027

And yet, there is no value capture district to provide the High Line O+M funding over time.

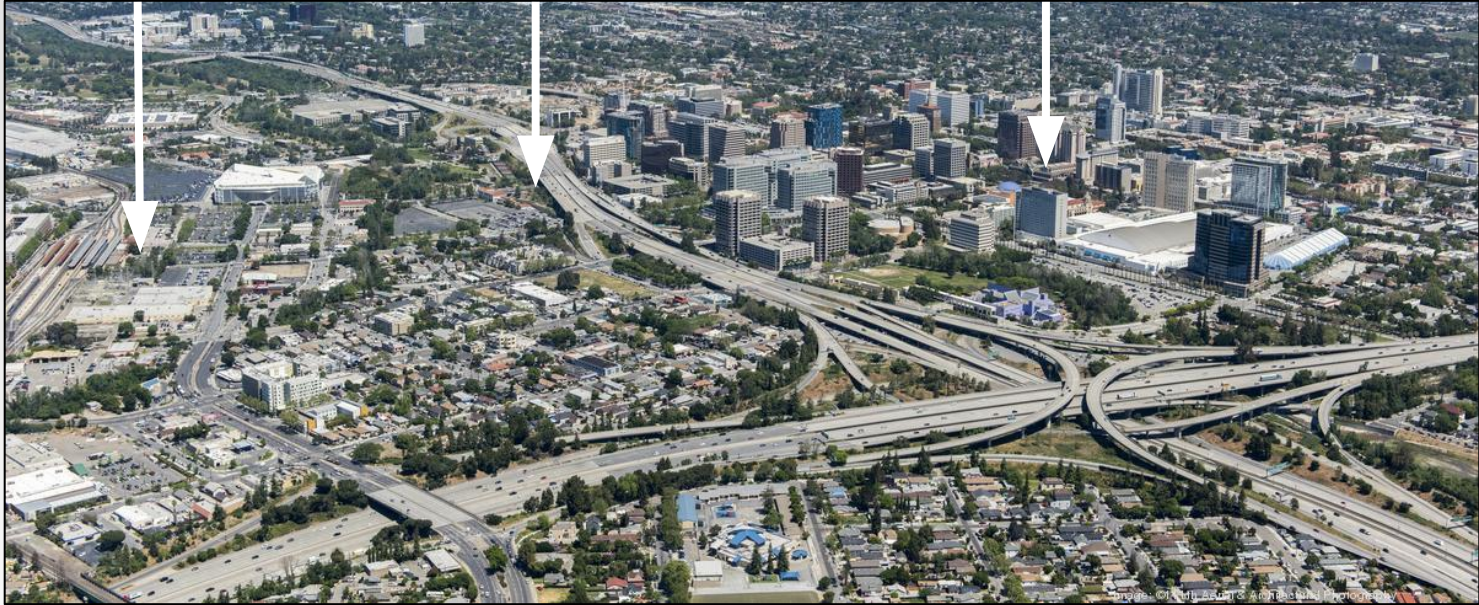
The High Line Network offers many lessons learned across its parks network. Building broad support early for value capture is one.

# The Opportunity for San Jose

Diridon Station

Guadalupe River Park

Downtown San Jose



100,000+ daily passengers for  
BART/CalTrans/Amtrak by 2035

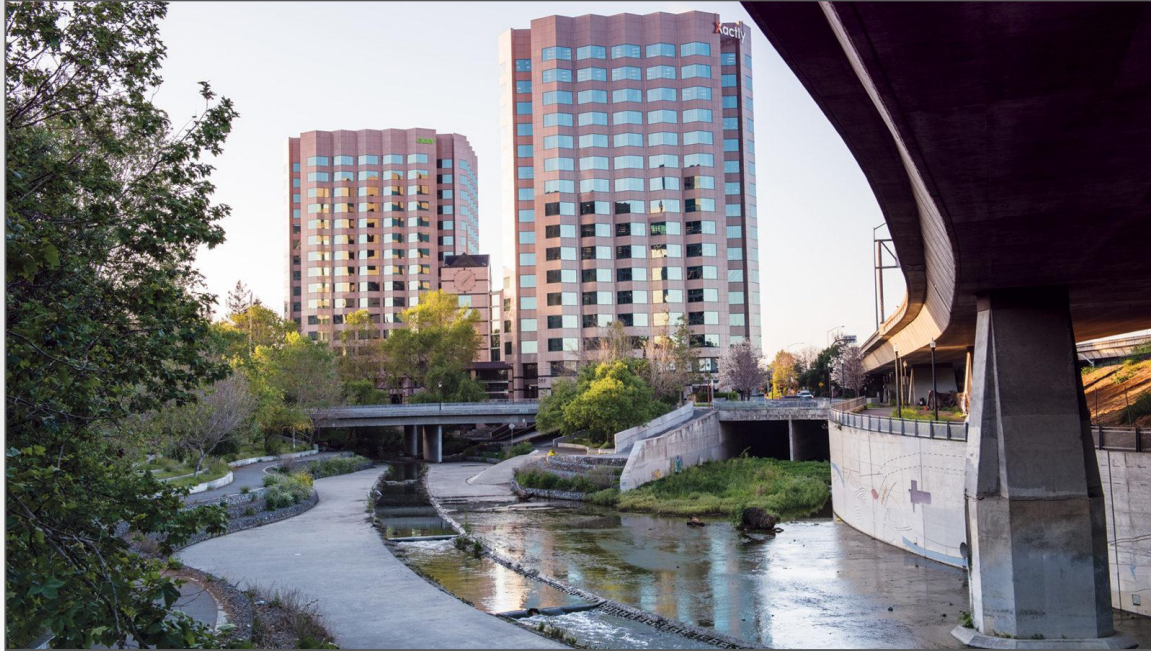




- Over **37 Million square feet** of planned and announced development within the next decade
- Downtown has attracted strong investment activity since the Great Recession due to **flexible zoning and progressive density allowances**
- Silicon Valley's transit system comes together here, **connecting regional transit systems, expanding on BART access and possibly High Speed Rail**

# Guadalupe River Park & The Future of Downtown San Jose

# Cities are Good at Funding Capital Projects



## Guadalupe River Park Capital Project (1992 - 2004)

- Total Cost: **\$242 Million**
- Core Components: Arena Green, McEnergy Park, Confluence East, Corps of Engineer flood protection system



# The Challenge for Parks is Sustained Operating Funding

Components of Great Parks
Public Art
Public Events
Horticulture & Turf Care
Public Programs
Visitor Center & Facilities
Wayfinding
Youth Education
Community Engagement

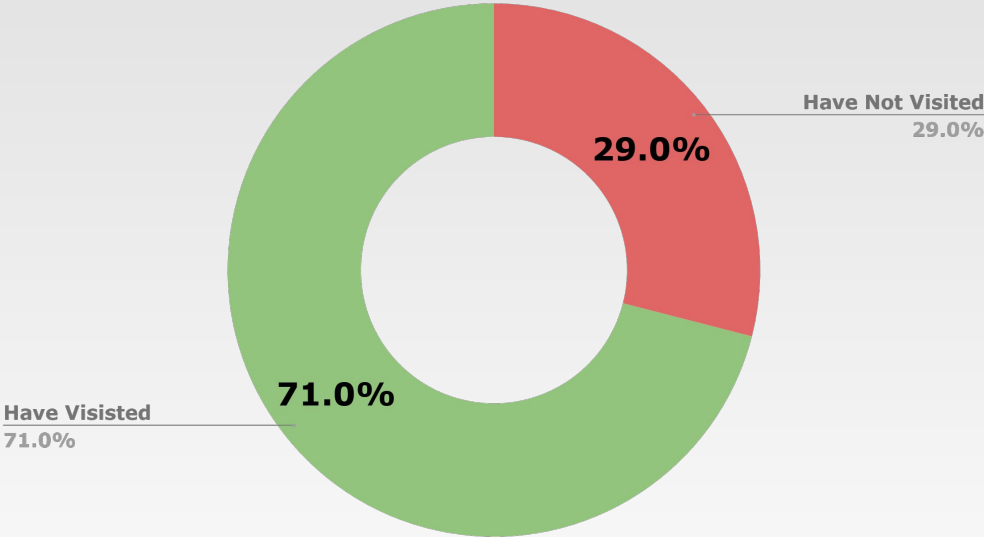
## Guadalupe River Park Conservancy

- 240 Acres
- Operating Budget (2018):  
\$717,000

# Lack of Park Stewardship is Keeping Visitors Away



Guadalupe River Park Underutilization



Source: SPUR 2018 White Paper

# The Case for Open Space

Demonstrating the benefits of property owners' investing in parks and open spaces

## THE CASE FOR OPEN SPACE

WHY THE REAL ESTATE INDUSTRY SHOULD INVEST IN PARKS AND OPEN SPACES



Parks and open space provide a variety of benefits:

- Promote community health
- Enhance environmental sustainability
- **Increase the value of nearby real estate**
- **Generate higher real property tax revenue**

# The Case for Open Space

Demonstrating the benefits of property owners' investing in parks and open spaces



The value of real estate properties proximate to the **Indianapolis Cultural Trail** rose by 148 percent between 2008 and 2014.



The number of business establishments near **Houston's Buffalo Bayou Promenade** increased more than fourfold between 2008 and 2012.



# Making the Case for Shared Funding

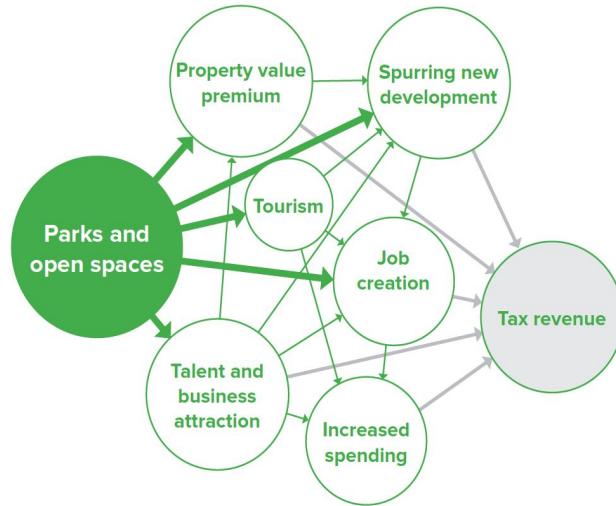


The economic value of a quality park for:

- Central Business District
- Downtown Residential
- Downtown Visitors

# Making the Case for Shared Funding

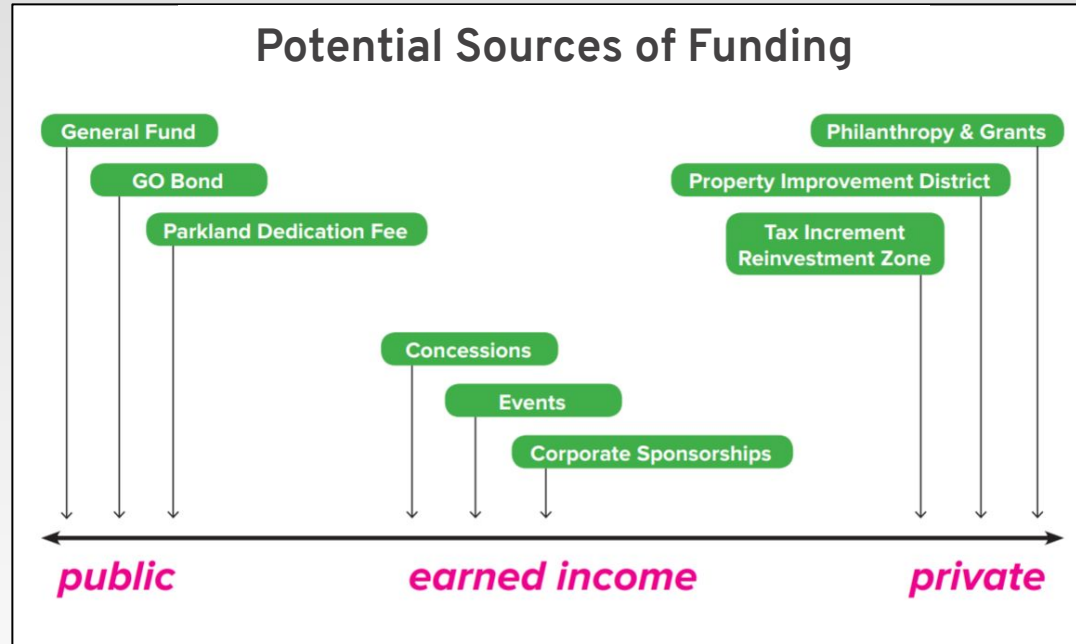
## How Do Parks and Open Spaces Generate Economic Benefit?



## Quantifying the Value of Parks & Open Space

- Proximity premium for existing parcels
- Value of induced new development

# Additional Sources of Funding



# Thank You!

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james**LIMA**  
Planning + Development



# The Guadalupe River & Urban Fabric

Digital Discourse Webinar

June 30, 2020

# Thesis

***The modern city of San Jose was developed with its back turned to the river,*** reminded of its presence only when the river swelled with winter rains and spilled over its banks. Many times in the past century the river has flooded adjacent homes and businesses, causing human suffering and economic loss.

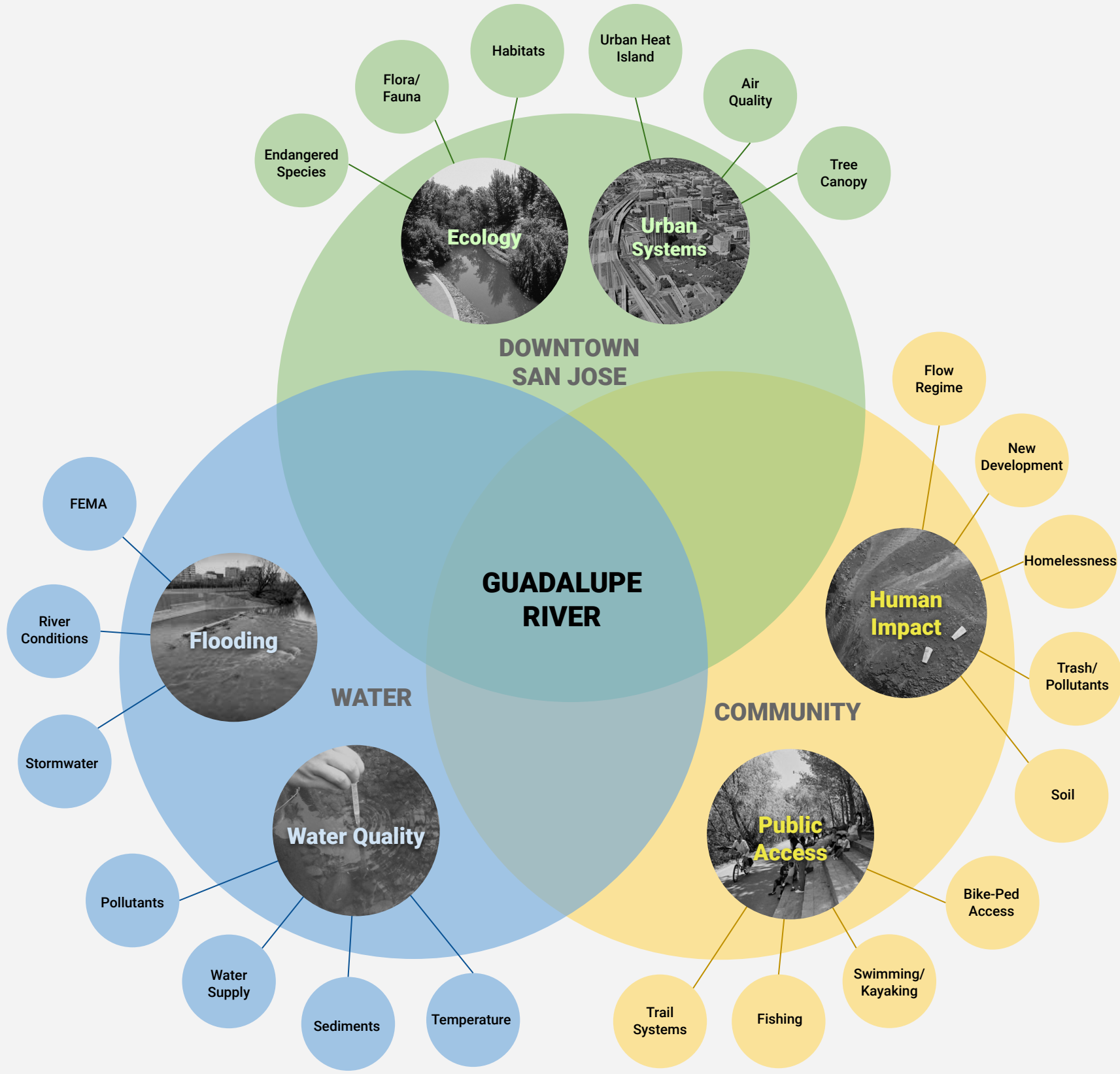
***After more than a decade, the river park has aged, making a number of challenges clear.*** Due to the **river's low flow** most of the year, its **proximity to San Jose's downtown urban core**, certain areas that are **heavily forested and inaccessible** and a general **lack of pedestrian activity** - not to mention the region's **housing affordability crisis**, as well as the **lack of maintenance in the river park** - all have contributed to a decrease in river trail and park usage, further creating additional maintenance needs and water quality challenges.

# A Blue-Green District

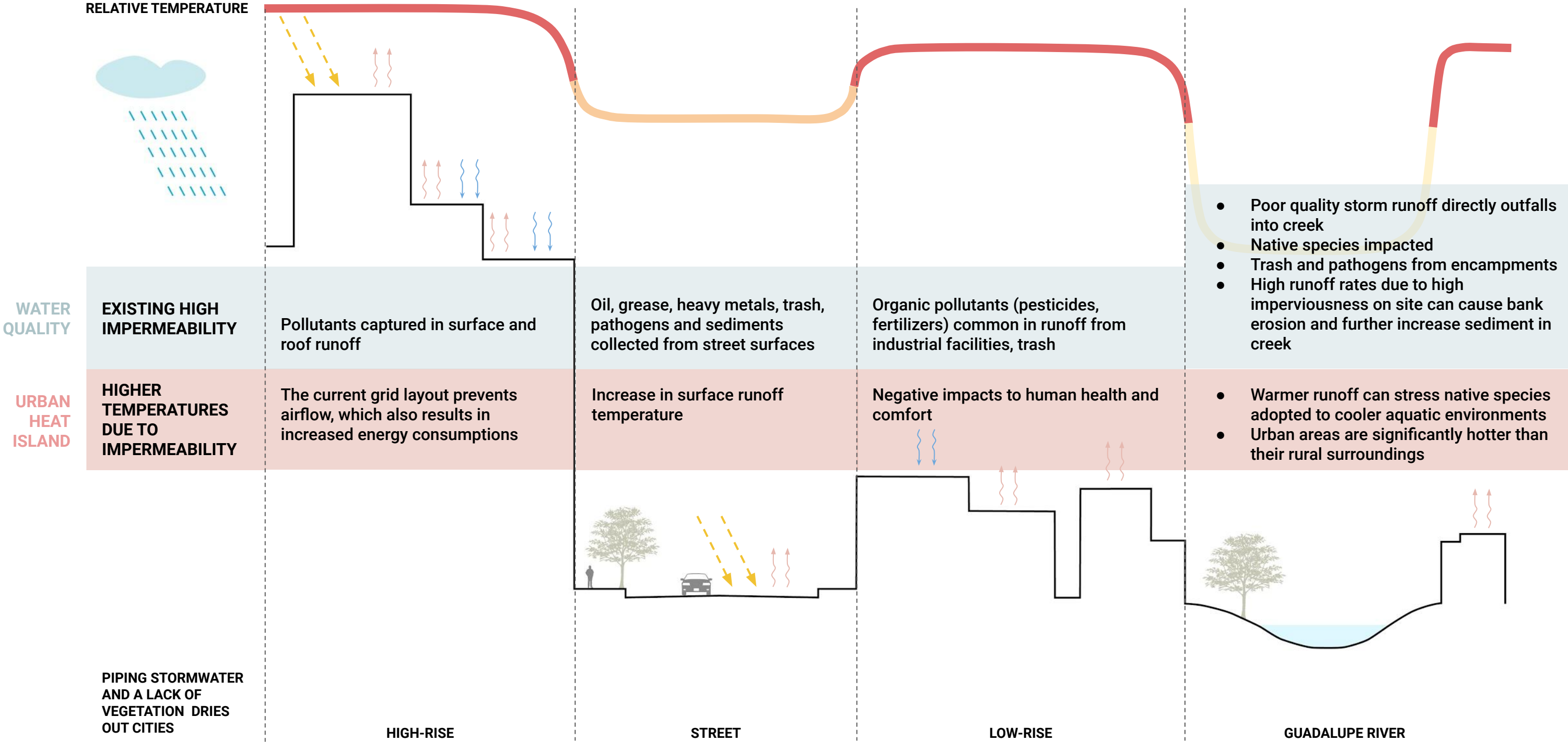
An interwoven series of pedestrian, ecological, and hydrology strategies focusing on Downtown San Jose emerging from the Guadalupe River can address prevailing concerns and further enhance the river and its surrounding regions to generate a blue-green district, making the Guadalupe River and Downtown San Jose the heart and lungs of Silicon Valley.

Blue-Green districts can facilitate a variety of functions, including **water treatment, urban air quality, biodiversity, food production, & community recreation.**

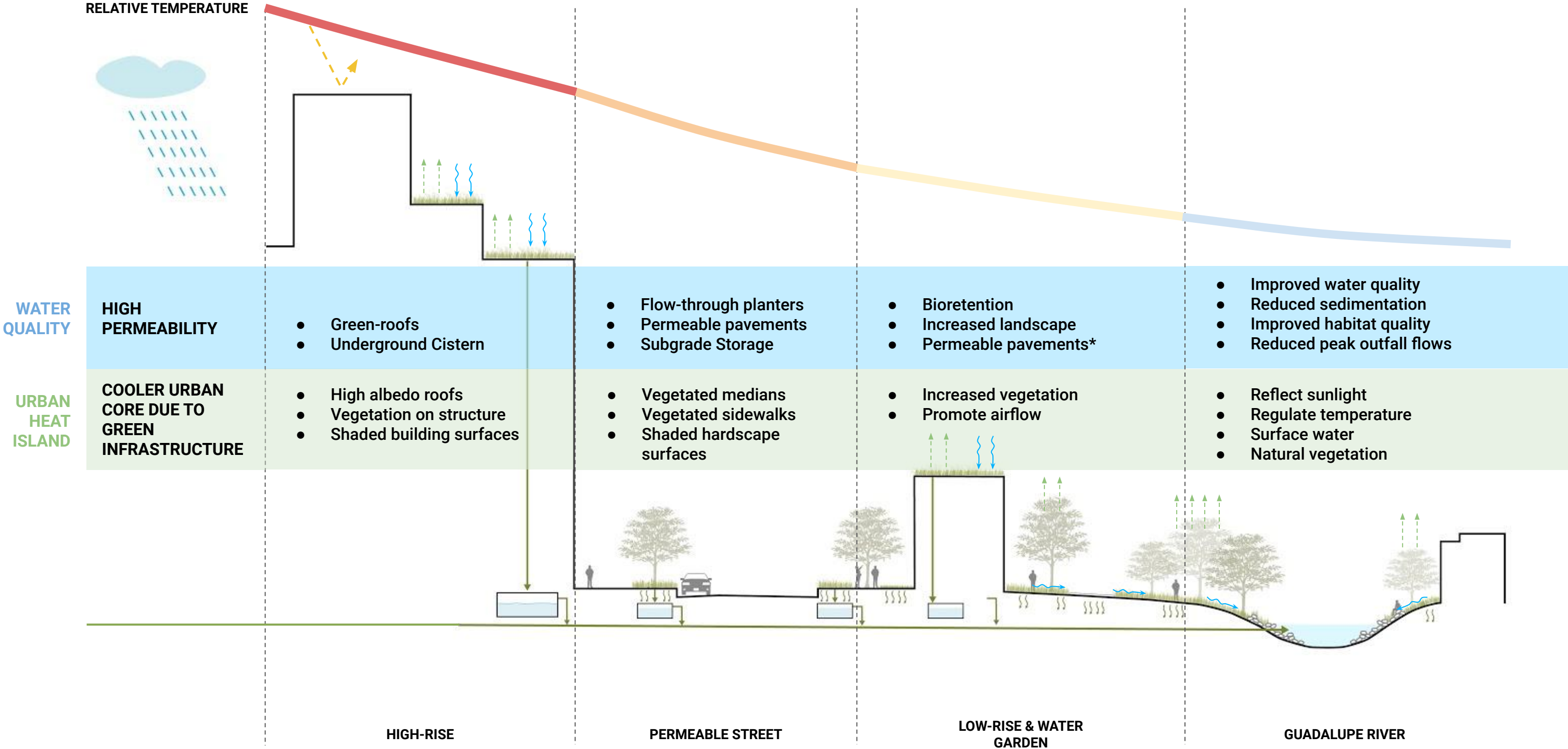
Ecological landscape planning and design with the introduction of green infrastructure in Downtown San Jose originating from the Guadalupe River has the potential to reshape the current impervious cityscape, regenerating natural processes and functions, enhancing people's lives.



# Existing Conditions



# Envisioning a Blue-Green District



\*soil dependent



# Blue-Green Street System

Vegetated areas are for infiltration and water quality

Permeable areas go to underground conveyance, moving water laterally

Green roofs to absorb stormwater



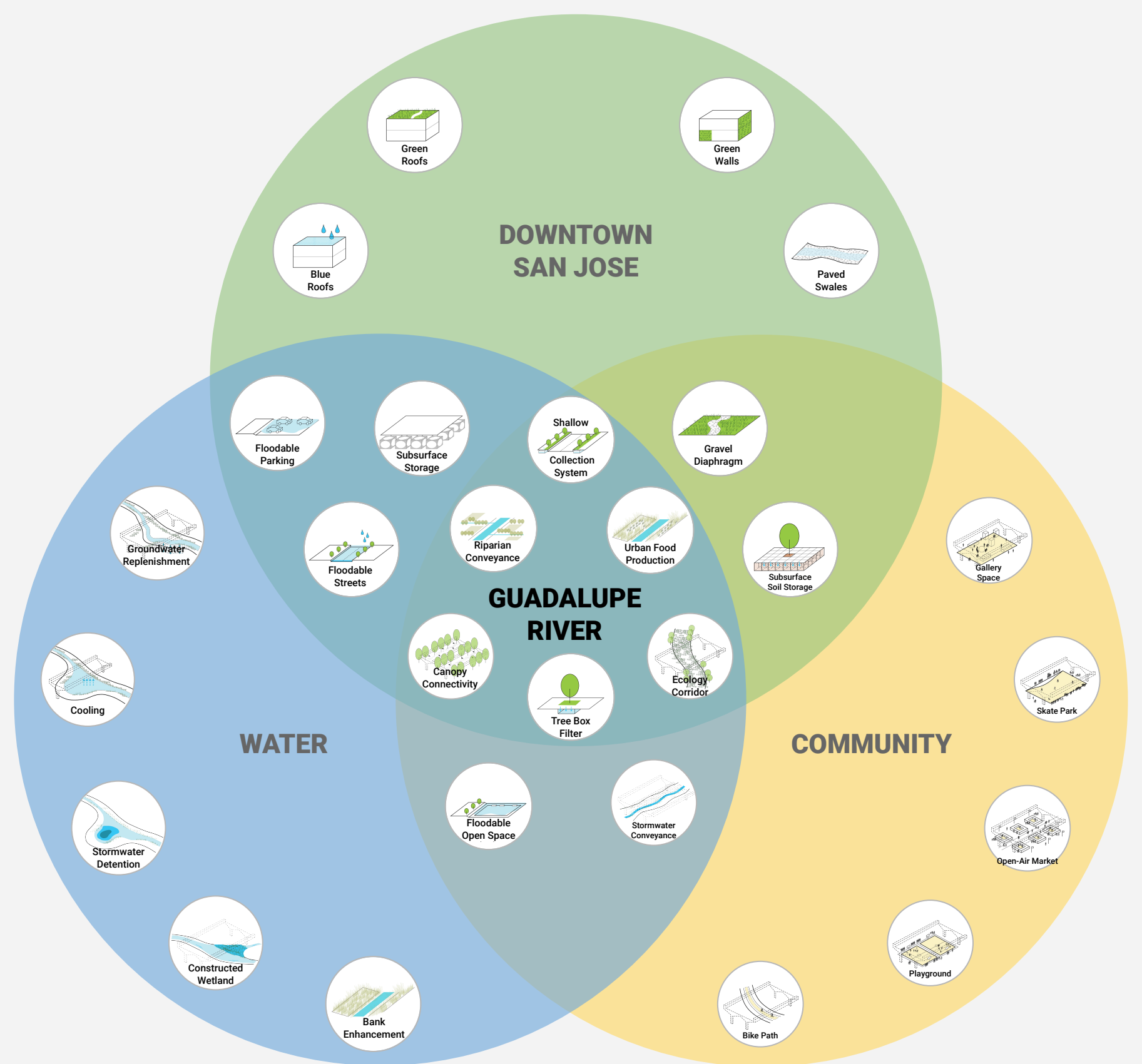
- 1 Surface water flows to curb cuts + infiltrates
- 2 Larger storms backup with permeable paving + infiltration + conveyance underground
- 3 Street becomes overland release during peak storm events.

# Thesis

By examining the Guadalupe River and downtown San Jose, 6 site assessment criteria were studied; criteria that are critical to the growth of a blue-green district:

1. **Water Quality,**
2. **Urban Systems,**
3. **Ecology,**
4. **Public Access,**
5. **Flooding, and**
6. **Human Impact**

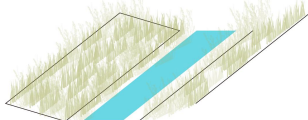
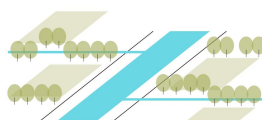
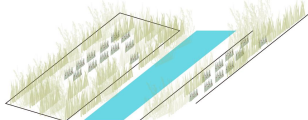
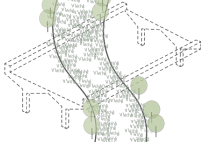
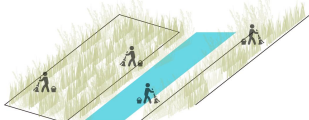
By identifying the current conditions and existing efforts in the region through the lens of these six criteria, **an interweaving of pedestrian, ecological, and hydrological strategies** would not only bring San Jose's name into the spotlight as the actual heart of Silicon Valley, but also begin to correct the initial understanding of the city being developed with its back to the river.





# Strategy Evaluation

# Decision Matrix

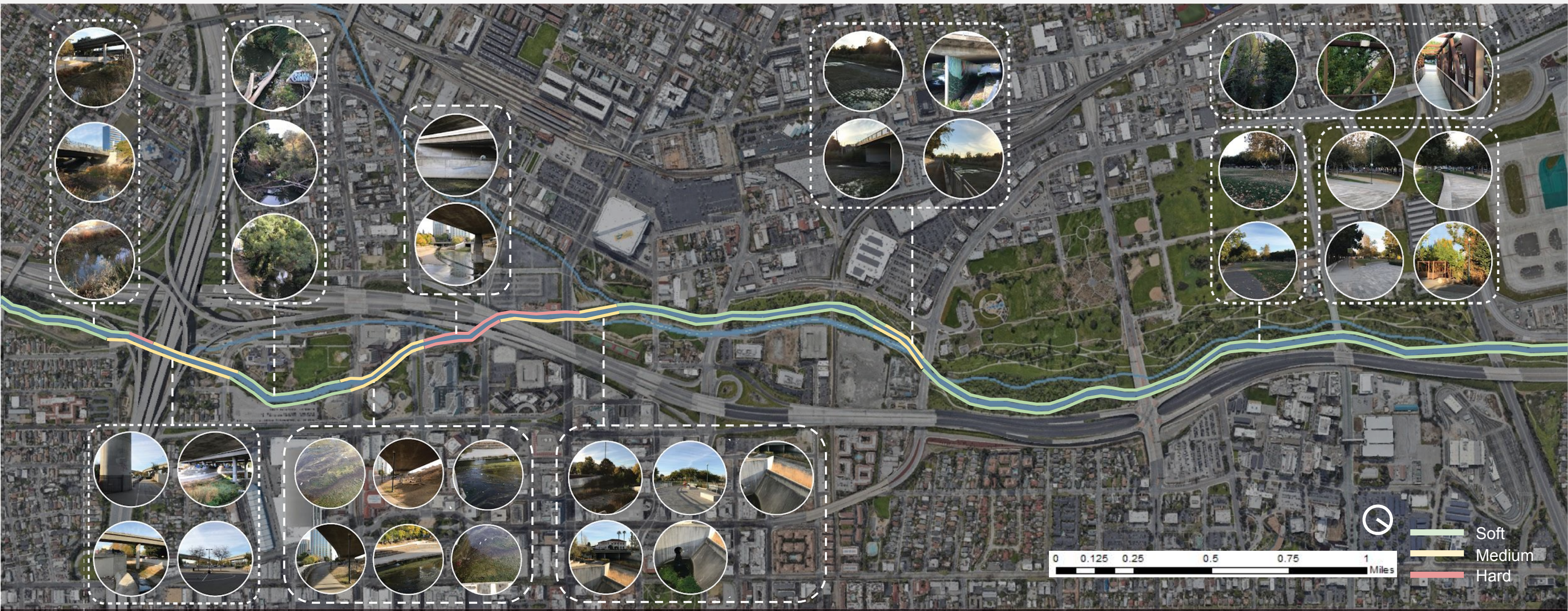
										
			Bank Enhancement	Improving Surface Hydrology	Urban Food Production	Underpass Utilization	Cleanup Program			
DOWNTOWN SAN JOSE	Ecology	Habitats	●			●	●			
		Flora/ Fauna			●	●				
		Endangered Species	●			●				
	Urban Systems	Urban Heat Island		●	●	●				
		Air Quality		●	●	●	●			
		Tree Canopy		●	●					
WATER	Flooding	Detention				●				
		Conveyance	●	●		●				
		Bank Condition	●							
	Water Quality	Pollutants	●		●					
		Water Supply		●						
		Sediments	●	●						
		Temperature	●	●		●				
COMMUNITY	Public Access	Trail Systems	●	●		●				
		Fishing								
		Swimming/ Kayaking								
		Bike-Ped Access	●	●		●				
	Community Wellness	Social Equity		●	●		●			
		Health		●	●		●			
		Homelessness	●			●	●			
		Trash/ Pollutants					●			
		Adaptability	●	●			●			
Potential Cost			MODERATE COST	HIGH COST	MODERATE COST	HIGH COST	MINIMAL COST	MODERATE COST	LOW COST	MINIMAL COST



# Bank Enhancement

Because rivers and streams are dynamic systems, they are constantly changing and affecting riverbank stability. The natural process of riverbank erosion can produce favorable outcomes such as the formation of productive floodplains and alluvial terraces. Some rivers have a natural and healthy amount of erosion; most rivers in developed areas experience erosion taking place on those banks are a cause for concern.

Vegetation is the best resource for protecting eroding stream banks within a natural context. However, levees and other flood control devices may be compromised by inappropriate or poorly maintained plantings.



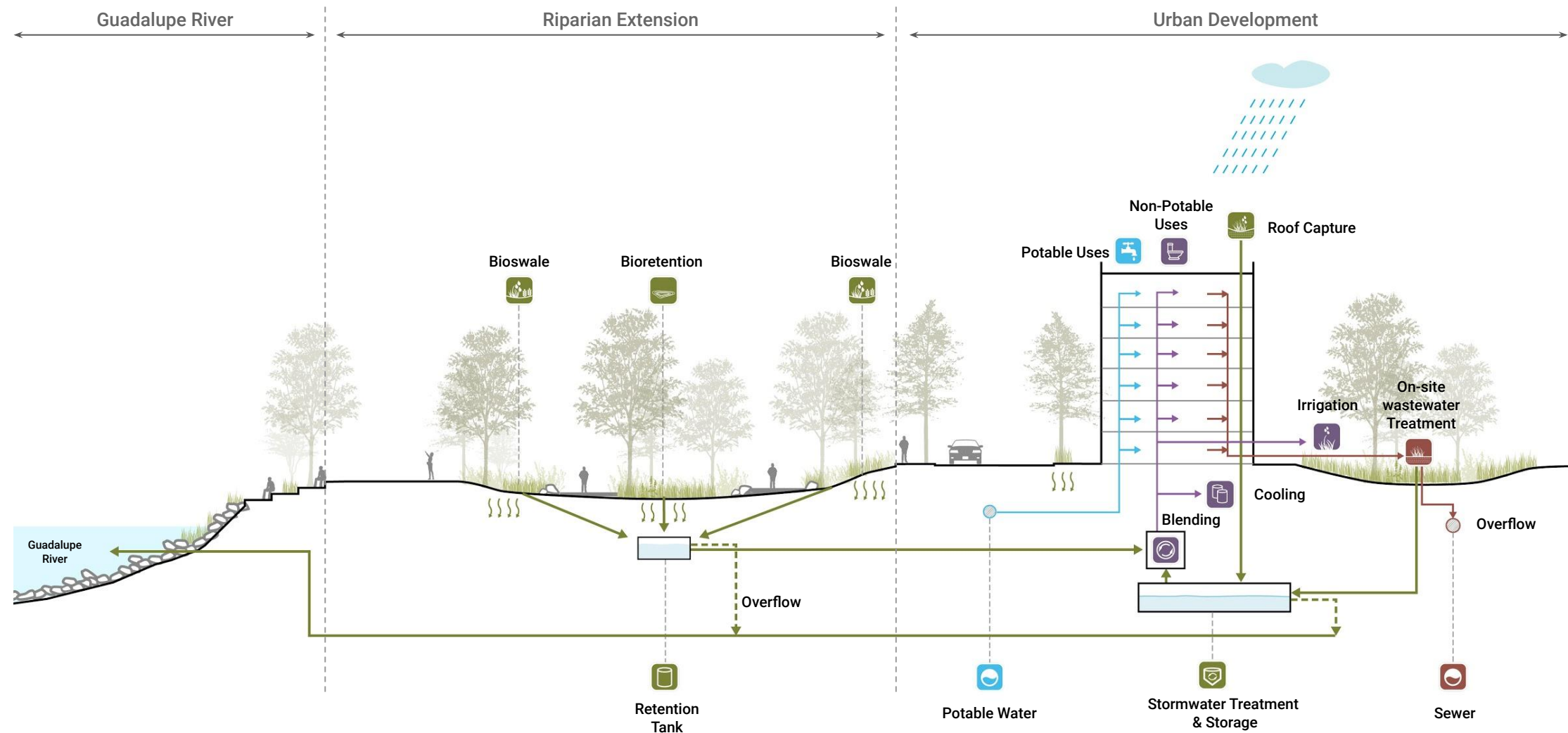


# Improving Surface Hydrology

Improving Surface Hydrology can serve a multitude of functions important to the environment and its denizens by:

- **Preserving water quality** by filtering sediment from runoff before it enters rivers and streams,
- **Protecting stream banks** from erosion,
- **Providing a storage area** for flood waters,
- **Providing food and habitat** for fish and wildlife, and
- **Preserving open space** and aesthetic surroundings.

Nuisance groundwater is a potential source of water for river flow augmentation, and has been shown to create or regenerate valuable habitat. This may be an opportunity to **utilize the nuisance groundwater water for non-potable applications, such as irrigation, in an effort to bolster landscaping/green infrastructure and offset potable water demands.**





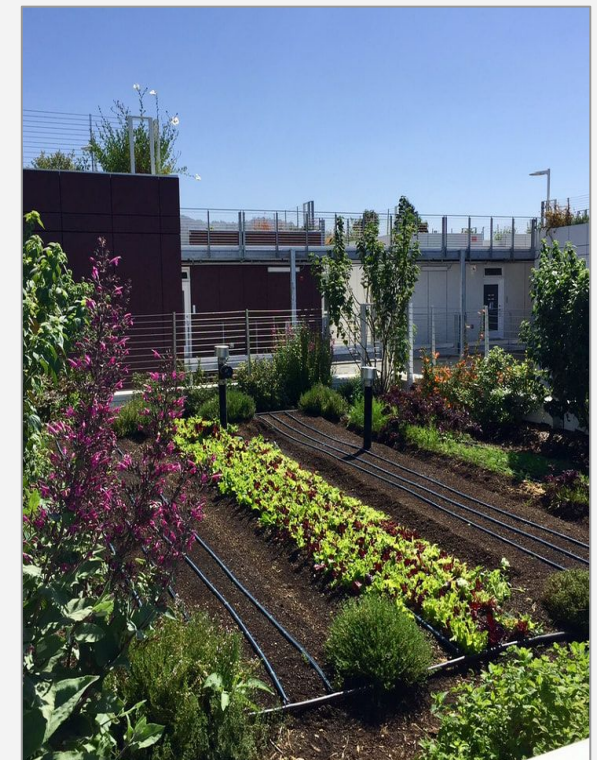
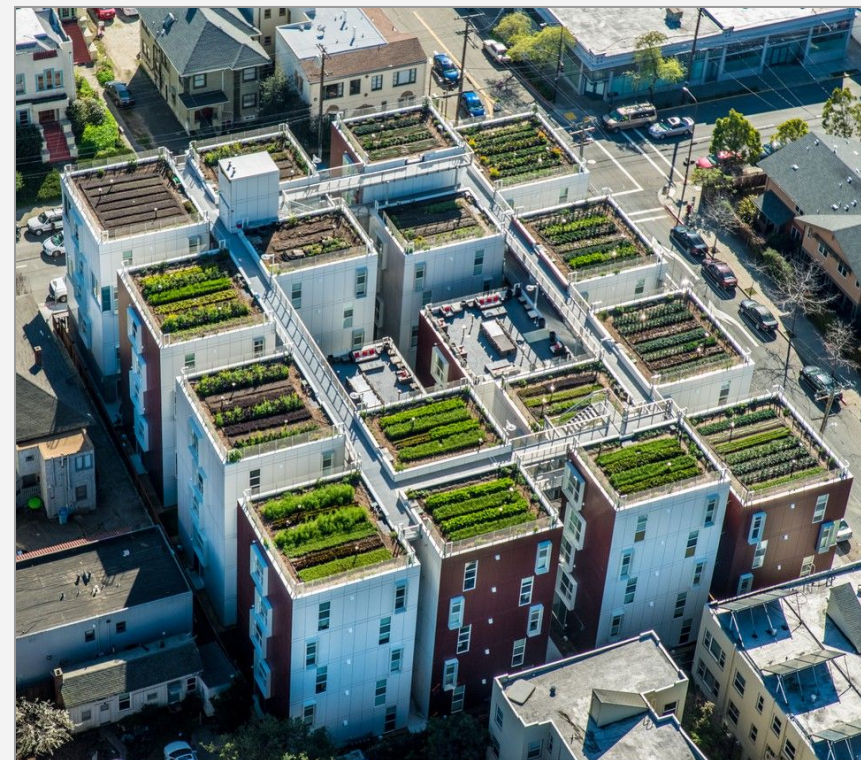
# Urban Food Production

Vegetated systems, in urban landscapes and on structure, can provide significant benefits that include **thermal comfort** and **cooling at both neighborhood and building scales**. In most cases, **drought tolerant plants are an option for reducing water use associated with vegetation**; there can be trade-offs with desired performance outcomes associated with cooling effects of landscape systems. **On-site water recycling** can provide a strategy to ensure a reliable water supply is available to support different forms of vegetated surfaces to achieve desired outcomes.

Building and site integration of localized food production systems are increasing in popularity in cities across the US, including but not limited to vertical farm systems, “agrihoods,” and rooftop farms. **Solar orientation, structural loads, access and a variety of site specific coordination concerns can make this process complex**. Properly applied, integrated food systems can provide a driver for **additional benefits to building performance**.

Design factors to consider include:

- water demands,
- wind patterns,
- production system design,
- structural loading,
- MEP conveyance,
- access,
- use compatibility, and
- waterproofing systems.





# Underutilized Sites

Within the immediate study area there are 12 identified underutilized parcels that combine to provide 20 acres of land. These underutilized spaces along the Guadalupe River project area were organized into the following categories based on land classification:

- 1. Underdeveloped Lots
- 2. Underutilized Recreational Spaces
- 3. City Utility Yards
- 4. Interstitial Spaces Between Infrastructure
- 5. Onramps
- 6. Roadway “Medians”

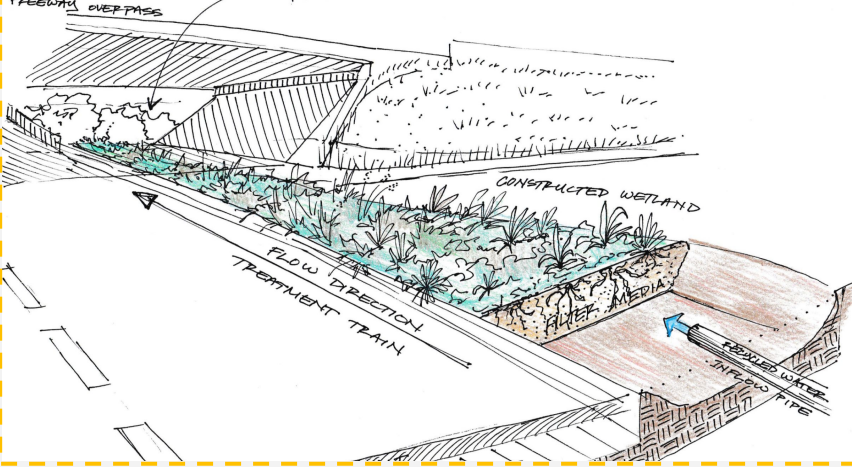
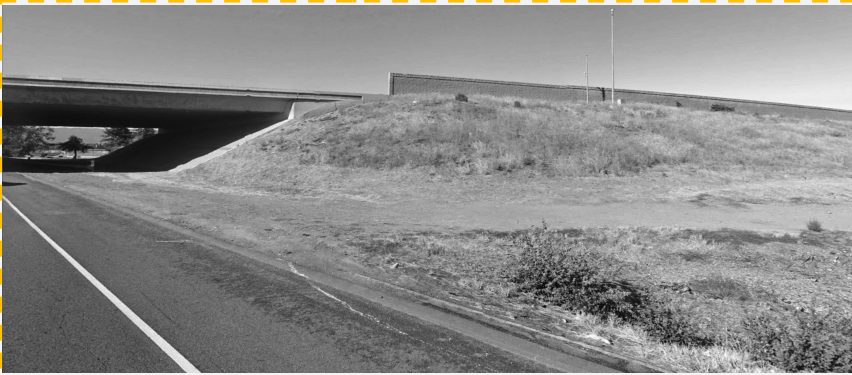
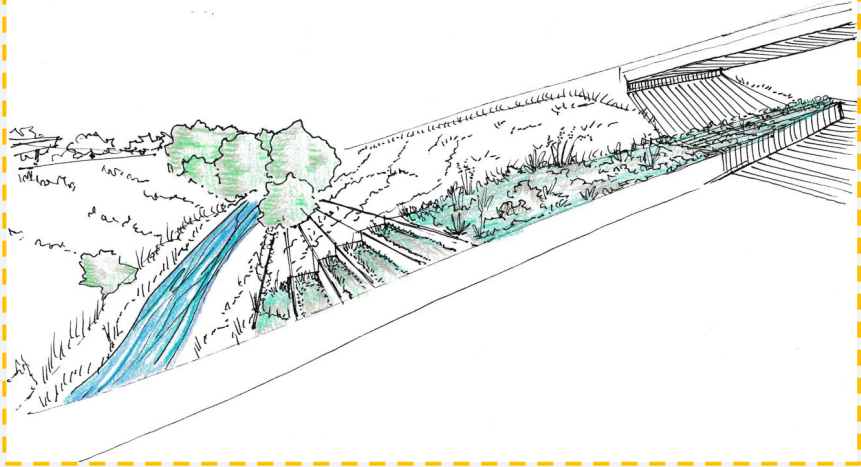
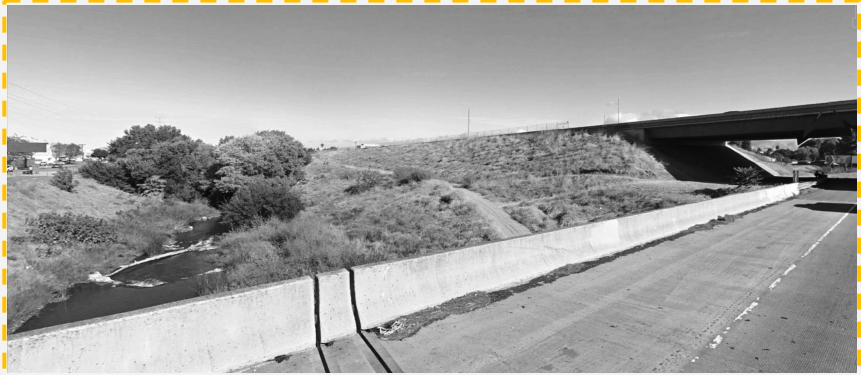




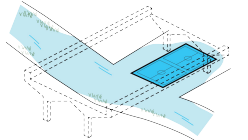
# Underpasses

With Downtown San Jose's immediate access to interstates and highways - namely CA-87, I-280, and I-880, there are bound to be several locations under these highways along the Guadalupe River that are **underutilized, potentially even abandoned, providing great opportunities for reprogramming with the proposed strategies.**

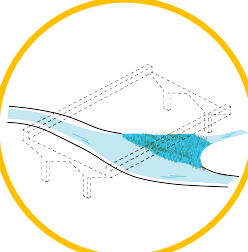
Below are visualizations of underutilized spaces beneath the freeway.



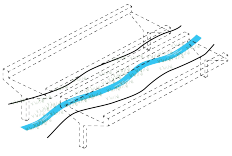
## Stormwater & Flooding Mitigation



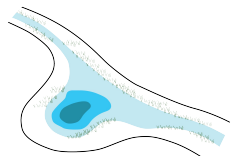
Floodable Open Space



Constructed Wetland

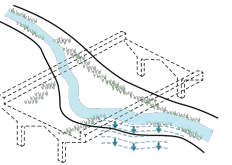


Stormwater Conveyance

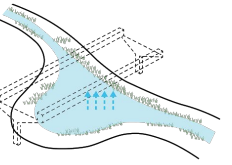


Stormwater Detention

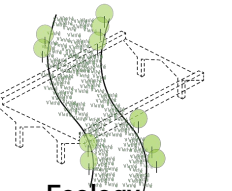
## Ecological Restoration



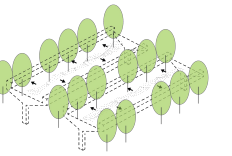
Groundwater Replenishment



Evapotranspiration & Cooling

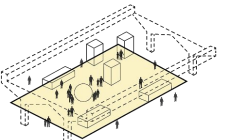


Ecology Corridor

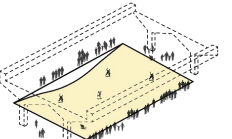


Canopy Connectivity

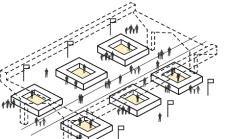
## Community Recreation



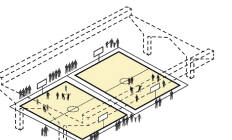
Gallery Space



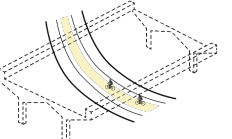
Skate Park



Open-Air Market



Playground



Bike Path

# Precedents



# Blue-Green District

## PRECEDENT: Green City, Clean Waters, Philadelphia, PA

Philadelphia receives over one million gallons of rainfall per acre annually. Though nowhere near the rainiest of US cities, the city has received a reputation for struggling with stormwater management. As a result, billions of gallons of untreated stormwater would rush out from the city, which has led to serious environmental impacts.

With over billions of dollars in funds from public and private funders, the city has propelled towards a “citywide mosaic of green stormwater infrastructure,” with the intention to create the largest system of its kind in the country. The city has created over one thousand “greened” acres to restore the natural precipitation cycles and systems of the area. These greened acres absorb billions of gallons of rainfall annually, with the added bonus of creating outdoor green spaces for the public.



## PRECEDENT: Hammarby Sjöstad, Sweden

The original plan of Hammarby was to develop the former industrial area to an ecological sports arena and athlete's village for the 2012 Olympics. When the bid was won by London the plans were changed to make this the first “Ecocity district” in Stockholm.

Large-scale local wastewater and stormwater harvest and filtration were also implemented. Stormwater devices have high aesthetical quality, which is an important factor in the livability of the neighborhood. There are also established green roofs which are an important part of the stormwater system as well as providing important habitat.

The first phases of the Ecocity were wind protected and offered sunny public spaces. The local areas in Hammarby were easy to keep clean and maintain, resulting in an attractive background fragrance due to lack of garbage, abundant blue-green infrastructure, soil, and designed streams.





# Blue-Green Corridor

The Park Paseo proposal aims to revitalize the Paseo de San Antonio, which **links San Jose State University to Cesar Chavez Park** through the heart of downtown, and to **extend the pedestrian experience along Park Avenue to Guadalupe River Park**.

The design process created a “culture collector,” bringing together the arts, innovation and technology by linking significant cultural institutions along the route. To enliven the paseo and make it a more attractive place to gather, **dynamic canopies** provide shade from the summer sun, drawing in during the winter months and transforming into sculptural lanterns after dark. A **generous tree canopy** reinforces the seasonal transformation and strengthens the character of San Jose as a garden city. Park Avenue is transformed **from bare avenue to verdant park**, **connecting the natural qualities of Guadalupe River Park with the city’s cultural center**.



Source: CMG Landscape Architecture





# Underpass Utilization

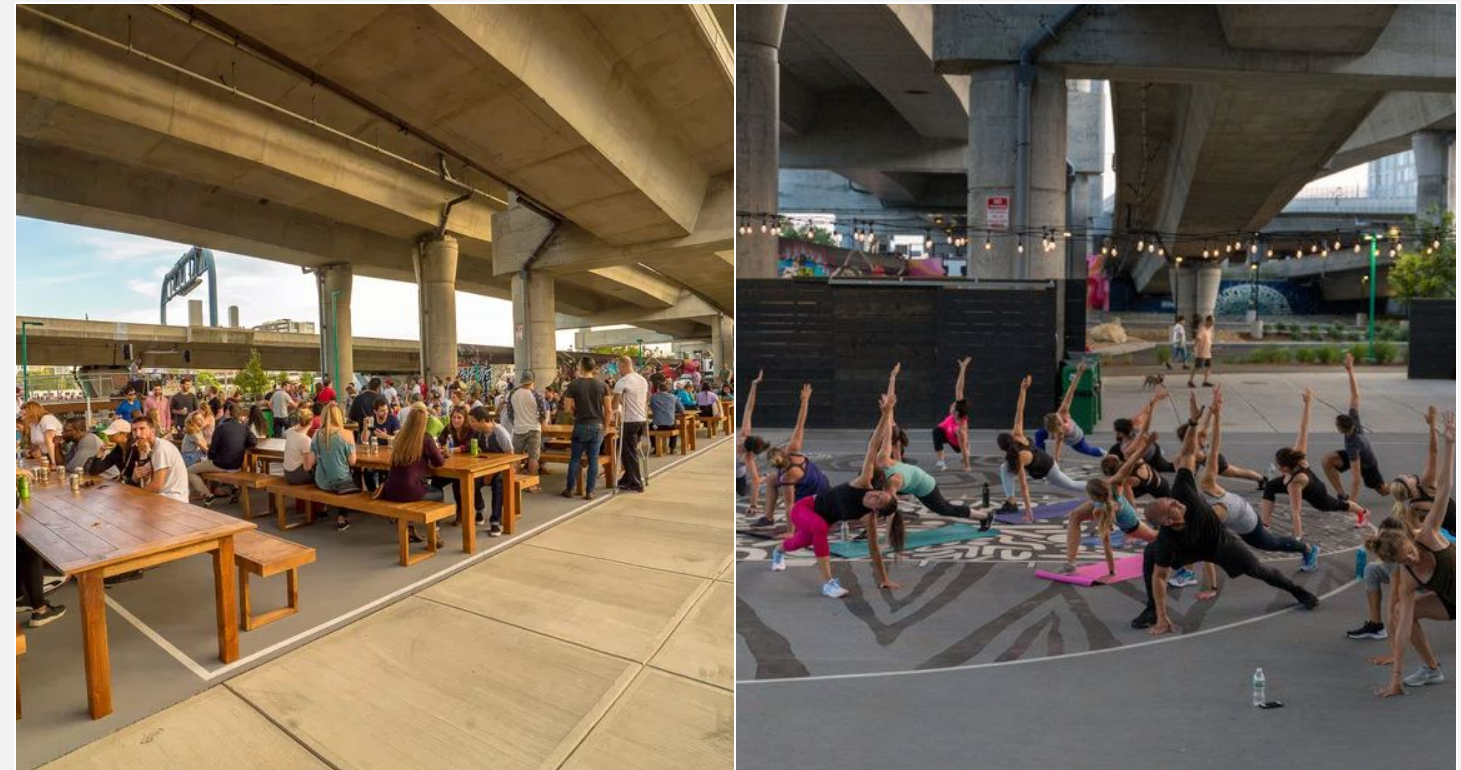
## **PRECEDENT: Sabine Promenade, Houston, TX**

This award-winning park—completed in 2006—located below Houston’s I-45 features bike and pedestrian pathways. The half-mile stretch below the highway uses nighttime lighting that changes from white to blue depending on the phases of the moon, provides access to the Buffalo Bayou, and boasts what some have called an “unintentional sculpture park” made up of the highway’s underpinnings.



## **PRECEDENT: The Underground at Ink Block, Boston, MA**

Located between Boston’s South End and South Boston, this recently opened 8-acre underpass park features landscaped pedestrian boardwalks, bicycle paths along the Fort Point Channel, a dog park, and 24-hour security. Much of the park is beneath the I-93 underpass, and one of its most unique features is a public art installation that uses local street artists to transform 150,000 square feet of mural walls.





# Bank Enhancement

## **PRECEDENT: Mill River Park, Stamford, CT**

Now completed, this 28-acre area is already significantly improving the residents' quality of life by enabling people to experience nature without leaving the urban environment. The main feature of this park has been the restoration of the urban section of the Mill River and its banks. By applying approaches of sustainable design and bio-engineering techniques, the design and technical teams worked together to remove concrete walls and de-pollute the water to allow the river to flow freely, storm water to be absorbed, and wildlife to return to the area.

The riverbanks have become the focal point of this new space that has transformed a decaying downtown area into a healthy central park.



## **PRECEDENT: Reedy River, Greenville, SC**

The Carolina Foothills Garden Club reclaimed 26 acres along the Reedy in downtown Greenville to be developed as the popular . Since that time, the Garden Club and the City of Greenville have worked alongside various state and federal agencies to develop the park and clean up the river. Recently, the South Carolina Department of Natural Resources and other groups have created a watershed planning guide to further ensure the health of the river.

Restoration methods included the removal of threatened areas of the landfill and replacing them with five foot lifts of large diameter native rock. Bio-engineered soil lifts consisting of four compacted soil lifts encapsulated in biodegradable geofabric were placed to an elevation slightly above the 100-year flood mark. Live plant stakes consisting of willow branch cuttings were then inserted into the soil lifts to take root and produce vegetative growth.





# Surface Hydrology Improvement



University of Rhode Island Center for Biotechnology and Life Sciences



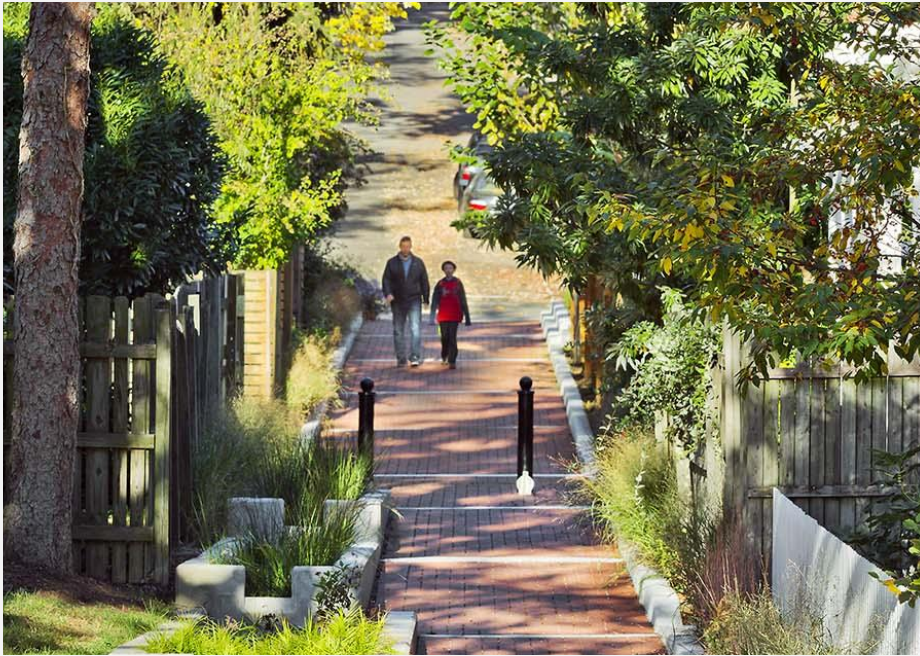
SA Water Mediterranean Garden, Adelaide, Australia



Student Work, Artful Rainwater Event, Penn State University



Green Corridor Example



Q Street Green Corridor, Washington DC



Green Corridor Example



Pavement Material Davis Court, SF, CA - SDE



Pavement Material Davis Court, SF, CA - SDE



# Urban Food Production

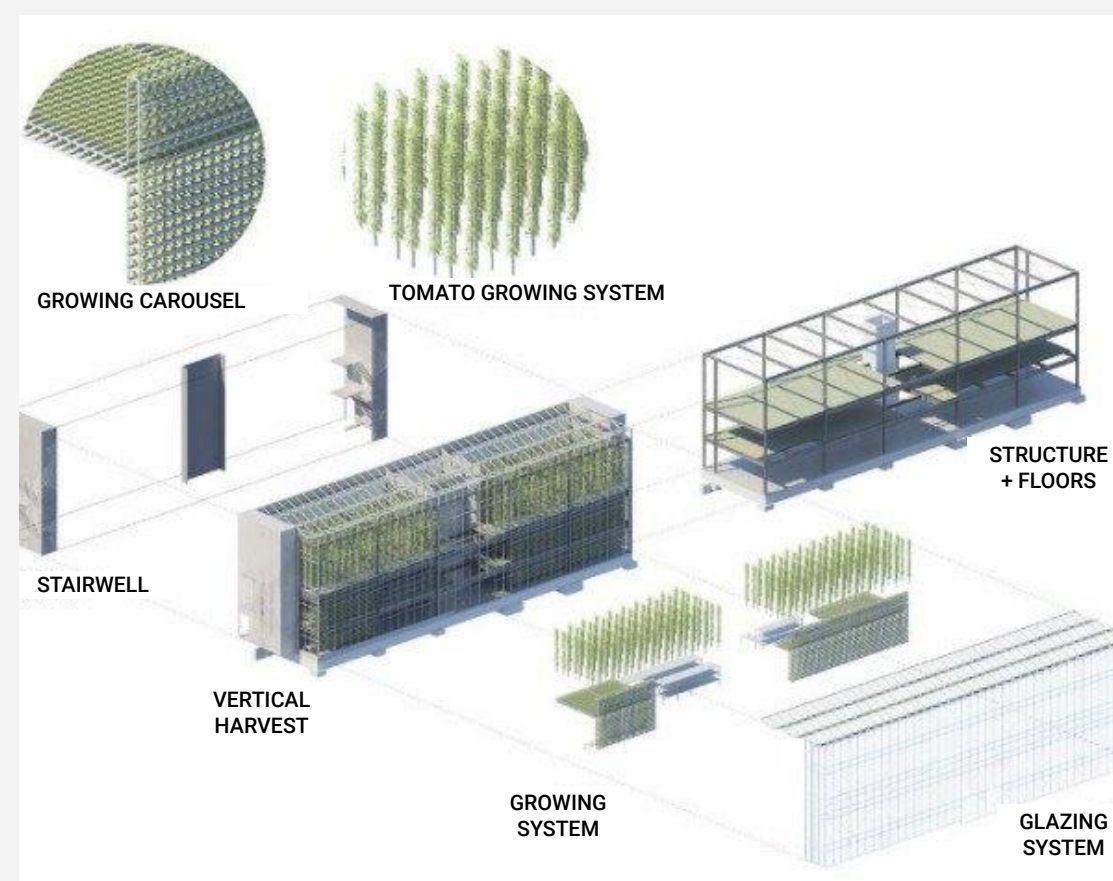
## *PRECEDENT: Vertical Farm, Jackson Hole, Wyoming*

Jackson has a 4 month growing season and imports the majority of its produce from outside Wyoming. There is also a 78% unemployment rate for people with different abilities in Wyoming.

This population deserves the opportunity to **participate in the workforce, earn a competitive wage and contribute to their community in a meaningful way.**

Located on a Town-owned, infill lot in the heart of Jackson Hole, Wyoming, this 13,500 square foot greenhouse **utilizes a 1/10 acre site to grow an annual amount of produce equivalent to 10 acres of traditional farming.** Vertical Harvest enables the community to **grow produce 365 days a year despite the difficulties posed by the harsh climate.**

Vertical Harvest of Jackson Hole sells locally grown, fresh vegetables year round to Jackson area restaurants, grocery stores and directly to consumers through on-site sales. Vertical Harvest **replaces 100,000 lbs of produce that is trucked into the community each year.** In addition to fresh lettuce, microgreens and tomatoes.





# Cleanup Programs

## **PRECEDENT: San Jose, CA (2014 - 2019)**

In 2014, Santa Clara County Creeks Coalition provided the homeless residents of the city with trash cans to help clean up after themselves and pick up litter they come across during the day.

2 years later, the Coyote Creek Homeless Streams Stewards was established, and more than 48,000 pounds of garbage was removed.

In 2018, the Coalition hired 25 homeless residents to pick up litter they came across for \$15 an hour, with the goal to provide a paycheck that can eventually result in full-time work. The City Council also approved a \$200,000 litter abatement grant, some of which was used to fund the program.

Last year, the Homeless Encampments Ad Hoc Committee was created to consider a range of programs that combat litter and homelessness together.



## **PRECEDENT: Fairfax County, VA (2019 - 2020)**

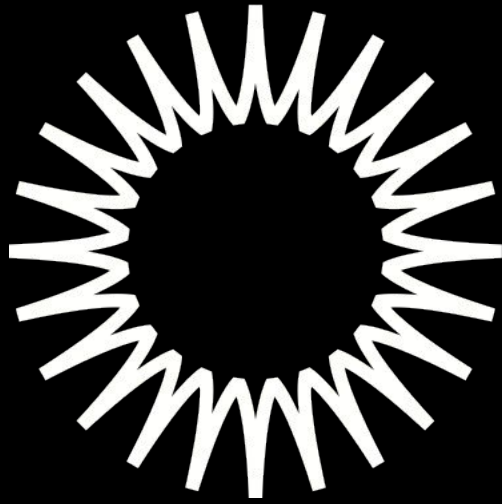
Fairfax County in Virginia implemented a homeless work pilot program in late 2019 called “Operation Stream Shield”, offering homeless residents of the county \$10 an hour - more than Virginia’s minimum wage - to pick up litter in and around streams and to remove invasive plants.

The team from the county’s Stormwater Planning Division identified litter hotspots, and the non-profit operators of the homeless shelters vetted participants, provided transportation, supervised their work, tracked and reported the number of bags of litter that were filled during each shift (which lasted about 4 hours), and provide a hot meal at the end of every shift.

Within the first 8 weeks of the program, nearly 60 individuals had signed on to participate and 11 tons of litter/debris had been removed. Operation Stream Shield finished their pilot run around January 15th 2020.



# Thank you!



# SPUR

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