



# Stormwater Program Update

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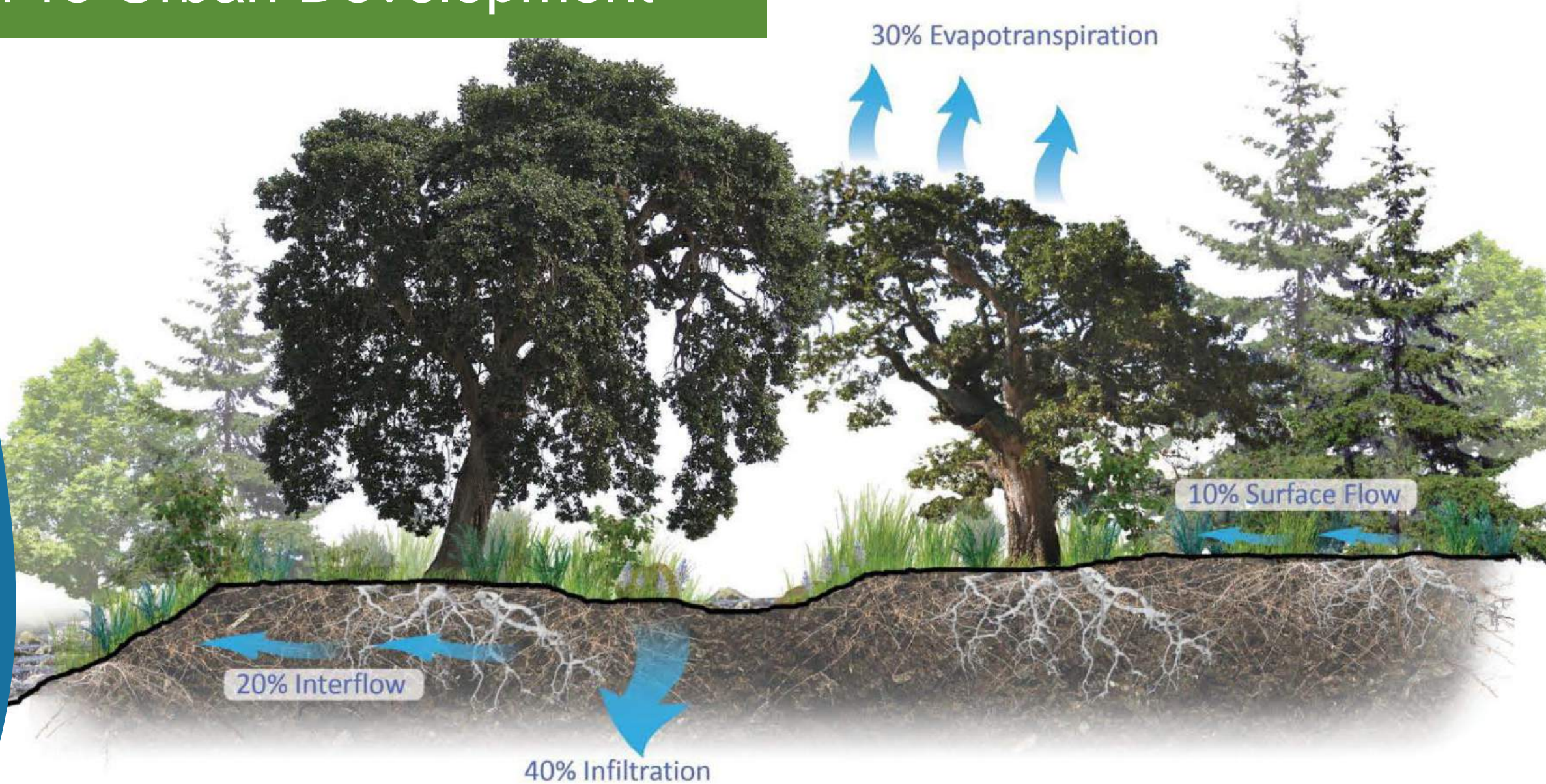
Matthew Fabry, PE

*Congestion Management and  
Environmental Quality Committee  
June 24, 2019*

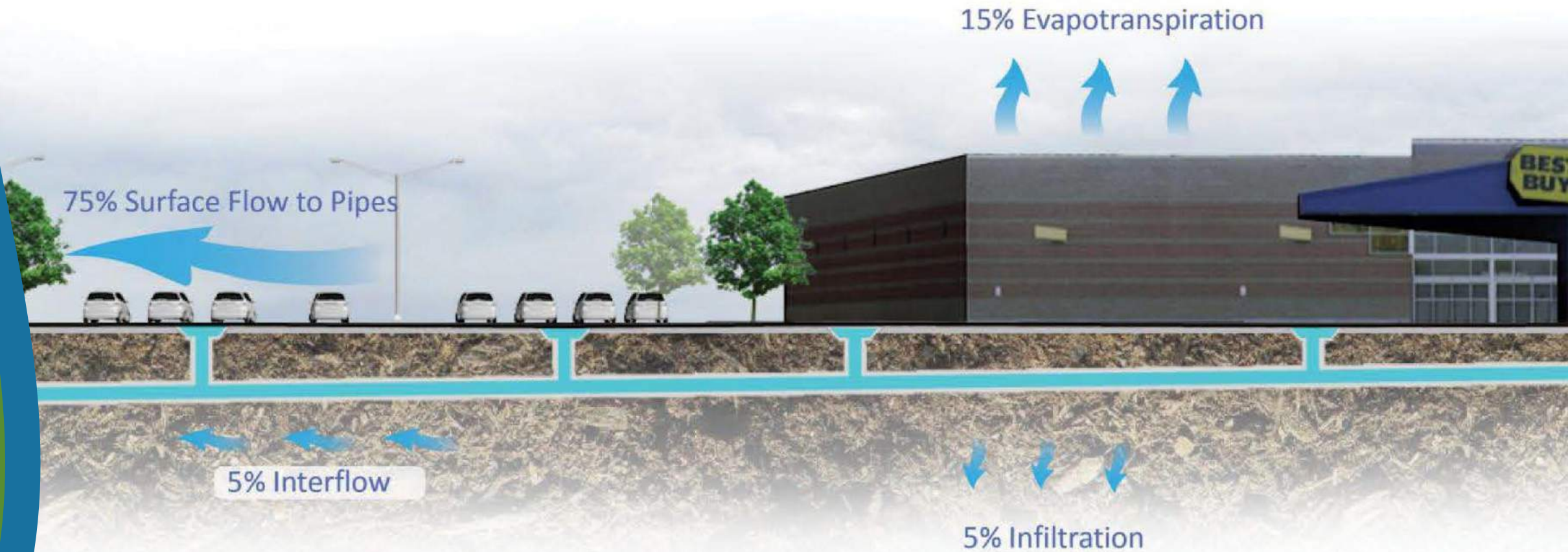
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# Pre-Urban Development



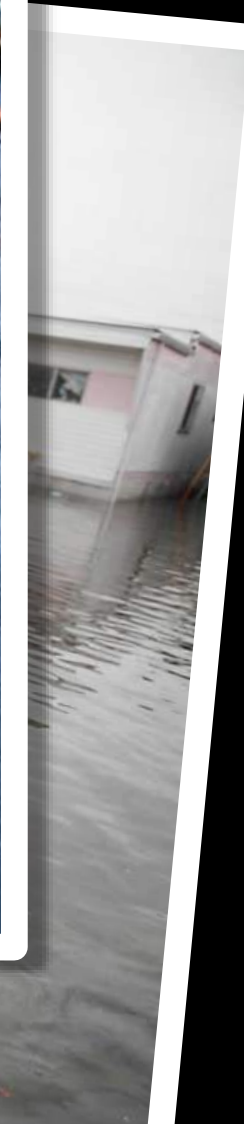
# Urban Development













**Women**  
(18-45 Years)

**Children**  
(1-17 Years)

**2** TOTAL  
SERVINGS  
A WEEK

OR

**1** TOTAL  
SERVING  
A WEEK

**0** DO NOT  
EAT



California Office of  
Environmental Health  
Hazard Assessment

web [www.oehha.ca.gov/fish](http://www.oehha.ca.gov/fish)  
email [fish@oehha.ca.gov](mailto:fish@oehha.ca.gov)  
phone (916) 324-7572

# A GUIDE TO EATING FISH

from

## SAN FRANCISCO BAY

(ALAMEDA, CONTRA COSTA, MARIN, NAPA, SAN FRANCISCO, SAN MATEO, SANTA CLARA, SOLANO, SONOMA COUNTIES)

**WOMEN 18 - 45 YEARS AND  
CHILDREN 1 - 17 YEARS**

### Eat the Good Fish

Eating fish that are low in chemicals may provide health benefits to children and adults.



### Avoid the Bad Fish

Eating fish with higher levels of chemicals like mercury or PCBs may cause health problems in children and adults.



### Choose the Right Fish

Chemicals may be more harmful to unborn babies and children.



Brown rockfish



Chinook (King) Salmon

♥ high in omega-3s



Jacksmelt



Red rock crab



California halibut



White croaker



Sharks



White sturgeon



Surfperches



Striped Bass

### Serving Size

A serving of fish is about the size and thickness of your hand. Give children smaller servings.

For Adults



For Children



Some chemicals are higher in the skin, fat, and guts.

Eat only the  
skinless fillet



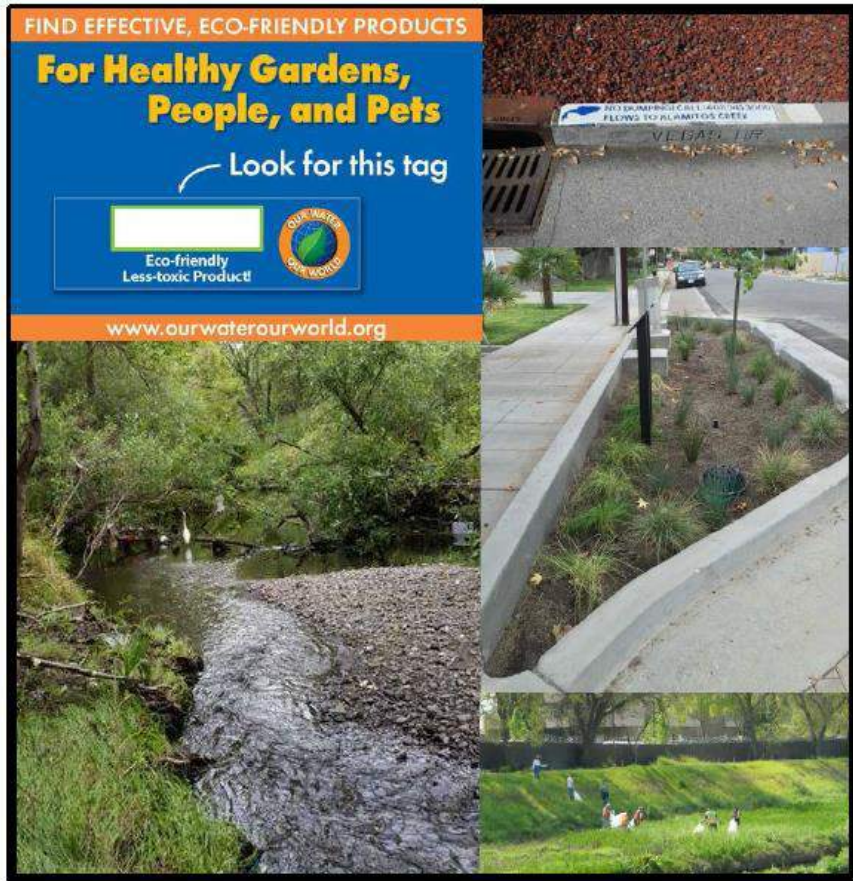
Eat only the meat



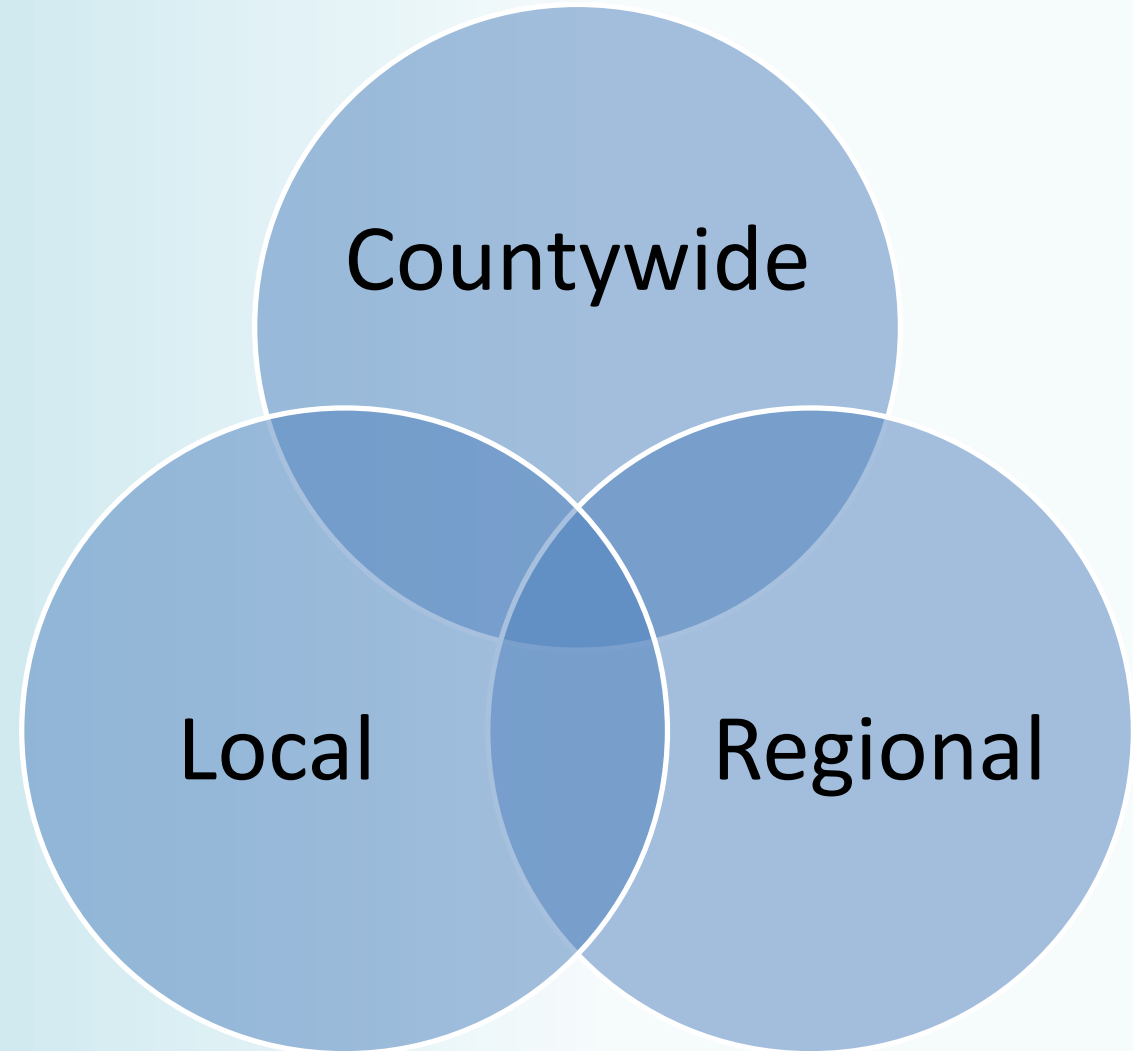


**California Regional Water Quality Control Board  
San Francisco Bay Region  
Municipal Regional Stormwater NPDES Permit**

**Order No. R2-2015-0049  
NPDES Permit No. CAS612008  
November 19, 2015**



# C/CAG's Role



# Balanced Development



# *Benefits of a Balanced Approach*

**Reduce Pollution**



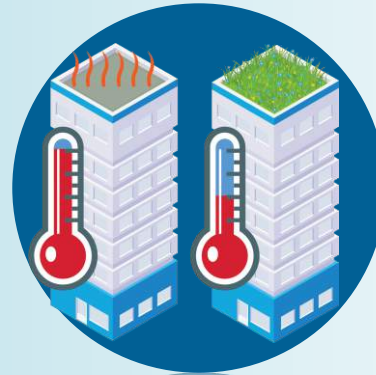
**Enhance Safety**



**Increase Natural Habitat**



**Reduce Heat Islands**



**Manage Flood Risk**



**Keep Water Local**



# *What Is Green Infrastructure?*

## **Parcel-Scale**

- Private and Public Projects
- Parcel-scale Management
- Primarily Private Funding via New/Redevelopment

## **Green Streets**



## **Regional Projects**





# *What Is Green Infrastructure?*

## **Parcel-Scale**

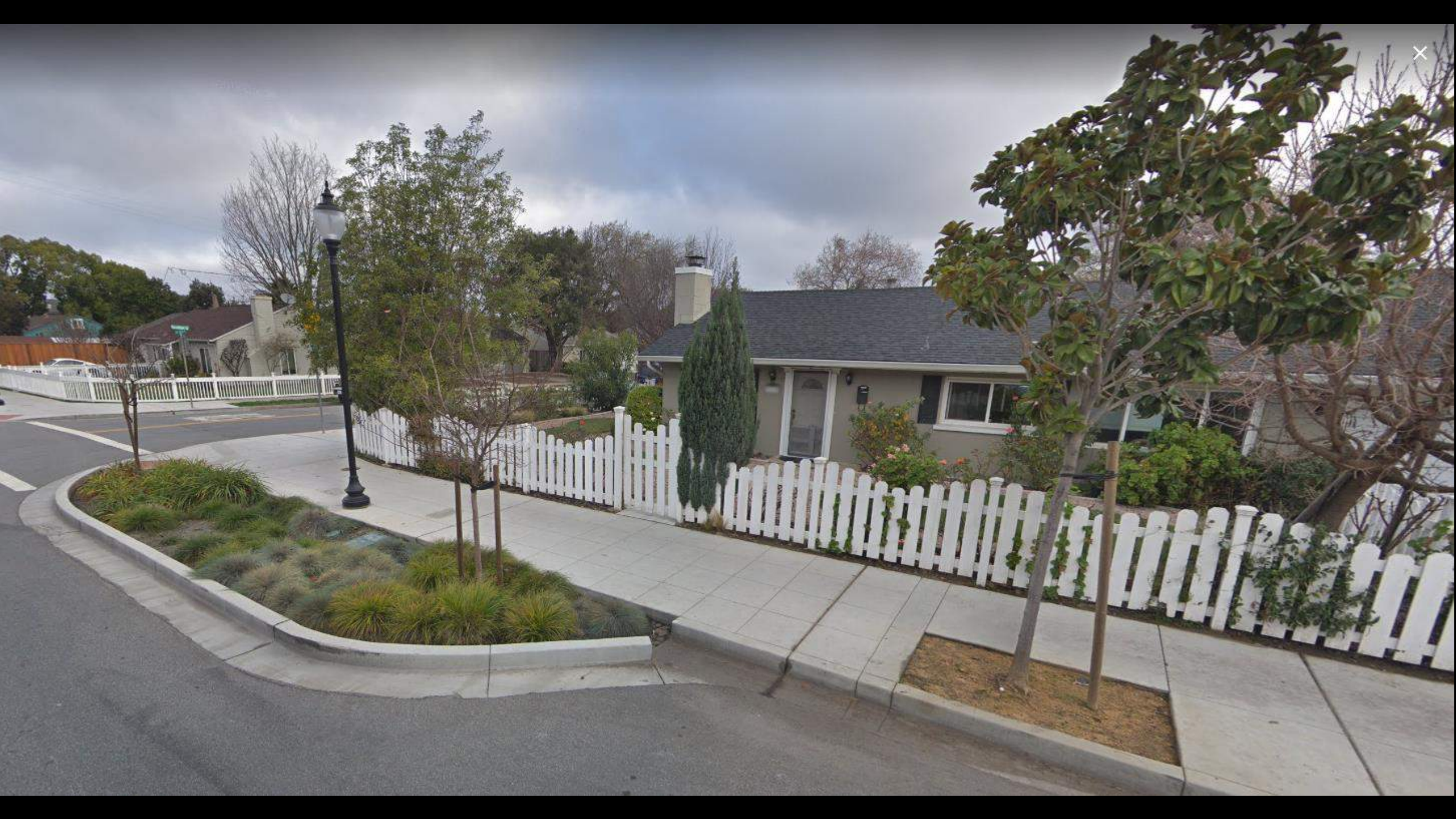
- Private and Public Projects
- Parcel-scale Management
- Primarily Private Funding via New/Redevelopment

## **Green Streets**

- Street Projects
- Block-Scale Stormwater Management
- Primarily Local/State Transportation Funding

## **Regional Projects**











STOP



# *What Is Green Infrastructure?*

## **Parcel-Scale**

- Private and Public Projects
- Parcel-scale Management
- Primarily Private Funding via New/Redevelopment

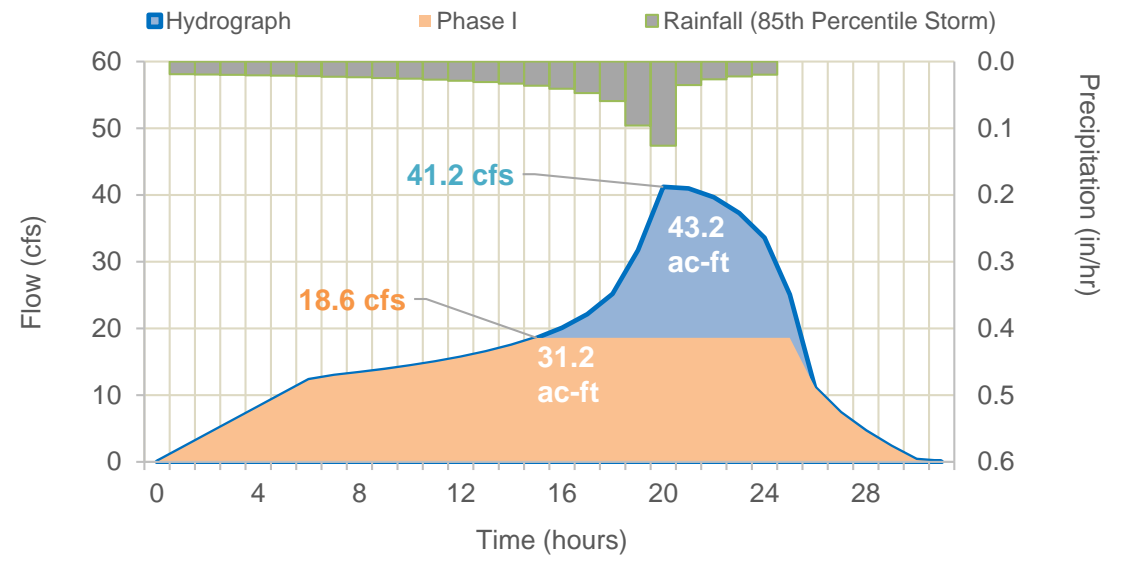
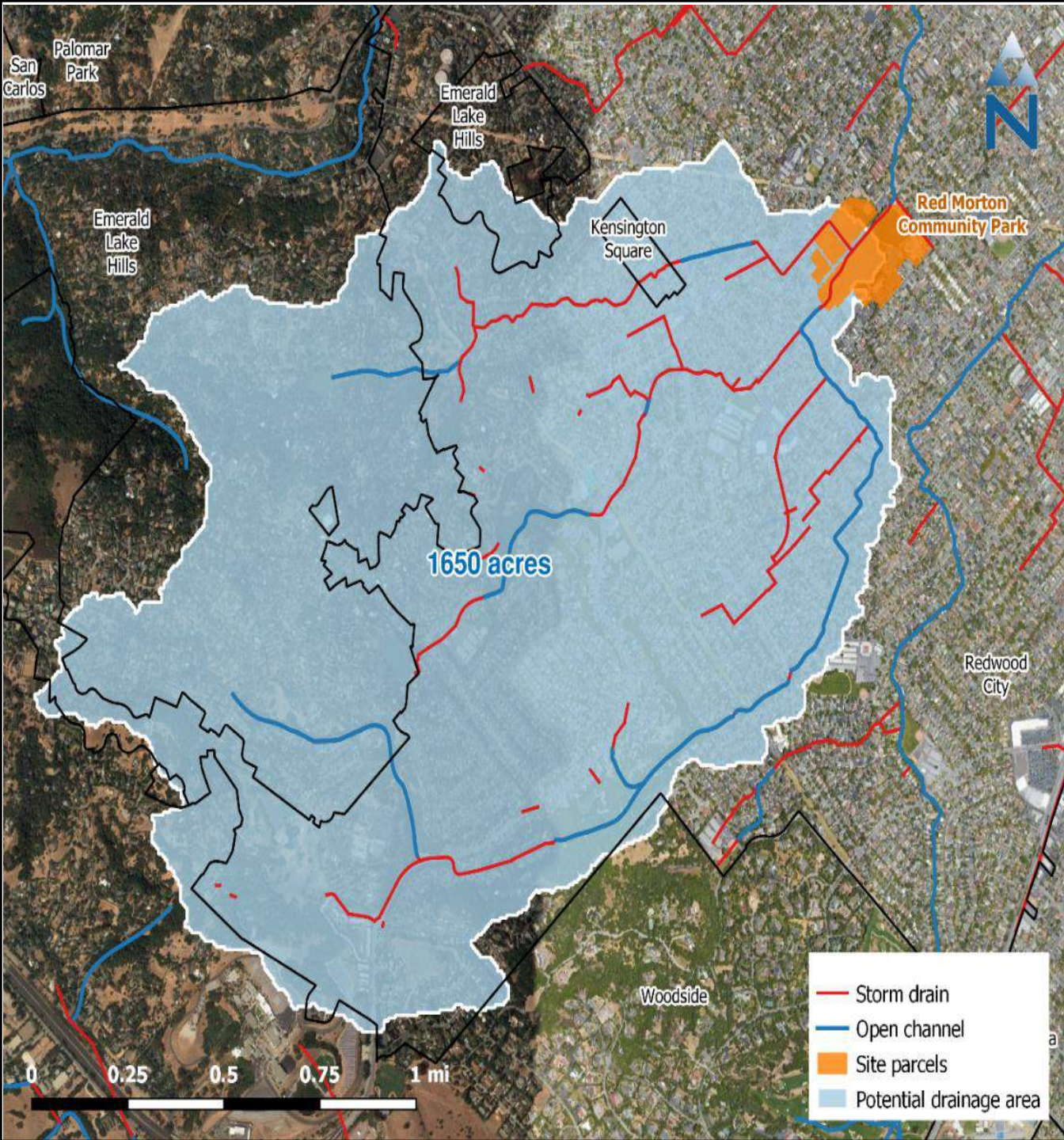
## **Green Streets**

- Street Projects
- Block-Scale Stormwater Management
- Primarily Local/State Transportation Funding

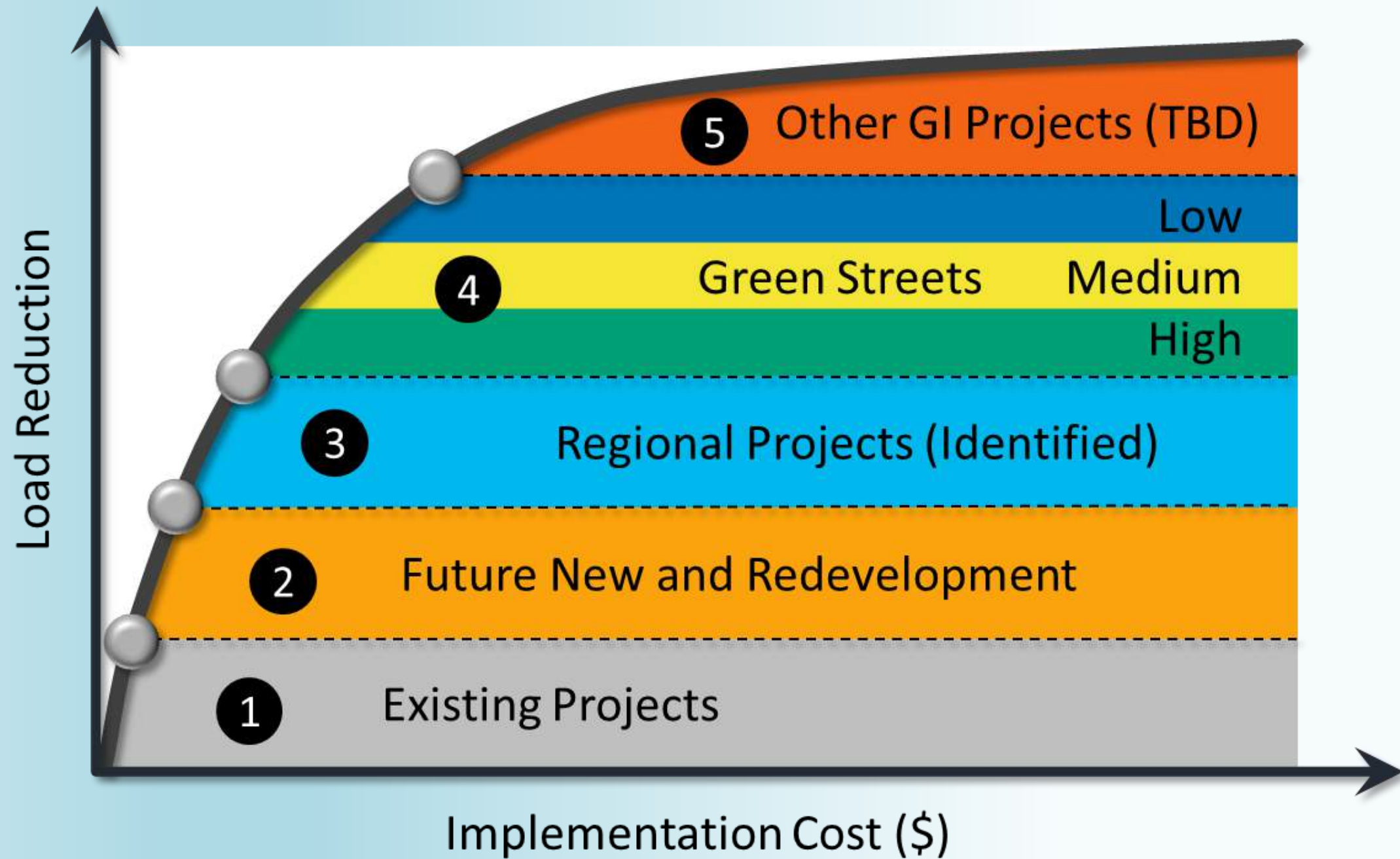
## **Regional Projects**

- Large Retention Projects (Parks, Schools, Large Public Parcels)
- Watershed-scale Management
- Primarily State/Federal Funding

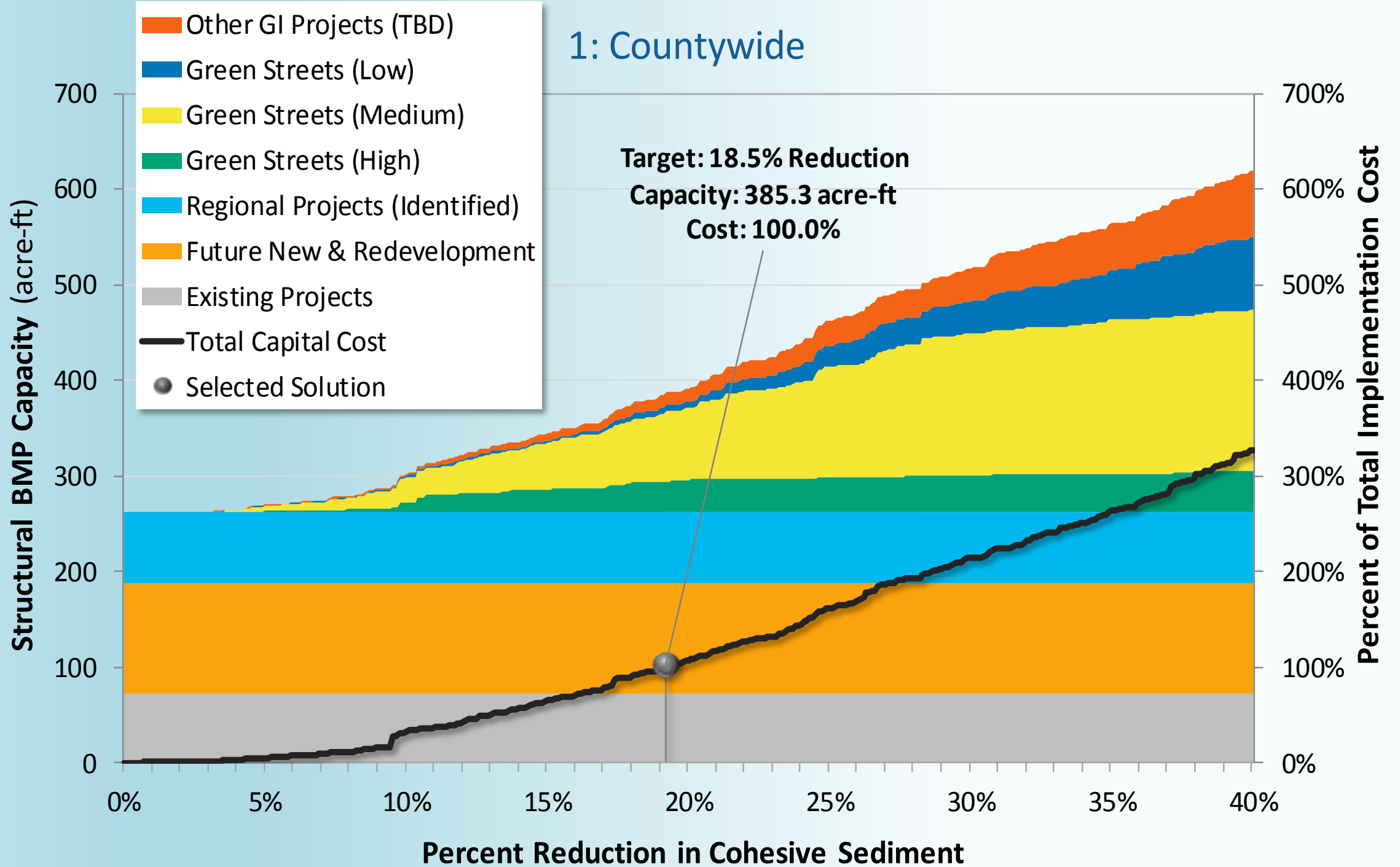




Site Information			
<b>Project Lead</b>	Redwood City		
<b>Location</b>	Red Morton Community Park – McGarvey Field		
<b>Land Owner</b>	Redwood City		
<b>Receiving Water</b>	Arroyo Ojo (tributary to Redwood Creek)		
Jurisdiction	Redwood City	San Mateo County	Woodside
<b>Capture Area (acres)</b>	1,142	467	41
<b>Percent of Capture Area</b>	69.2%	28.3%	2.5%



# 1: Countywide



# *Green Streets Implementation*

## **Parcel-Scale**



## **Green Streets**

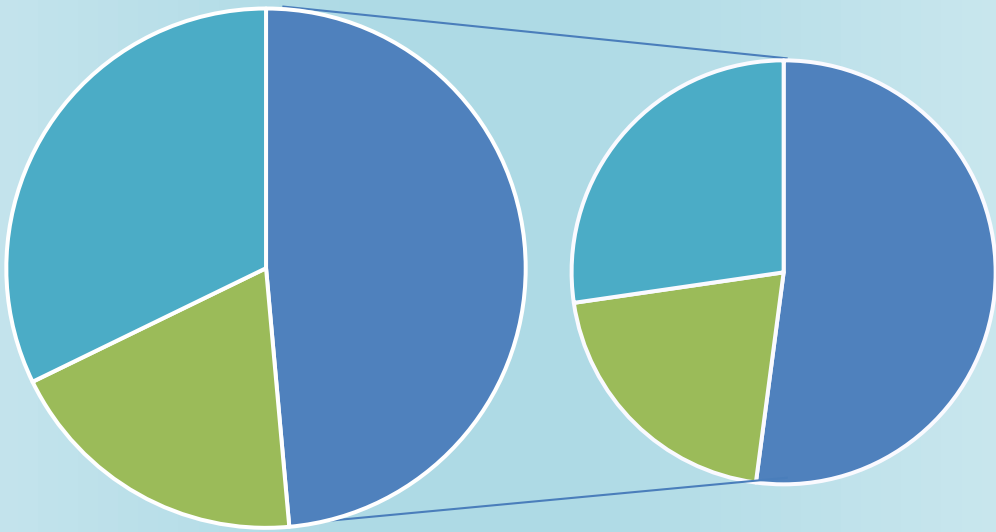
- Street Projects
- Block-Scale Stormwater Management
- Primarily Local Funding
- O&M Concerns

## **Regional Projects**



All for One  
(Each Agency does share)

One for All  
(Target efforts countywide)

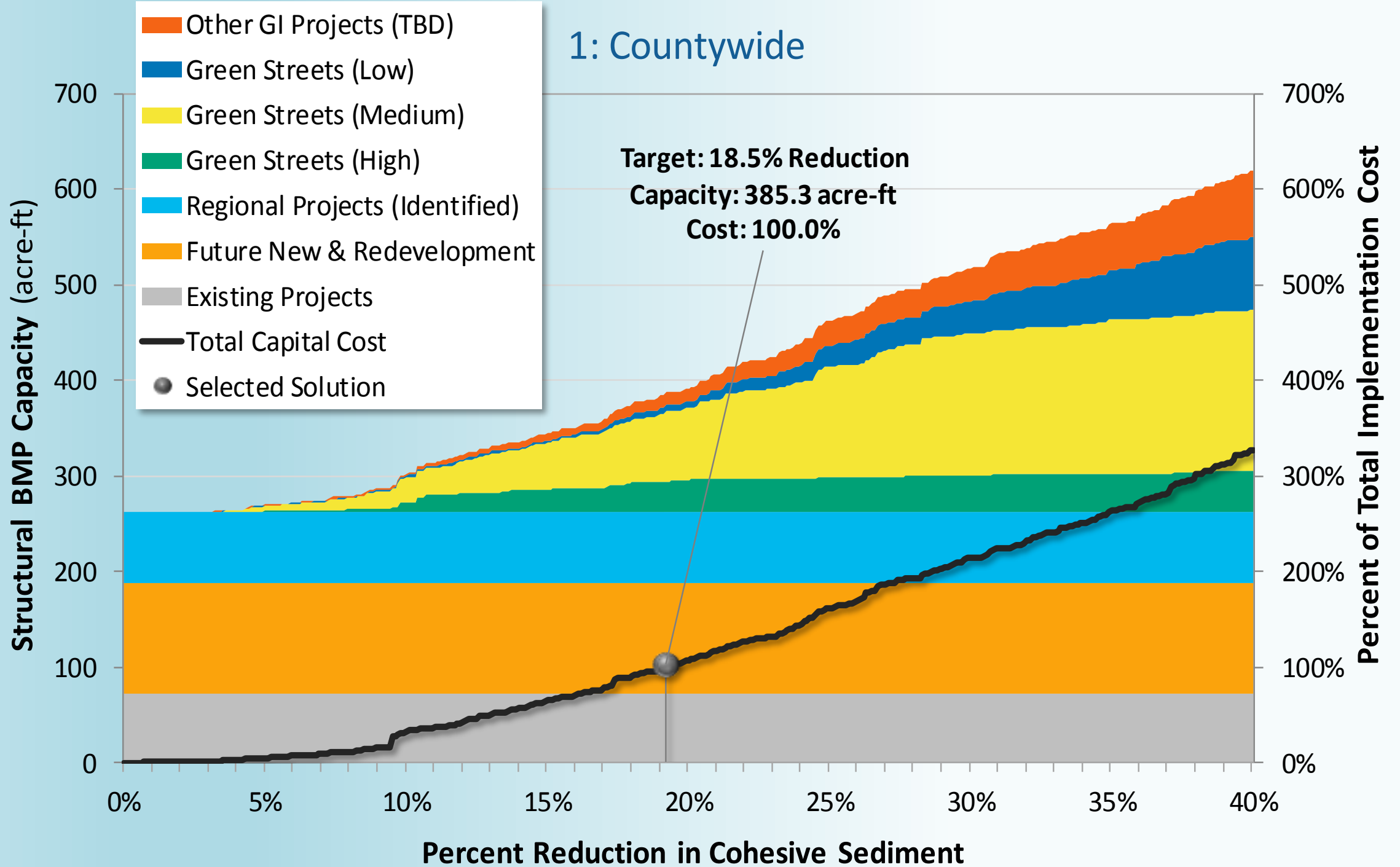


- Parcel GI
- Regional Projects
- Green Streets

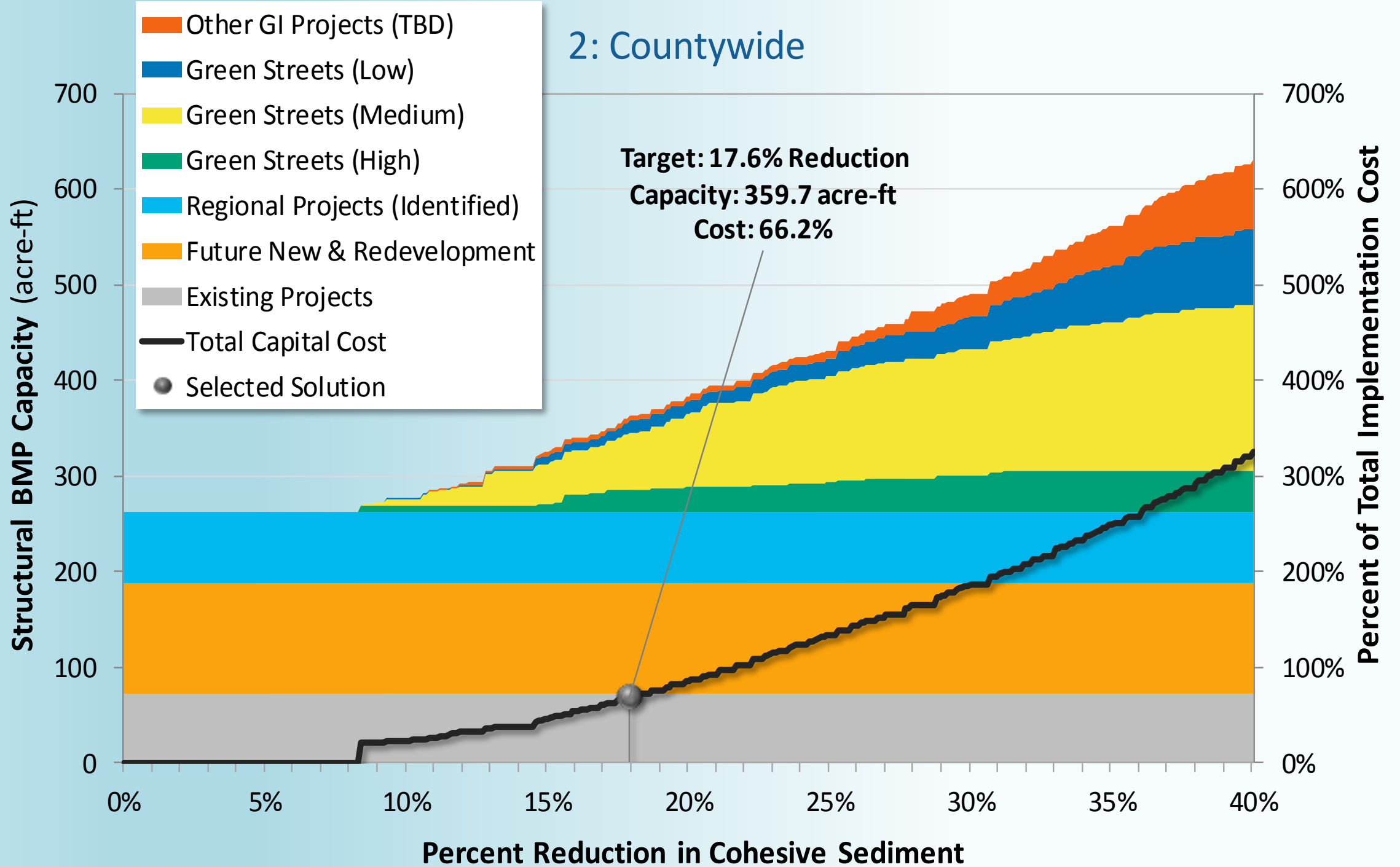
- Parcel GI
- Regional Projects
- Green Streets



# 1: Countywide



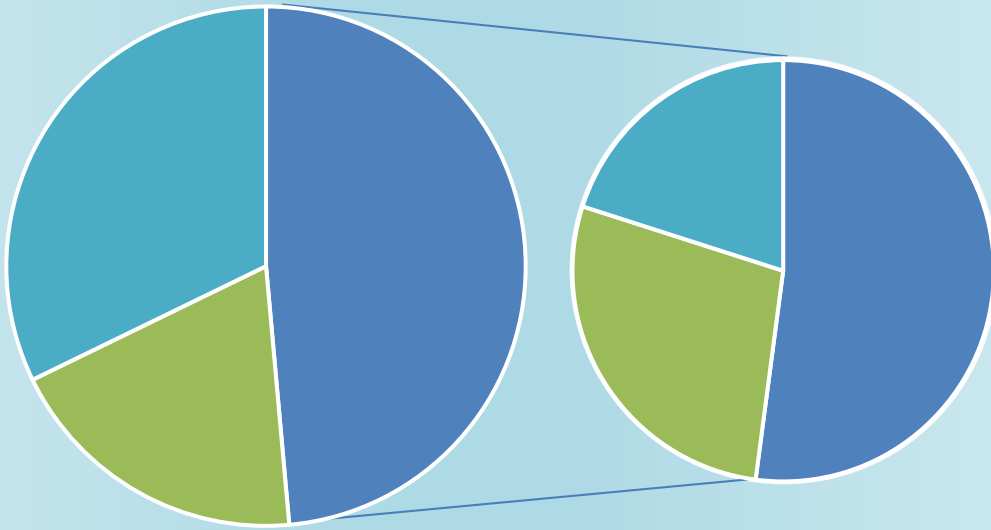
## 2: Countywide



All for One  
(Each Agency does share)

One for All  
(Target efforts countywide)

Flood Agency  
(Builds more regional projects)

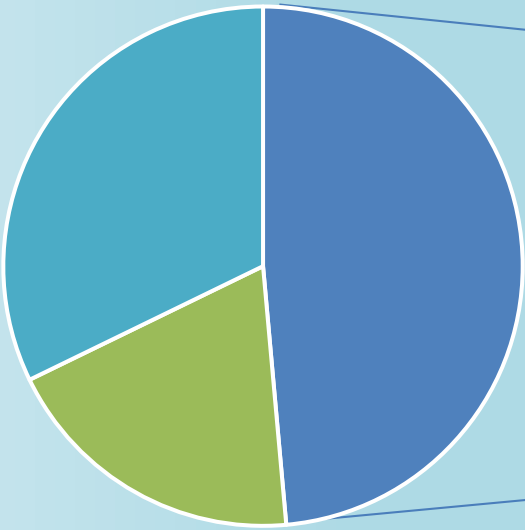


- Parcel GI
- Regional Projects
- Green Streets

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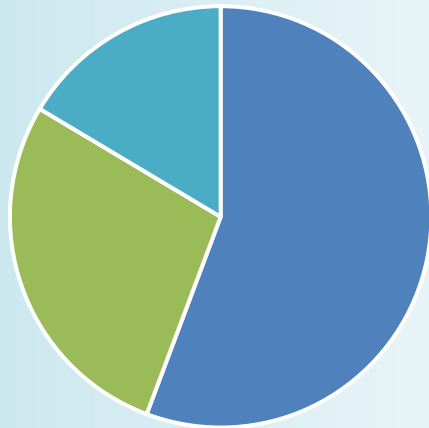
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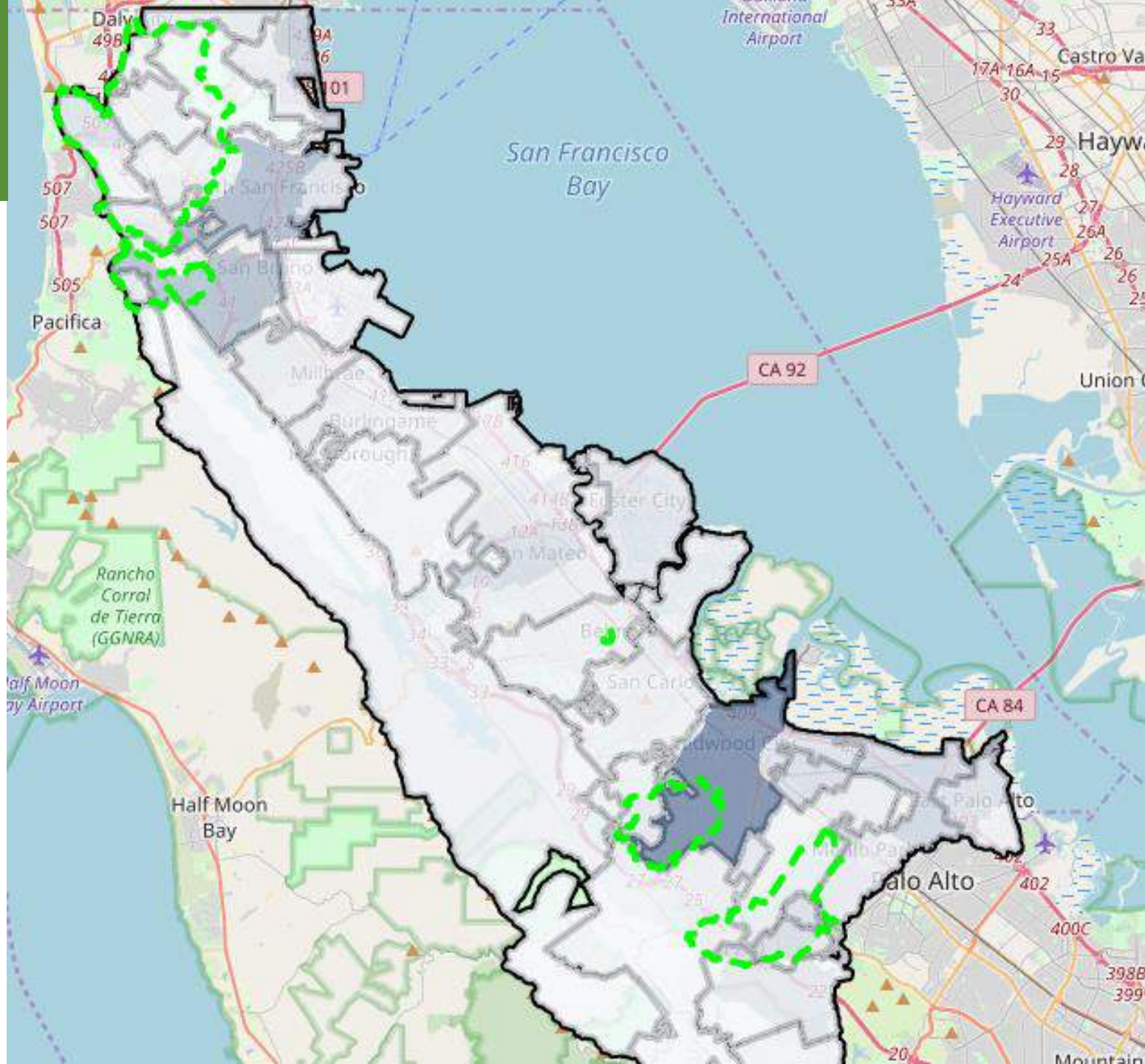
- Parcel GI
- Regional Projects
- Green Streets

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# Regional Projects

- South San Francisco
- San Bruno
- Belmont
- Redwood City
- Atherton

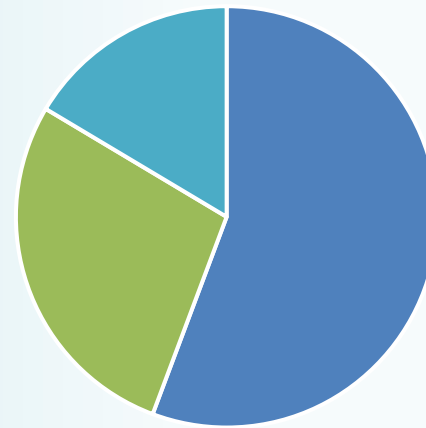
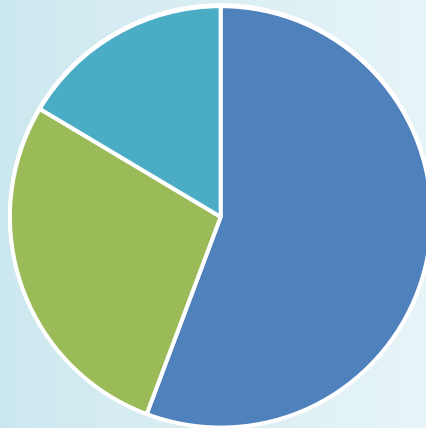
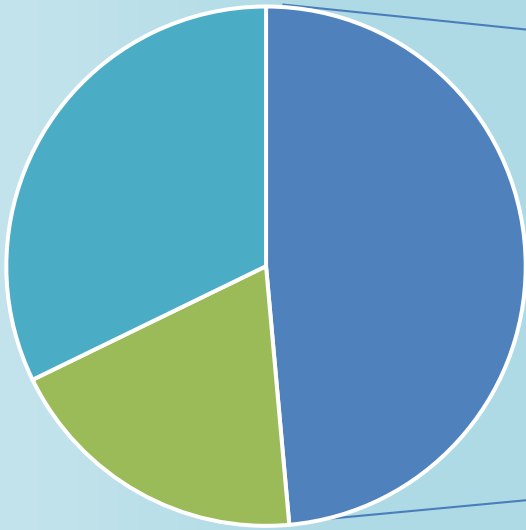


All for One  
(Each Agency does share)

One for All  
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Flood Agency  
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More Parcel GI  
(Require more projects do GI)



- Parcel GI
- Regional Projects
- Green Streets

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- Parcel GI
- Regional Projects
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# Development Projections

Projected acreage of Parcel-scale GI through 2040

CITIES	Single Family Acres	Multi-Family Acres	Employment Acres	Total Acres
ATHERTON	0.0	0.0	0.0	0.0
BELMONT	8.0	9.5	23.5	41.0
BRISBANE	8.5	69.5	206.0	284.0
BURLINGAME	4.0	26.5	95.0	125.5
COLMA	0.0	1.5	2.5	4.0
DALY CITY	13.5	23.5	26.0	63.0
EAST PALO ALTO	11.0	8.5	63.0	82.5
FOSTER CITY	0.0	30.0	83.0	113.0
HALF MOON BAY	30.0	7.0	13.0	50.0
HILLSBOROUGH	0.0	0.0	0.0	0.0
MENLO PARK	7.0	14.5	300.0	321.5
MILLBRAE	13.5	19.0	14.5	47.0
PACIFICA	22.5	1.5	10.5	34.5
PORTOLA VALLEY	0.0	0.0	0.5	0.5
REDWOOD CITY	10.0	115.5	129.5	255.0
SAN BRUNO	4.5	39.0	24.0	67.5
SAN CARLOS	10.0	14.0	34.0	58.0
SAN MATEO, CITY OF	18.5	122.0	128.0	268.5
SOUTH SAN FRANCISCO	17.0	39.5	67.0	123.5
WOODSIDE	5.5	0.0	4.5	10.0
UNINCORP. SAN MATEO CO	6.0	62.5	61.5	186.0
<b>Grand Total</b>	<b>245.5</b>	<b>603.5</b>	<b>1,286.0</b>	<b>2,135.0</b>

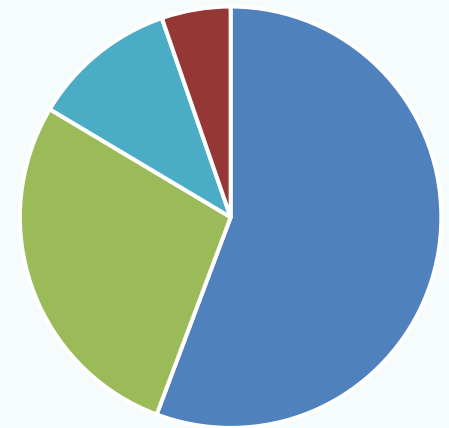
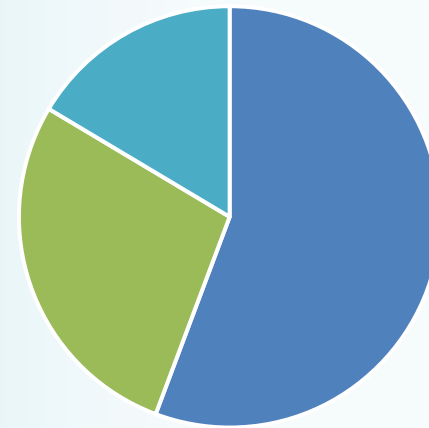
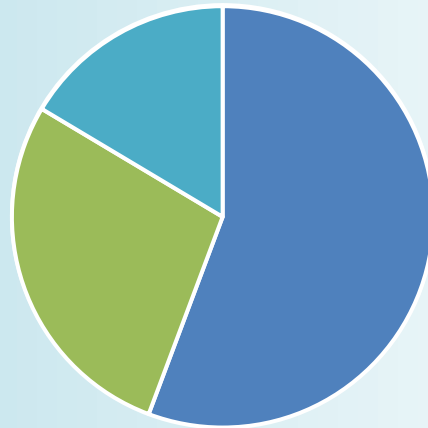
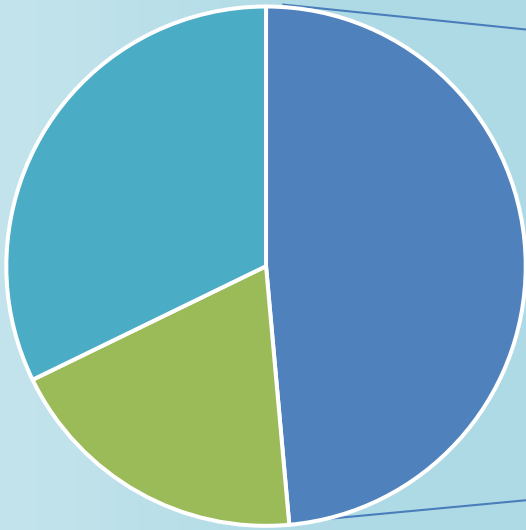
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Green Streets with Parcel GI  
(projects do green streets)



- Parcel GI
- Regional Projects
- Green Streets

- Parcel GI
- Regional Projects
- Green Streets

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- Parcel GI
- Regional Projects
- Green Streets

- Parcel GI
- Regional Projects
- Public Green Streets
- Privately-Funded Green Streets

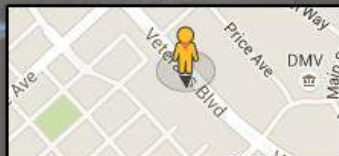


Veterans Blvd

Redwood City, California

Street View - May 2015

Veterans Blvd



Back to Map

Google



Pervious Concrete  
in Parking Zone

Rain Garden with  
Sustainable Landscape

Pervious Concrete  
in Sidewalk



Canopy / Shade Trees

Pervious Median with  
Sustainable Landscape

Light Color  
Roadway Surface



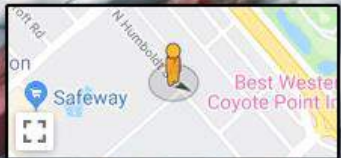
Hacienda



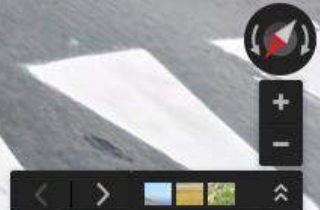
800 N Humboldt St  
San Mateo, California



Street View - Jun 2017



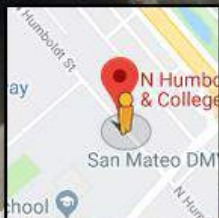
Google



698 N Humboldt St  
San Mateo, California

Google

Street View - Jun 2017



Google



## San Mateo Countywide Sustainable Streets Master Plan





  
SAN MATEO COUNTYWIDE  
**Water Pollution  
Prevention Program**  
Clean Water. Healthy Community.  
[www.flowstobay.org](http://www.flowstobay.org)

**C/CAG**  
City/County Association of Governments  
of San Mateo County

# QUESTIONS?

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650.599.1419 | [mfabry@smcgov.org](mailto:mfabry@smcgov.org)