

Breaking Down Silos Through Regional Participation

San Diego Integrated Regional Water Management Program

STEPHANIE GAINES, PROGRAM COORDINATOR

COUNTY OF SAN DIEGO, WATERSHED PROTECTION PROGRAM

CALWEP P2P ~ 12-10-20

Project Clean Water → IRWM



PROJECT CLEAN WATER

- 2000 Regional Forum for Water Management Strategies
- 2004 Formed Regional Water Management Group
- 2005 First IRWM MOU
- 2007 First Grant

 **SAN DIEGO**
Integrated Regional
Water Management



Tri-County Funding Area Coordinating Committee

San Diego IRWM Funding Region

Breaking down silos
between Counties

Diversity in Membership: IRWM RAC

Regional Water Management Group

Water Supply

Water Quality

Natural Resources and Watersheds

DAC/EJ/URCs

Other Members

Non-Voting Members



Appendix 6-B: Regional Advisory Committee (RAC) Charter



Propositions 50, 84 and 1 – Evolution of Funding



San Diego Region has been
fully funded for each
proposition & round of
funding

- Prop 50 \$25M
- Prop 84 \$92M
- Prop 1 \$52.5M

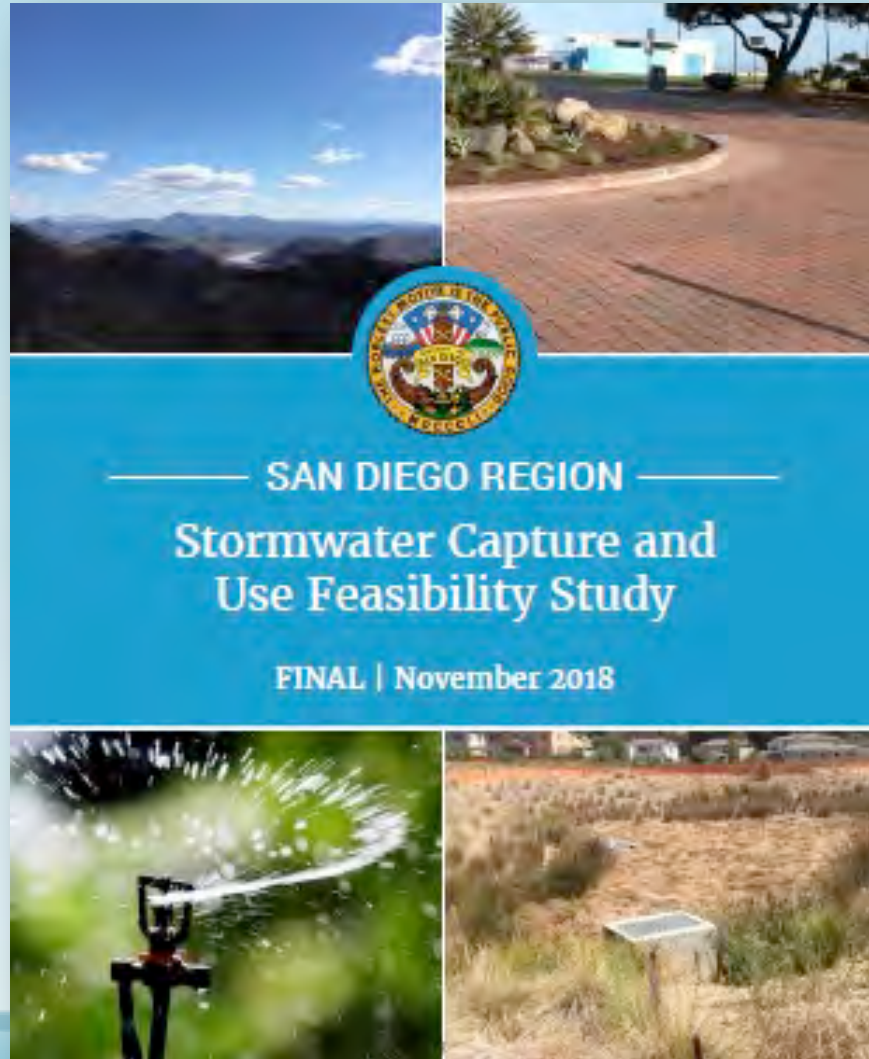
Example Projects: Opportunities for Collaboration

- Proposition 84 Sustainable Landscapes Program
- Proposition 1 Stormwater Capture and Use Feasibility Study
- Proposition 1 San Elijo JPA Stormwater Reuse within a Traditional Wastewater/Recycled Water Facility
- Proposition 1 DACI Water Needs Assessment

Proposition 84 San Diego Sustainable Landscapes



Proposition 1 Stormwater Capture & Use Feasibility Study



Integrating Stormwater Reuse Existing Facility

Project Area

- Cardiff by the Sea, Encinitas, California
- Drainage area of 0.76 sq. miles (486 acres)
- Storm channel adjacent to San Elijo Water Campus
- Discharges into the San Elijo Lagoon

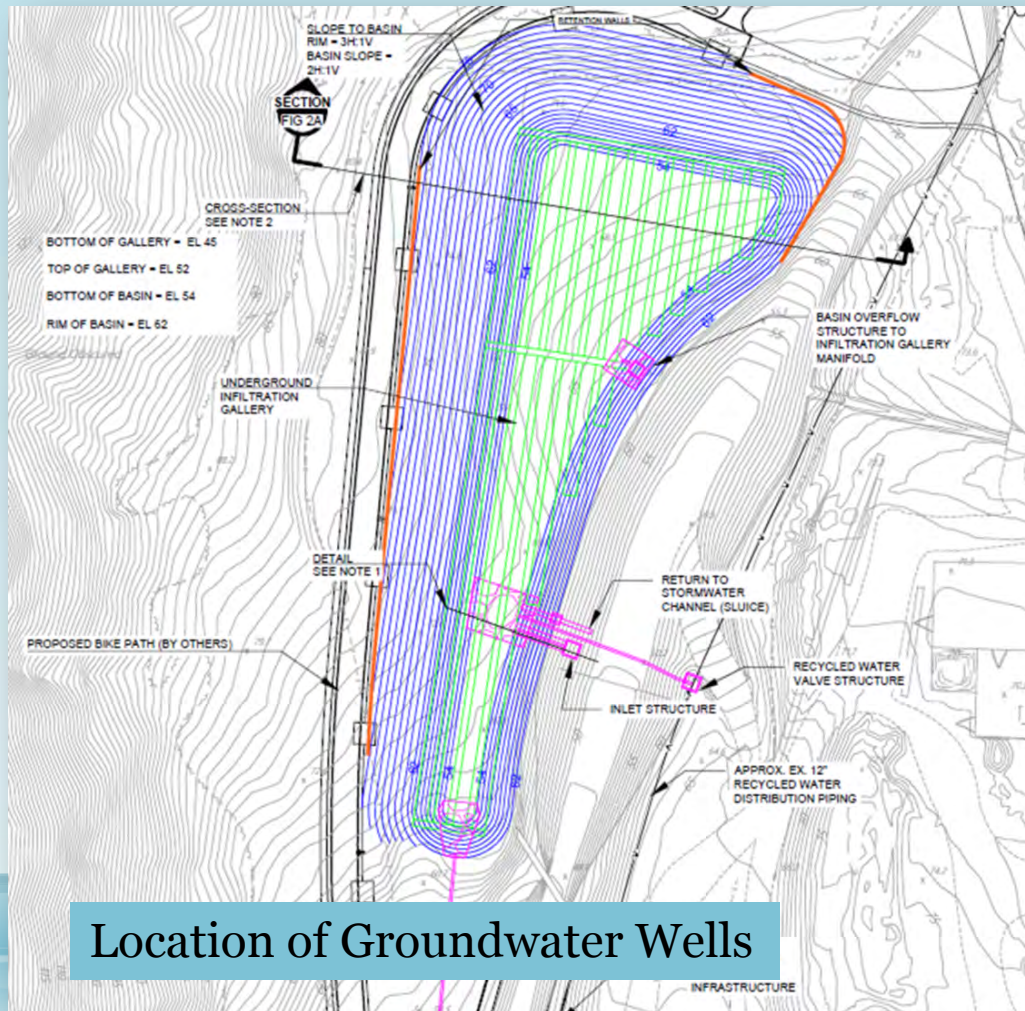


Phase 1

- Stormwater capture in new & existing desilting basins
- New pumps & pipes to convey water to existing treatment system
- Treatment, disinfection, & distribution through existing infrastructure
- Promotes “**One Water**” concept

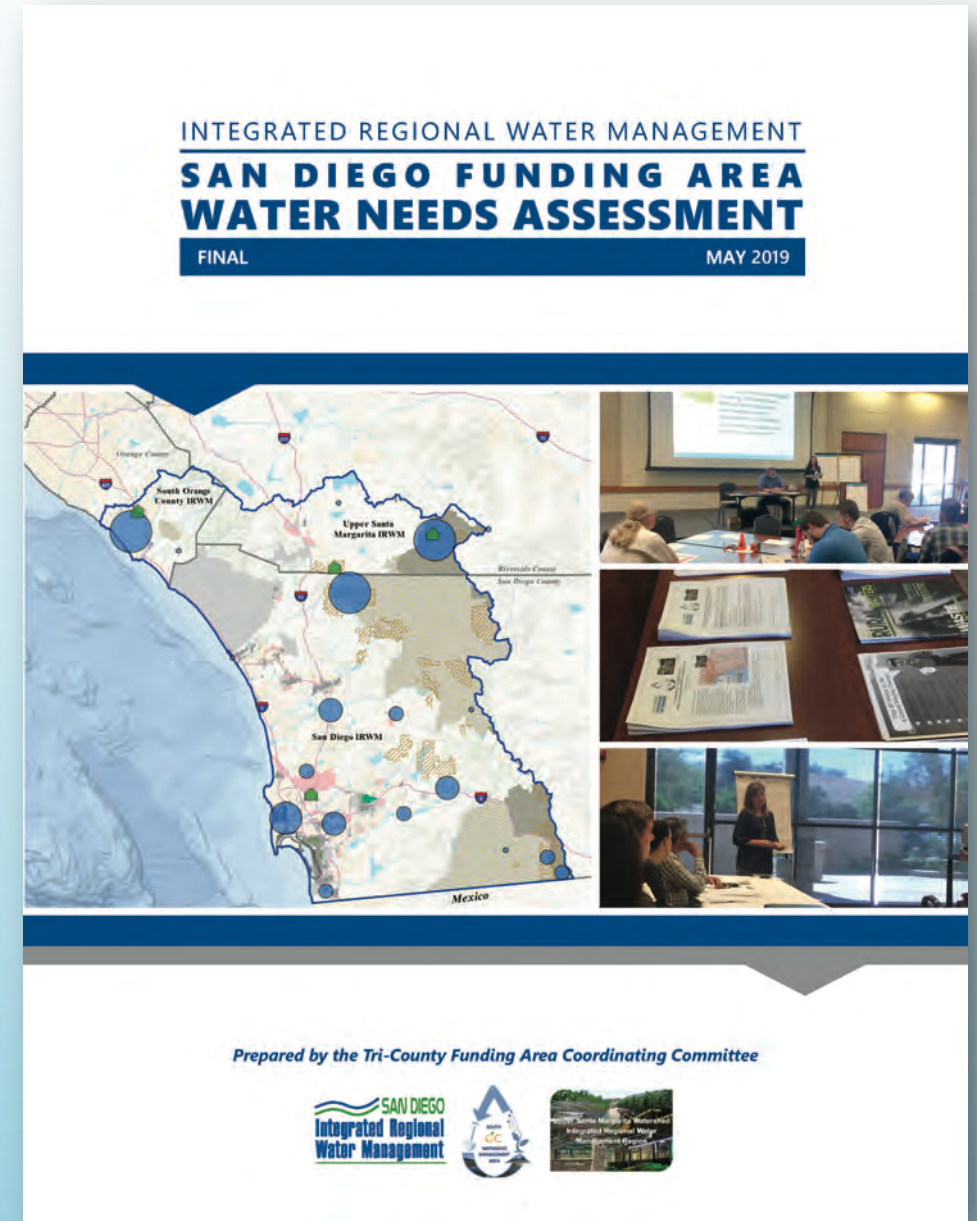


Stormwater Capture & Reuse (Phase 2) San Elijo Water Campus



Water Needs Assessment

- Identify Underrepresented Communities (URCs)
- Identify & characterize water-related issues & needs
- Increase URC participation in the IRWM planning process





Legend

- Proposition 50 Projects
- Proposition 84 Round 1 Projects
- Proposition 84 Round 2 Projects
- Proposition 84 Round 3 Projects
- Proposition 84 Round 4 Projects
- Proposition 1 DACI Projects
- Proposition 1 Round 1 Projects

Round	Number of Regional Projects
Prop 50	6
Prop 84 Round 1	5
Prop 84 Round 2	2
Prop 84 Round 3	2
Prop 84 Round 4	4
Prop 1 DACI	0
Prop 1 Round 1	1

CalEnviroScreen 3.0 Results

Percentile

- No Data
- 1-5% (lowest scores)
- 6-10%
- 11-15%
- 16-20%
- 21-25%
- 26-30%
- 31-35%
- 36-40%
- 41-45%
- 46-50%
- 51-55%
- 56-60%
- 61-65%
- 66-70%
- 71-75%
- 76-80%
- 81-85%
- 86-90%
- 91-95%
- 96-100% (highest scores)
- Disadvantaged Communities
- Supervisor Districts
- Municipal Boundaries
- San Diego IRWM Region

CalEnviroScreen:
Disproportionately
burdened by
multiple sources of
pollution

DACs: < 80%
Median Household
Income

Mexico

See handout!

Diversity ~ Inclusion ~ Equity

Equity in:



Geography of
funded projects



Grant funding



Representation
on the RAC

Thank You!



Stephanie Gaines, County of San Diego
Watershed Protection Program

Stephanie.Gaines@sdcounty.ca.gov



Motivating Adoption of Sustainable Landscapes on Commercial Properties

Sonali Abraham, Pacific Institute
CalWEP Peer to Peer 2020



Project Overview

Objective: Implement, and measure the impacts of, sustainable landscape practices on commercial and industrial properties in Southern California.

Phase 1 (complete): Identify potential water-related benefits across the watershed, as well as motivations and barriers for greater uptake.

Phase 2 (current): Work with the business community—providing tools, resources, and support—to advance the adoption of sustainable landscape practices.



Sustainable Landscapes Defined

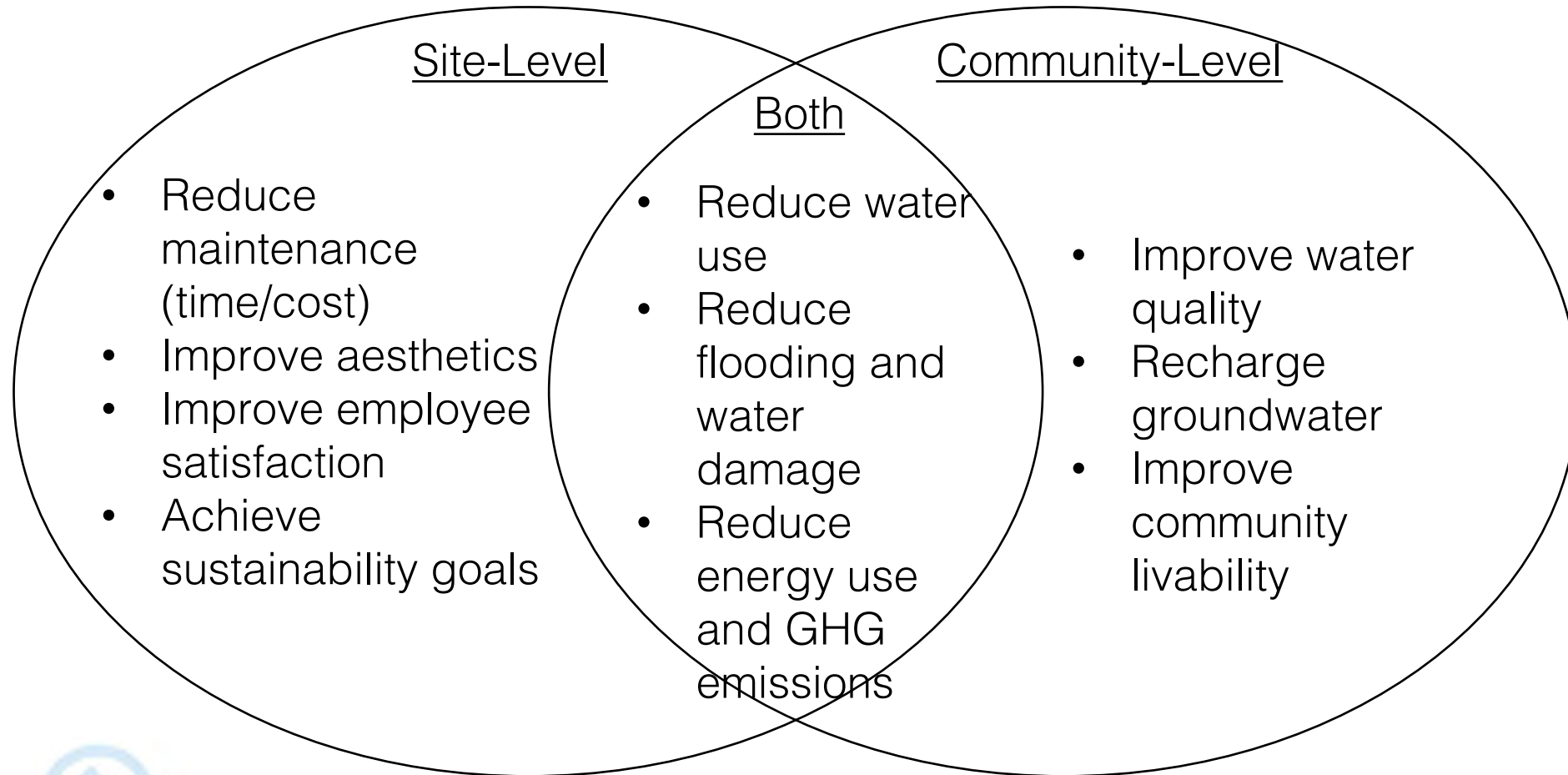
Key elements of sustainable landscapes include:

- Building healthy, living soils
- Using climate-appropriate plants
- Treating rain as a resource
- Irrigating efficiently



Sustainable Landscape Benefits

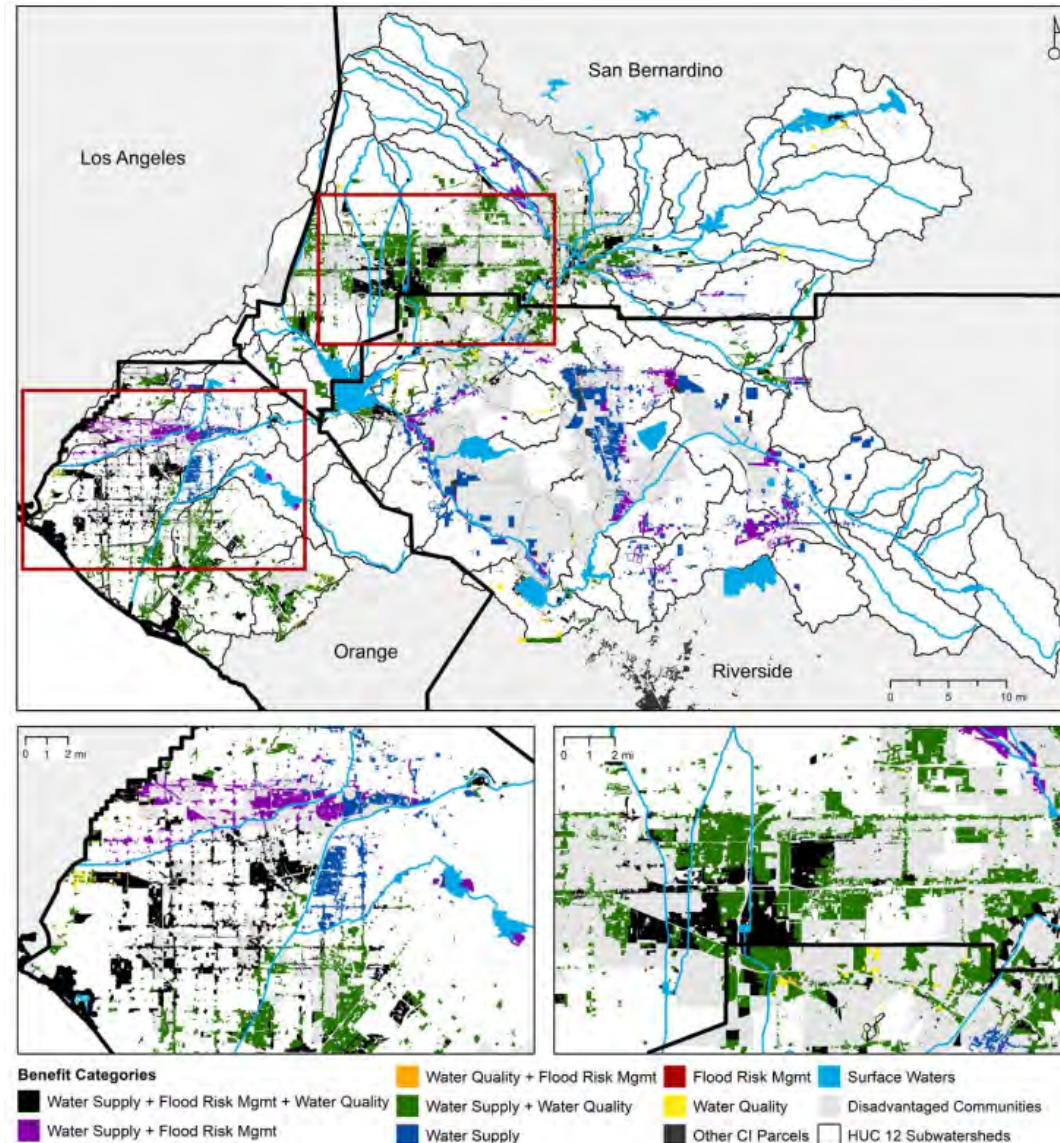
Sustainable landscapes provide benefits to the site and the surrounding community:



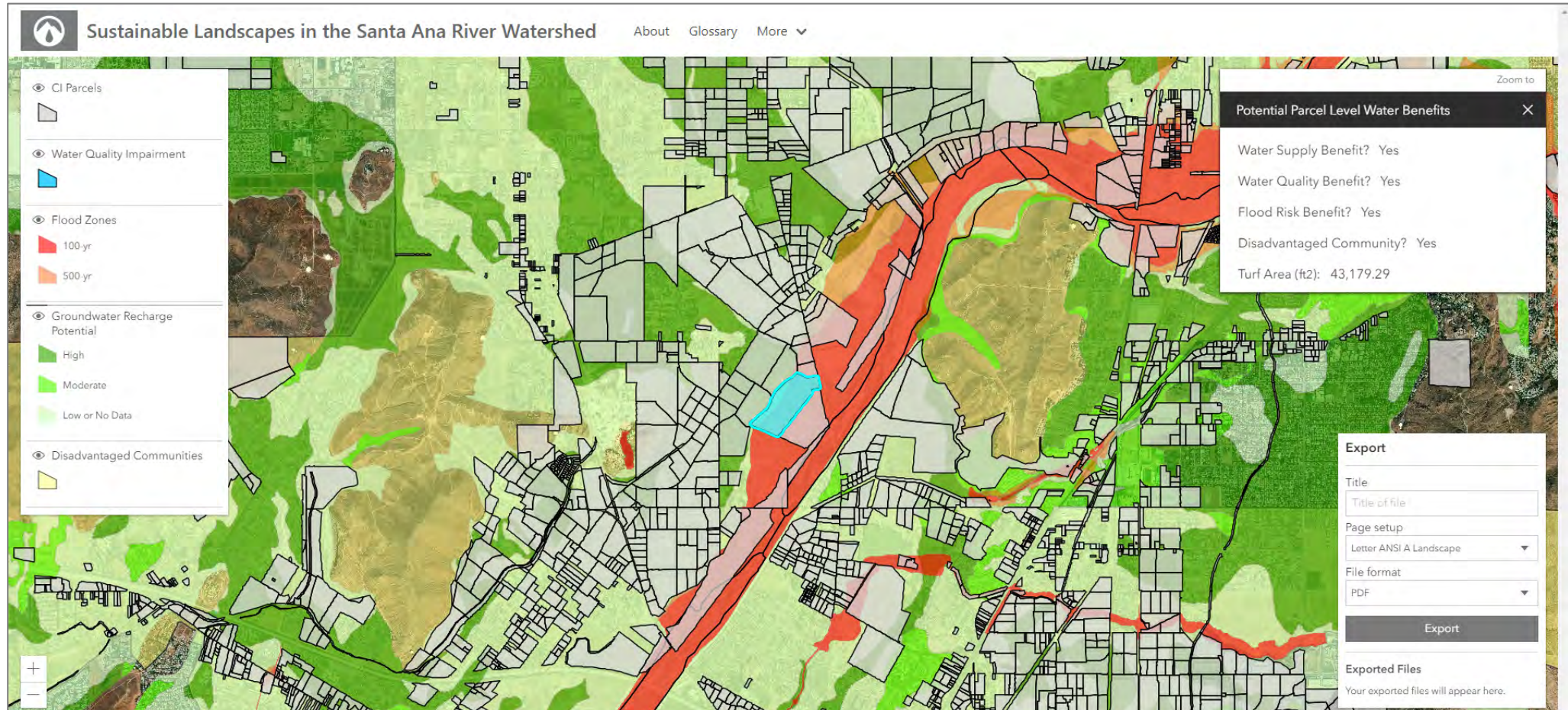
Geospatial analysis informed our understanding of the potential multiple benefits of sustainable landscapes.

Analysis at watershed and parcel scale:

- Water supply
- Water quality
- Flood risk mitigation
- Disadvantaged communities

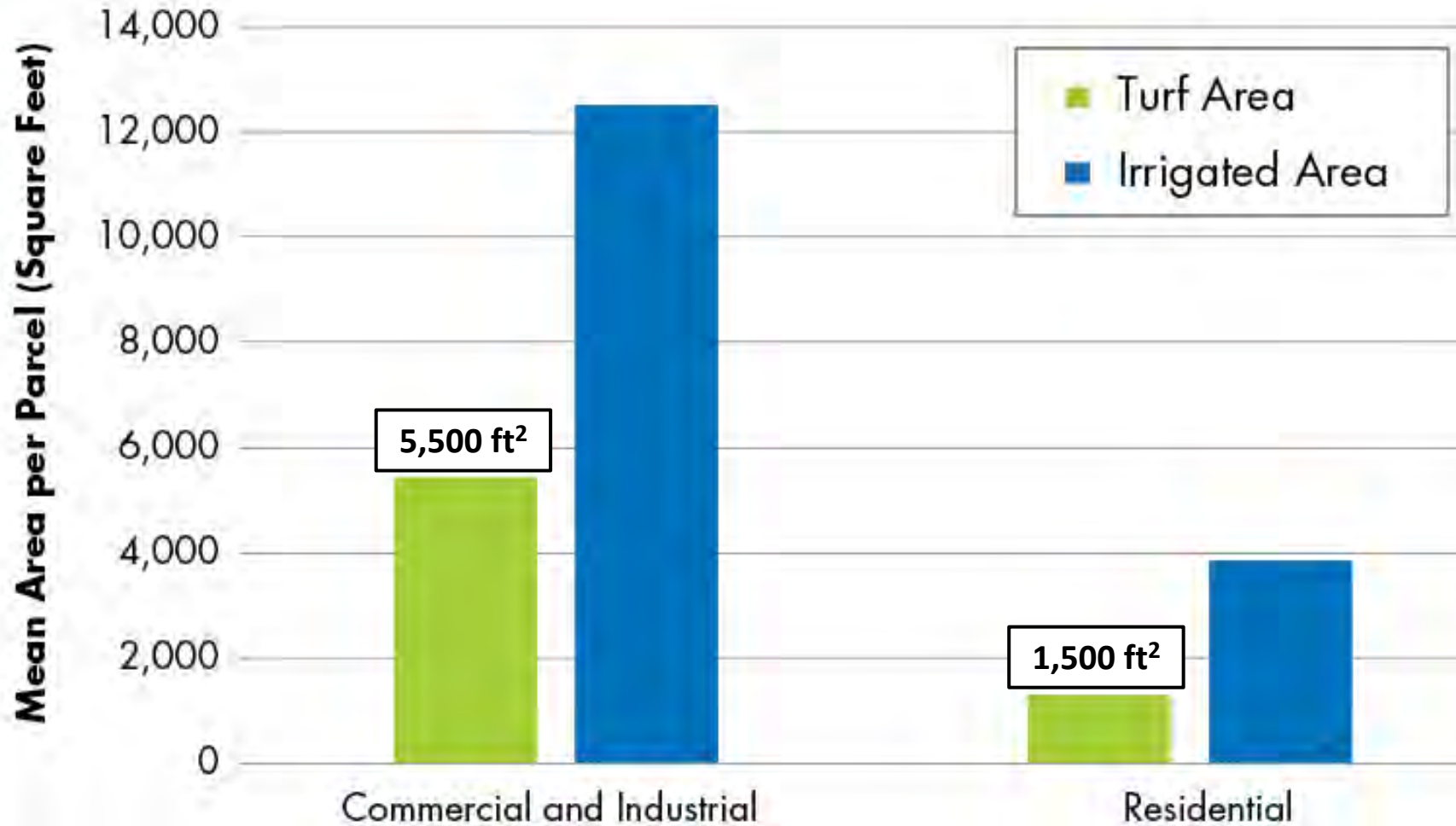


This analysis is accessible in a free, interactive online mapping tool.



www.pacinst.org/santa-ana-benefits-map

Why focus on CI properties?



Understand business interests to make connections with landscape benefits

- How are decisions made?
- What information do decision-makers need?
- What drives investment?
- Is the business consumer-facing or largely operational?
- What is the business's budgeting process for sustainability projects?



Business motivations to invest in sustainable landscapes vary depending on the company.

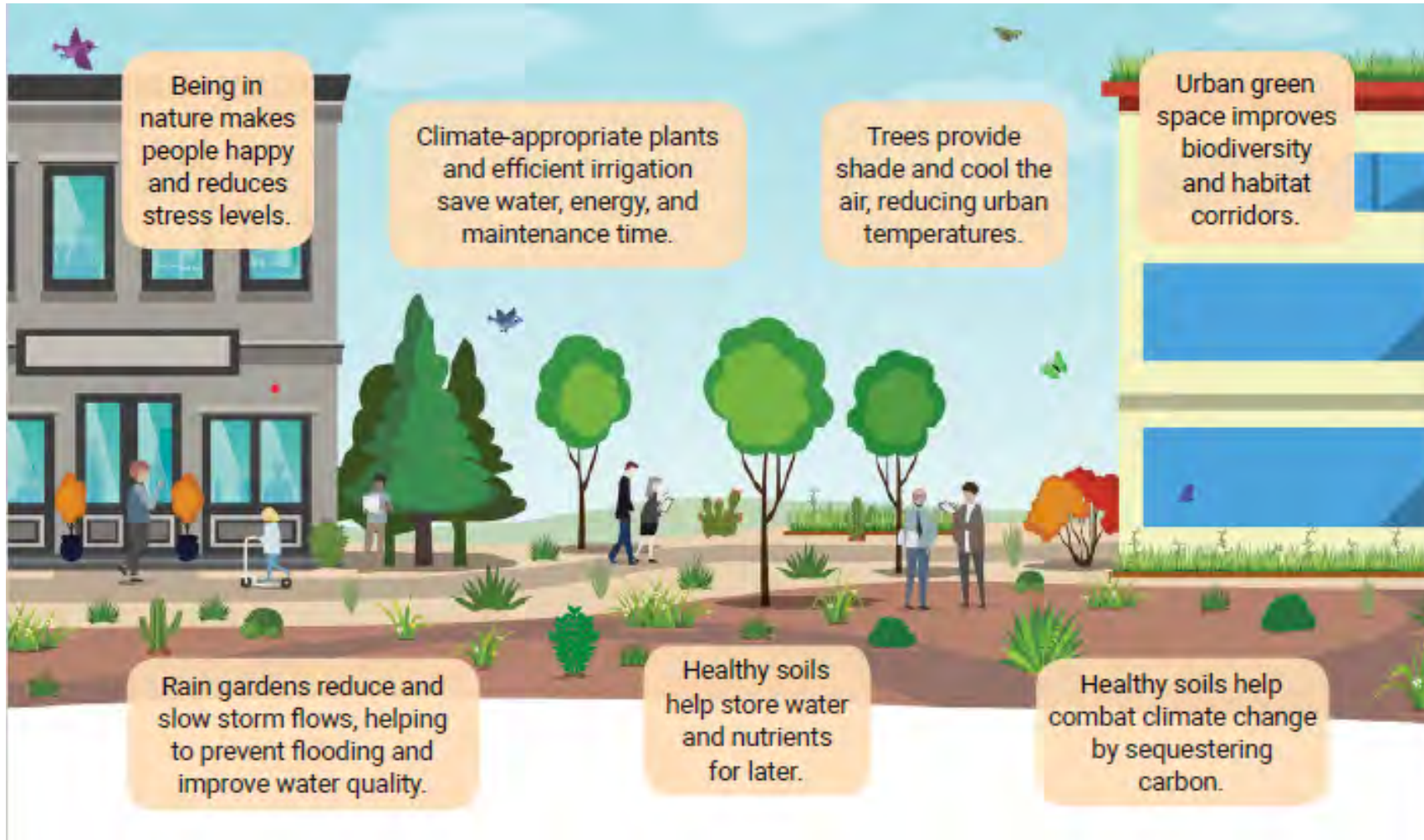
- Financial savings
- Sustainability goals
- Social responsibility
- Water risk



We identified several barriers to adoption.

- Project benefits not fully understood and distributed among multiple parties.
- Business decision-making processes complex and varied.
- Few financial incentives for benefits beyond water savings.
- Business community often unaware of available rebates.
- Permitting and regulatory requirements complex and varied.
- Specialized knowledge needed to install & maintain landscapes.

Connect business interests to landscape benefits



Foster Long-term Relationships between Water Managers and the Business Community

- Lack of established relationships between water utility staff and the business community and difficulty in maintaining these relationships
- Staff turnover and designated roles make it difficult to understand *who* to contact within the organization
- Providing avenues to build these relationships and a shared understanding of goals is key



Create Tailored Materials that Speak to the Business Community



Worksheet A: Understanding the Why and Why Not

The following questions can help you explore motivations and concerns. If you do not know an answer, ask for input from your supervisor, coworkers, or landscape maintenance provider.

What **motivates** your company to consider changing the landscape? (check all that apply)

- ☐ Conserve water
- ☐ Reduce water bills
- ☐ Improve aesthetics
- ☐ Meet corporate sustainability goals
- ☐ Improve property value
- ☐ Be a steward of the environment
- ☐ Demonstrate sustainability commitment to local community/employees
- ☐ Obtain sustainability certification (e.g., LEED¹)
- ☐ Reduce maintenance costs and/or time
- ☐ Reduce flooding or water damage
- ☐ Other: _____

What are your company's **concerns** about changing the landscape? (check all that apply)

- ☐ Installation cost
- ☐ Maintenance cost
- ☐ Time investment
- ☐ Changed aesthetics
- ☐ Disruption to operations (parking, noise, etc.)
- ☐ Other: _____

¹ Leadership in Energy and Environmental Design, <https://www.usgbc.org/leed>.

Worksheet B: How Are Decisions Made and What Information Is Needed?

There are multiple people who might play a role in the project, whether to plan, implement, or maintain the new landscaping. Recall your company's motivations from Step 1 and consider any co-benefits, beyond water savings, that you might want to incorporate into the sustainable landscape.

These can inform decision making and any information needed to support that process.

Answering the following questions will help you better understand decision making. If you do not know an answer, seek input from your supervisor or coworkers.

Property management

Who owns the site? _____

Who has management control of the landscape? _____

Financial management

Who makes decisions about budget and finances for the site? List their name(s), position(s), and what role they play in budget decisions _____

How would the project be funded?

- Are there any restrictions or requirements associated with this funding source? For example, is there a return on investment threshold, a certain number of bids required, or a certain timeline to follow?
- Are rebates available from the local water provider or stormwater agency? (See Box 2)

What other information would be needed? _____

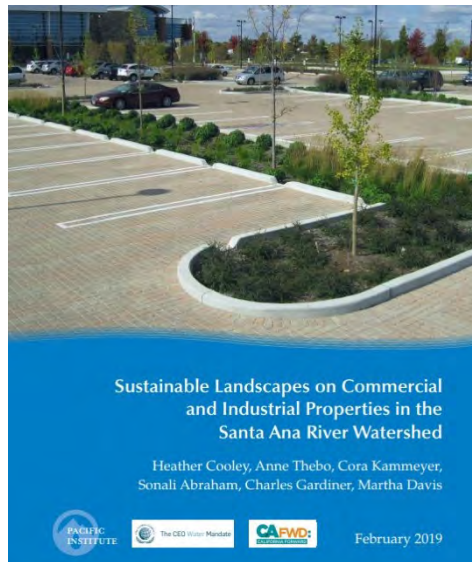
Create Tailored Materials that Speak to the Business Community

- Use language and examples that resonate with the business community
- Develop resources to assist businesses considering sustainable landscapes
 - Quantification of benefits
 - Understanding the project ROI
 - Case studies with practical examples



Resources and Next steps

- Continuing to engage the business community, build relationships, and work with businesses interested in installing sustainable landscapes
- Creating resources to help assist businesses



pacinst.org/publication/sustainable-landscapes-santa-ana-river/



Informational flyer targeted at businesses



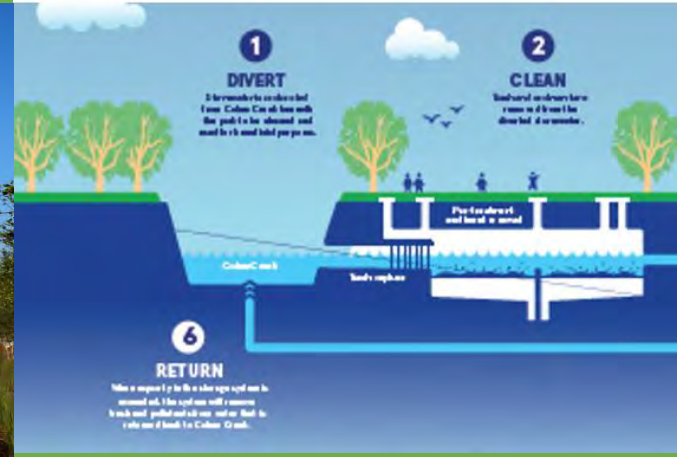
<https://pacinst.org/publication/sustainable-landscapes-guidebook/>



Thank you!

Sonali Abraham, Pacific Institute
sabraham@pacinst.org

A One Water Approach to Urban Water Management



Rosey Jencks, Vice President
One Water Technical Leader

CALWEP Per to Peer December 2020

Outline

- What is a One Water Approach?
- How to think about One Water
- One Water in Action





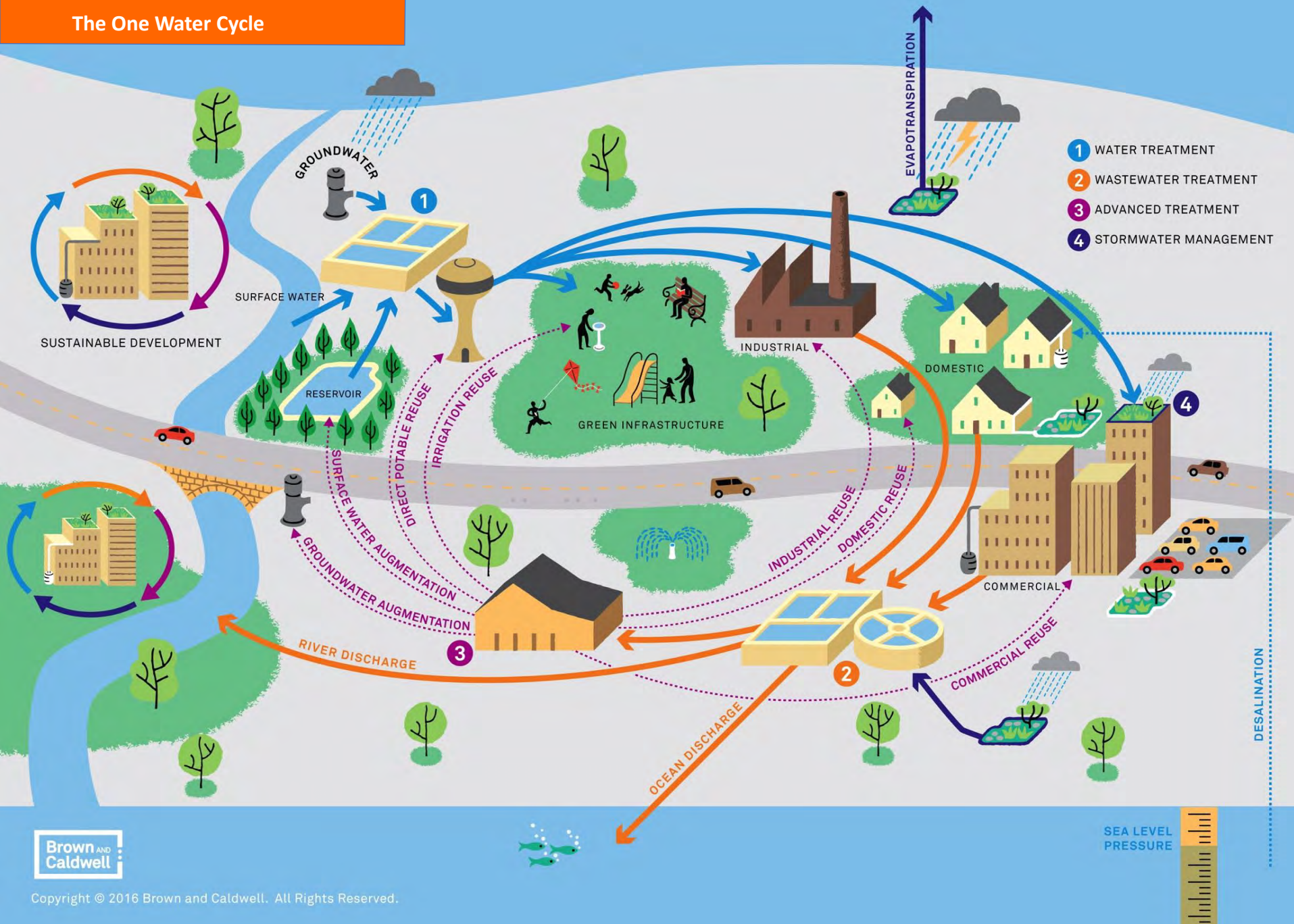
ONE WATER

One Water defined

One Water is an integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs.

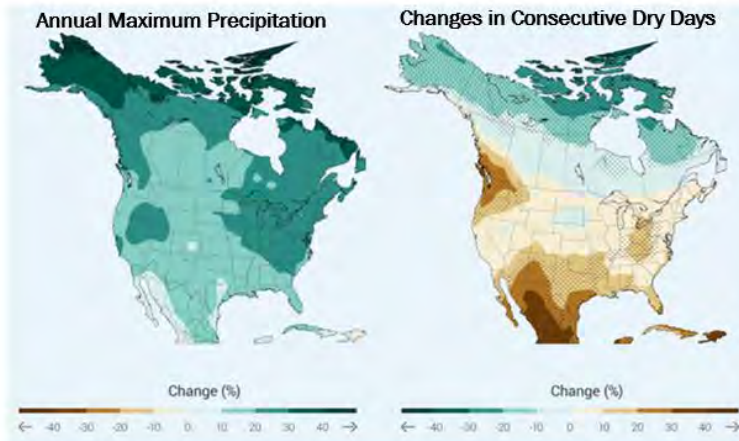


The One Water Cycle



Why do we need a One Water Approach?

Extreme Precipitation Events and Longer Droughts Expected



2070-2099 predictions

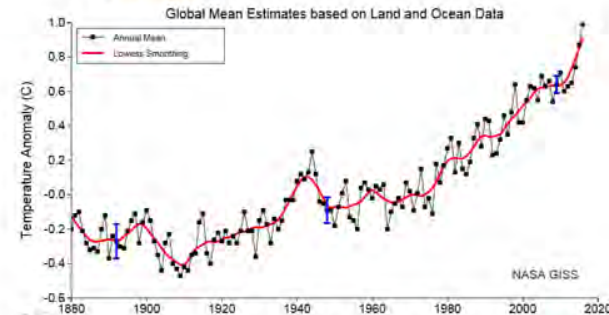
Source: NOAA NCDC/CICS-NC, 2014 National Climate Assessment

Driving Forces Toward One Water - Steadily Rising Temperatures

The Washington Post

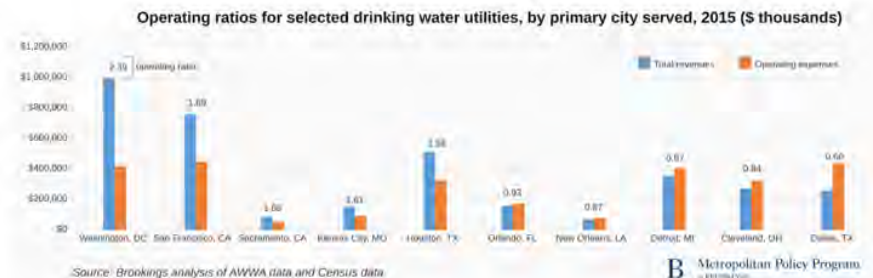
U.S. scientists officially declare 2016 the hottest year on record. That makes three in a row.

By Chris Mooney



Source: Hansen et al. 2010, Global surface temperature change, Rev. Geophys., 48, RG4004, doi:10.1029/2010RG000

Challenges to Financial Sustainability



Source: Brookings analyses of AWWA data and Census data

Source: Brookings Institute, Dec. 2016

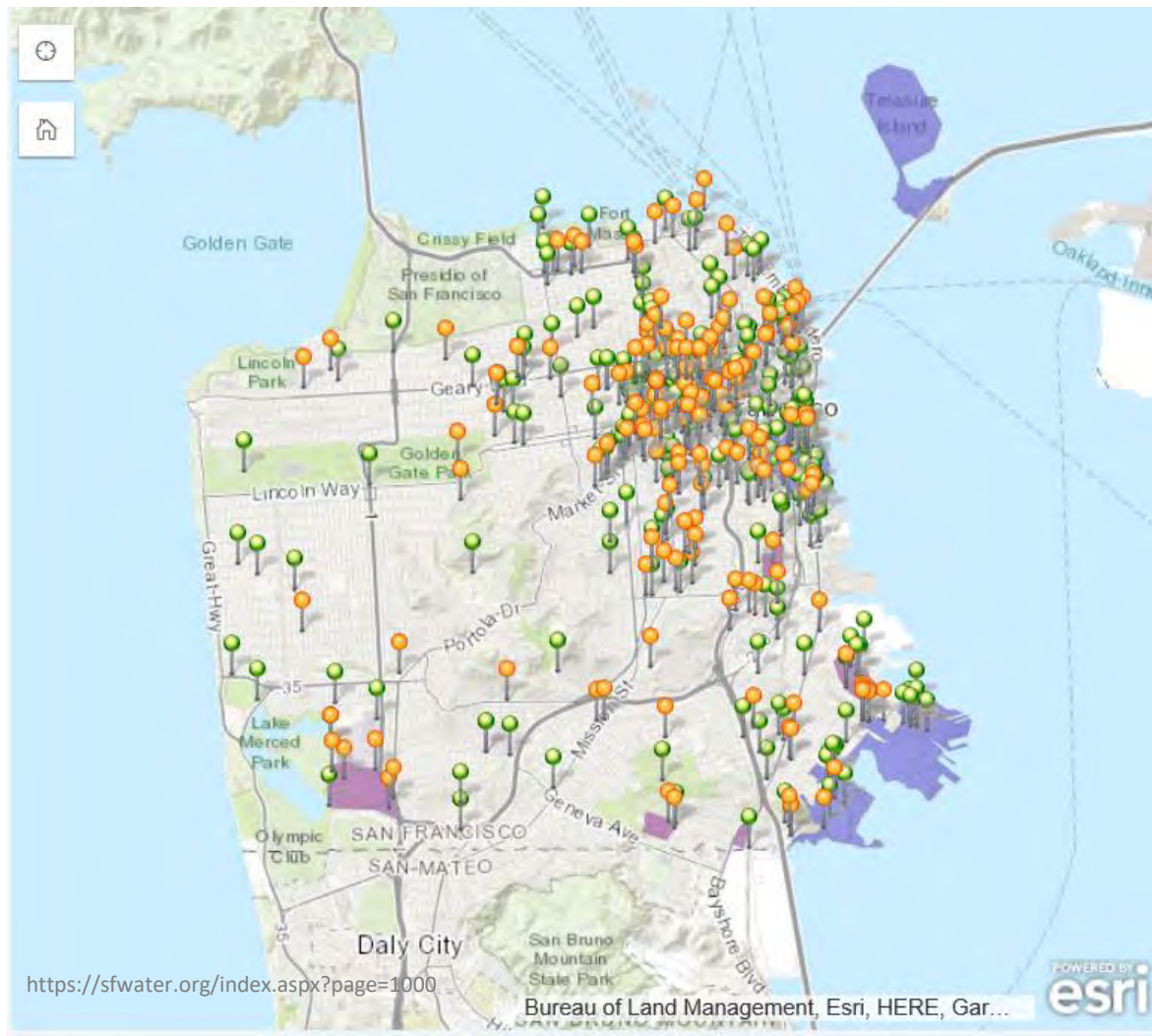
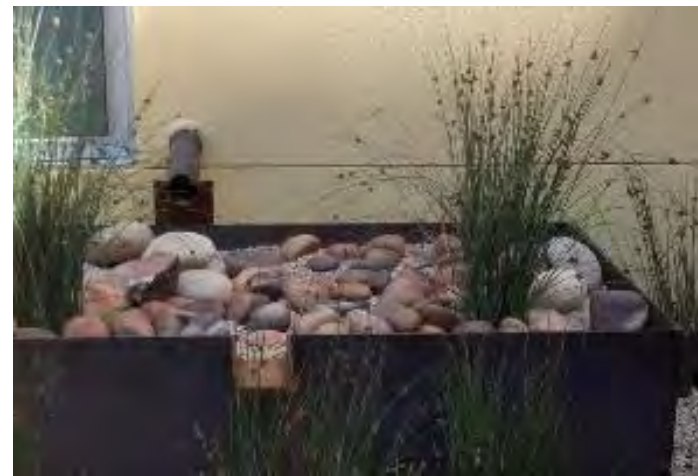
Key Elements of a One Water Approach



Think like a watershed, but start where you are



My One Water story begins with stormwater management

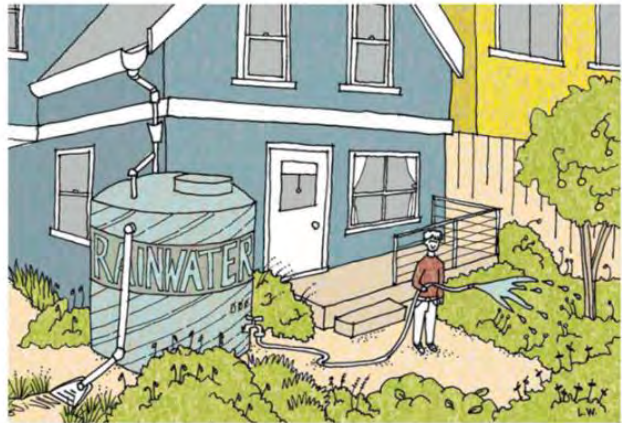


<https://sfwater.org/index.aspx?page=1000>

Bureau of Land Management, Esri, HERE, Gar...

POWERED BY
esri

<https://sfwater.org/index.aspx?page=1000>



SAN FRANCISCO
rainwater  **harvesting manual**
 for non-potable residential uses



SAN FRANCISCO
graywater design manual
 for OUTDOOR IRRIGATION



One Water Schools



Photo:
Birgit Teichmann

Photo: Birgit Teichmann

Photo: Birgit Teichmann

Living Schoolyards as Stormwater Infrastructure

- Berlin Model
- Technical Planning and design
- Charrette on Stevenson Projects

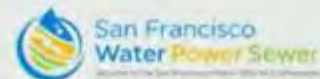


Living Schoolyards as Stormwater Infrastructure: Inspiring School Grounds of Berlin

Keynote speaker:

Birgit Teichmann

Teichmann Landschafts Architekten
Berlin, Germany



Green Streets



STREETSCAPE IMPROVEMENT PROJECT

CESAR CHAVEZ STREETSCAPE

CESAR CHAVEZ STREETSCAPE IMPROVEMENT PROJECT
Cesar Chavez Street is an important arterial in the Mission District that provides direct access to the Mission District from Highway 101. The purpose of the streetscape improvement project, which focuses on the segment between Guerrero Street and Hampshire Street, is to improve the security, aesthetics, and infrastructure and transit efficiency of the corridor.

This project will also turn Cesar Chavez into a sustainable "green street" by increasing the number of street trees, implementing Low Impact Development & Design practices, and installing stormwater planters.

A COORDINATED EFFORT
A joint effort between the San Francisco Department of Public Works, Planning, Municipal Transportation Agency, and Public Utilities Commission, the project aims to address many issues affecting Cesar Chavez. Each department is working together to ensure that proper lighting, drainage, safety, and street vibrancy is promoted. The coordinated project will reinvent Cesar Chavez as a welcoming multimodal roadway with increased transit efficiency, corridor greening, permanent bike lanes, and efficient lighting and sewage infrastructure.

PROJECT HIGHLIGHTS

- Widening the center median and installing bulb-outs at intersections and mid-blocks.
- Install new energy-efficient LED street lighting.
- Install street furnishings such as trash cans and seating.
- Plant 302 new street trees.
- Improve street drainage and irrigation.
- Resurface and repave the roadway.
- Increase sewer reliability and minimize potential flooding.
- Installation of permanent bike lanes.
- Green the street with new landscaping and biofiltration planters.
- Construct public plazas that pay homage to the streets namesake; Cesar Chavez.

Total Project Cost:
\$1.16 Million

Project Team:
Project Manager:
Project Lead:

Cristina Olea
John Dennis

Schedule:
Construction Began: February 2013
Construction Completed: January 2014

City and County of San Francisco
Department of Public Works
<http://www.sfdpw.org>

Cesar Chavez Streetscape Improvements

Center median with street trees

Biofiltration planters collect rain and recharge the watershed

Sidewalk extensions increase transit efficiency



Delivering Equitable Outcomes

Equitable Engagement

Equitable Engagement Guidelines can support project managers in ensuring that engagement procedures that are reflective of the needs and values of the communities you serve.

- Develop a community profile
- Tailor engagement strategies to meet harder to engage community members
- Pay community members for their expertise
- Validate project assumptions and data with the community
- Adaptively manage process to insure statistically representative participation
- Catalogue community direction and report back on where their input is reflected within the project, plan or program

EQUITABLE ENGAGEMENT GUIDELINES

COMMUNITY OUTREACH AND COMMUNICATIONS GUIDELINES
DRAFT FINAL – VERSION 1



Prepared for:

San Francisco Public Utilities Commission
525 Golden Gate Avenue, 9th Floor
San Francisco, California 94102

Prepared by:

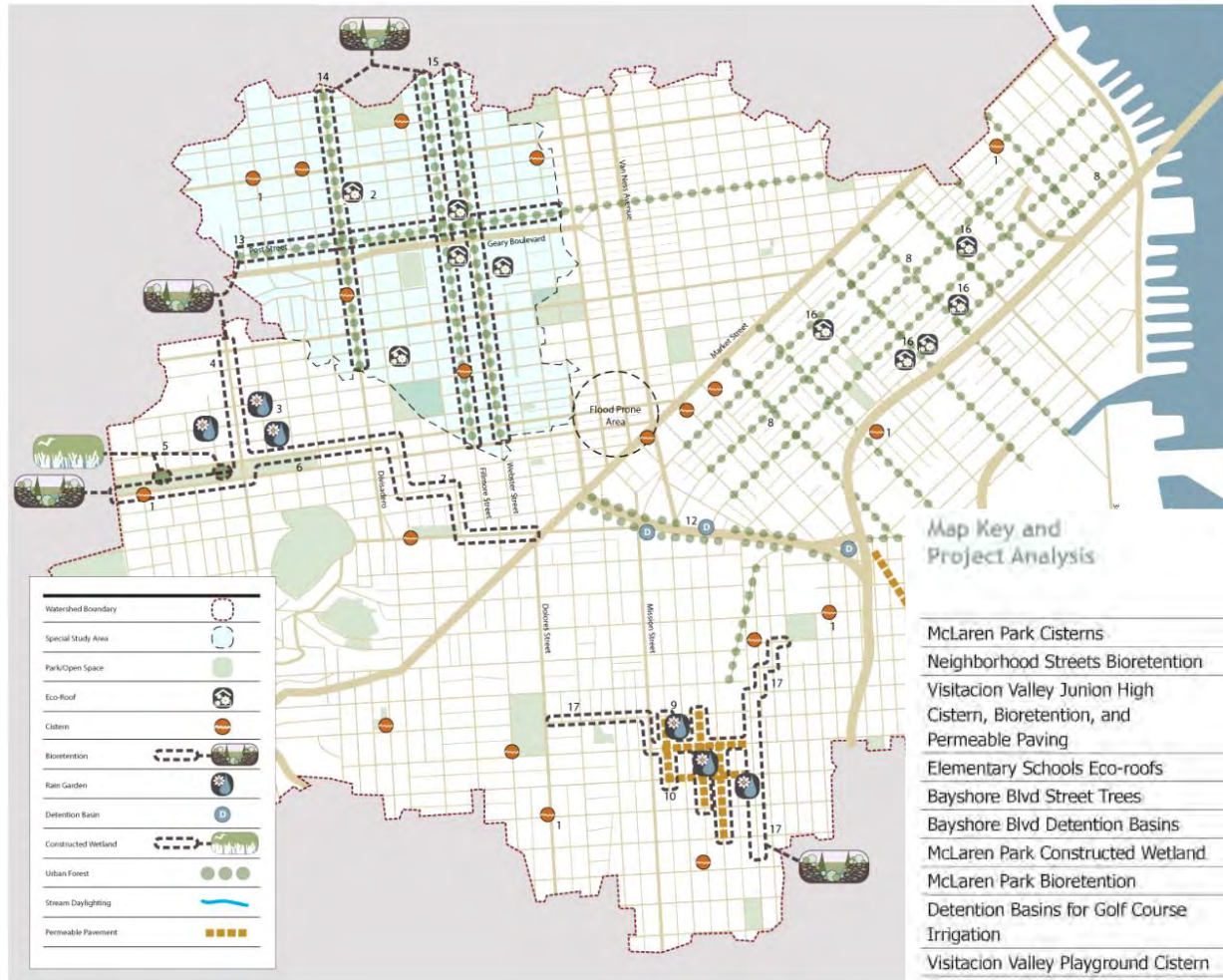
Sewer System Improvement Program
Program Management Consultant
Contract CS-165

JANUARY 2016



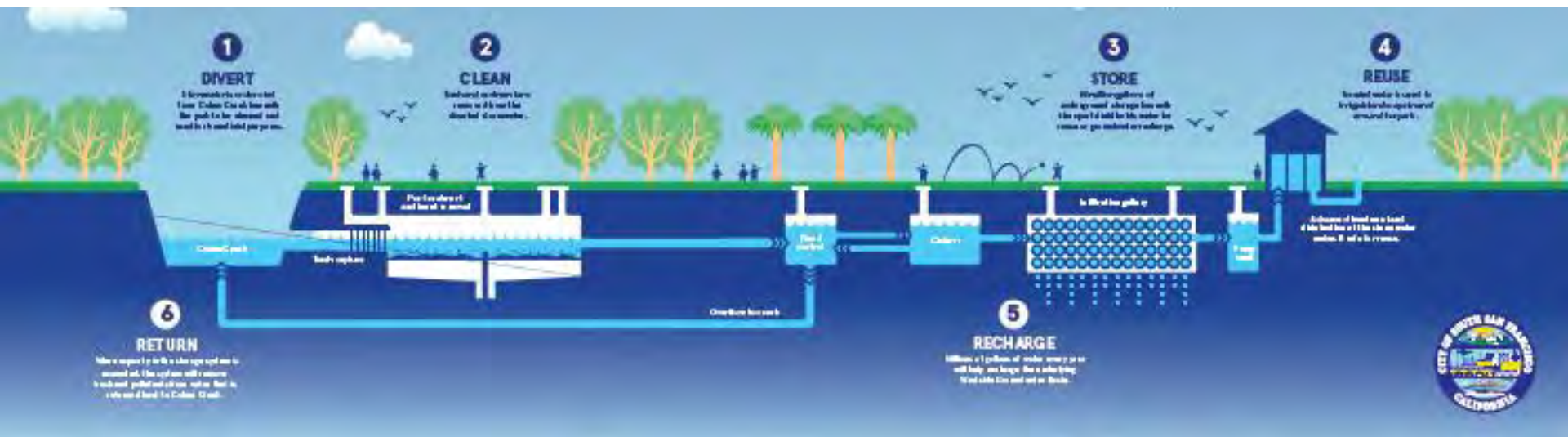
Delivering Equitable Outcomes

Watershed Planning Game



Channel Basin

Stormwater Parks

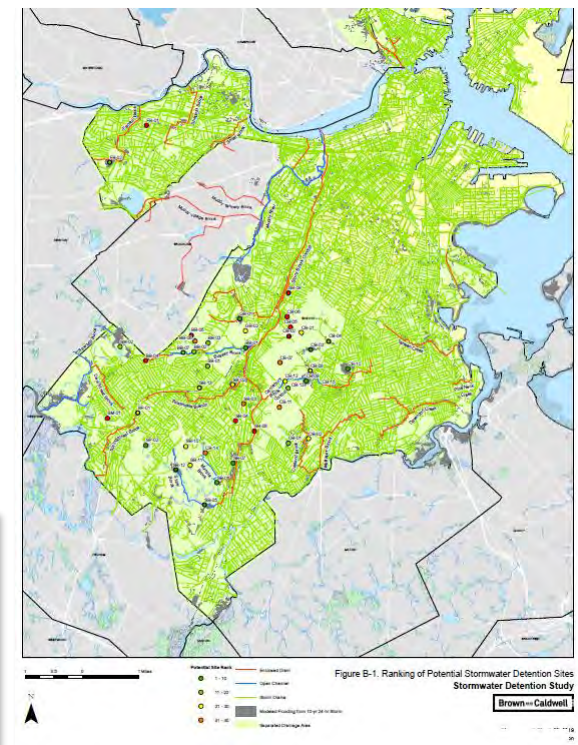
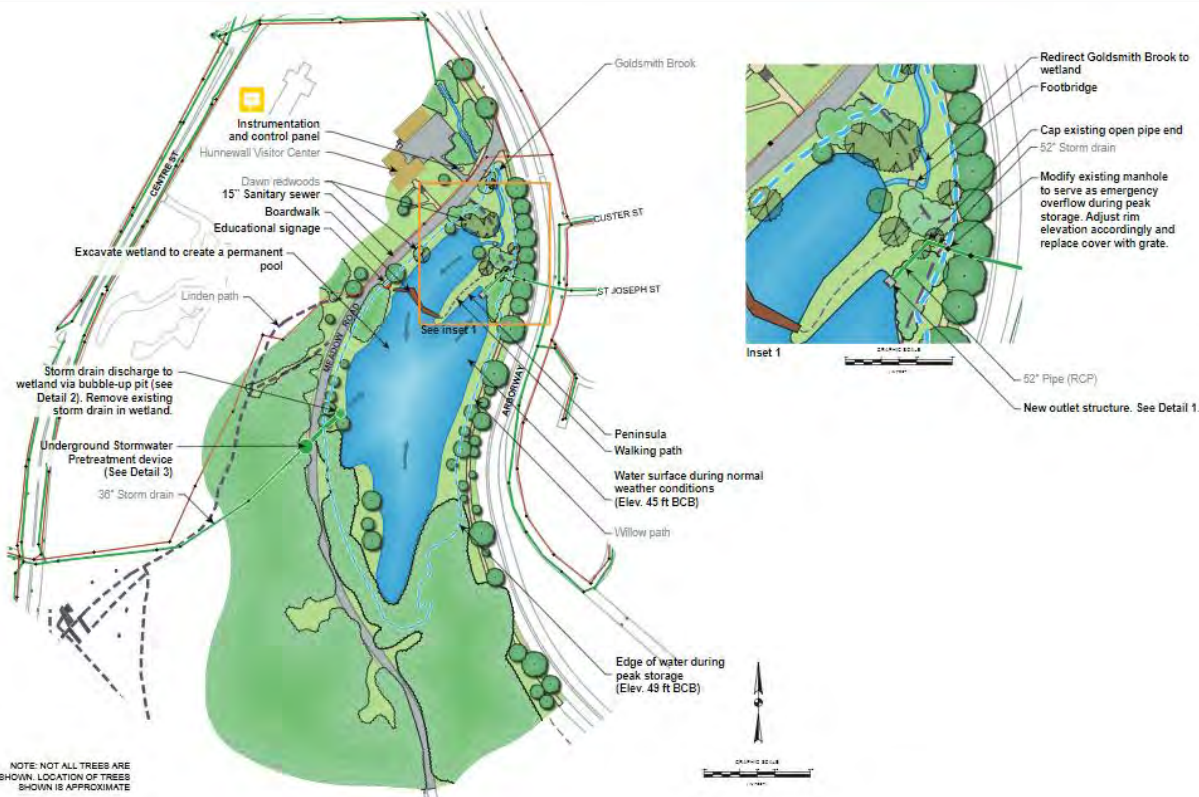


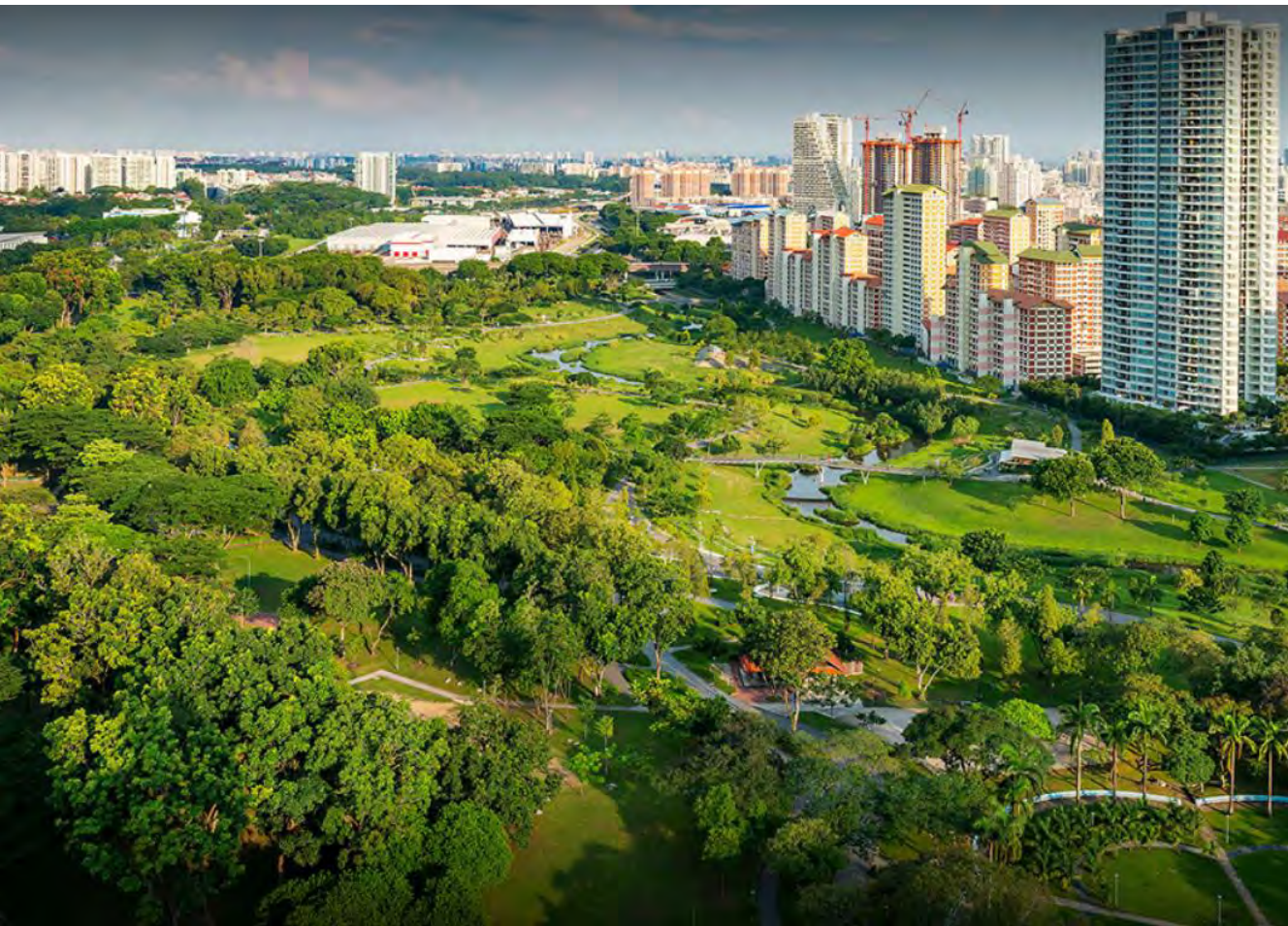
Water quality, reuse for park irrigation
and groundwater recharge

Orange Memorial Park
Stormwater Capture
South San Francisco

Multi-benefit resilient infrastructure

Boston, MA: floodable Parks & Streets and Water Quality





Bishan-Ang Mo Kio Park, Singapore

Local water supply, flood management, river restoration, vegetated stormwater treatment, water playscapes & habitat enhancement

https://en.wikipedia.org/wiki/Bishan-Ang_Mo_Kio_Park



During Storm Event



After Storm Event

Local water supply, flood management, river restoration, vegetated stormwater treatment, water playscapes & habitat enhancement

https://en.wikipedia.org/wiki/Bishan-Ang_Mo_Kio_Park



Local water supply, flood management, river restoration, vegetated stormwater treatment, water playscapes & habitat enhancement



https://en.wikipedia.org/wiki/Bishan-Ang_Mo_Kio_Park

Blueprint for **One Water**

WRF PROJECT 4660



Download a copy of the Blueprint for One Water:

<http://www.waterrf.org/Pages/Projects.aspx?PID=4660>

Thank you!

rjencks@brwnncald.com



it's about connecting



essential ingredients®