



Climate Resilient Water Resources Planning

A Local Perspective

Sarah Young, CFM, Senior Project Manager
Prepared for [DWR CCTAG](#)
Aug. 23, 2013

Santa Clara Valley
Water District 

Outline

- ▶ About the Water District
- ▶ Local context
- ▶ Climate change by simplistic number
- ▶ District policies/framework/approach
- ▶ Plans for the future
- ▶ Personal perspectives for integrating climate science

Our core services

About Santa Clara Valley Water District



SAFE, RELIABLE WATER



FLOOD PROTECTION



HEALTHY CREEKS & ECOSYSTEMS

3 |

An urban waterscape in a semi-arid region

Local context

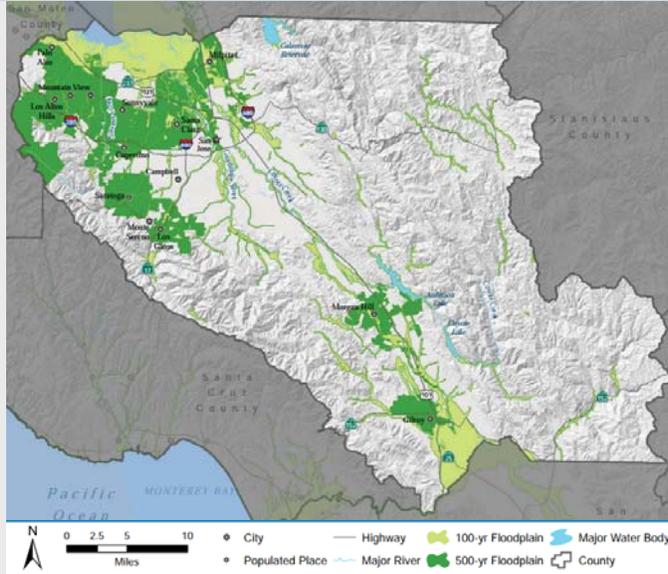


- 800** square miles of watershed lands
- 240** miles of creeks & rivers managed
- 5** major watershed areas
- 15** municipalities
- 16** Water retailers
- ~2 million** Population

4 |

7% land areas is flood prone

Local Context: <http://www.water.ca.gov/sfmp/>



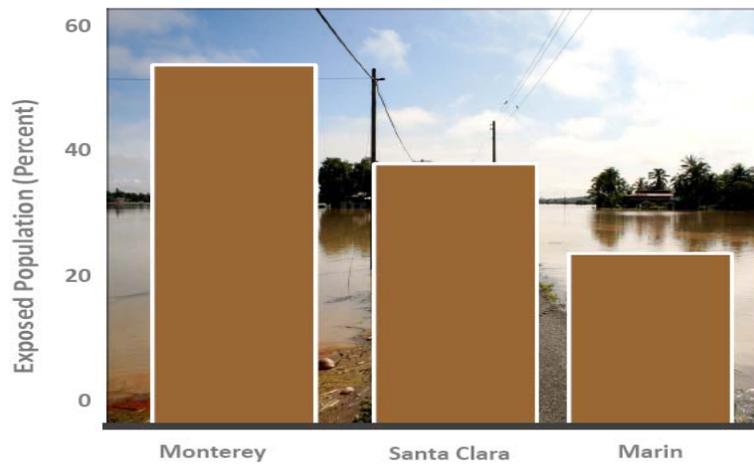
15 billion
exposed
structure
and
contents

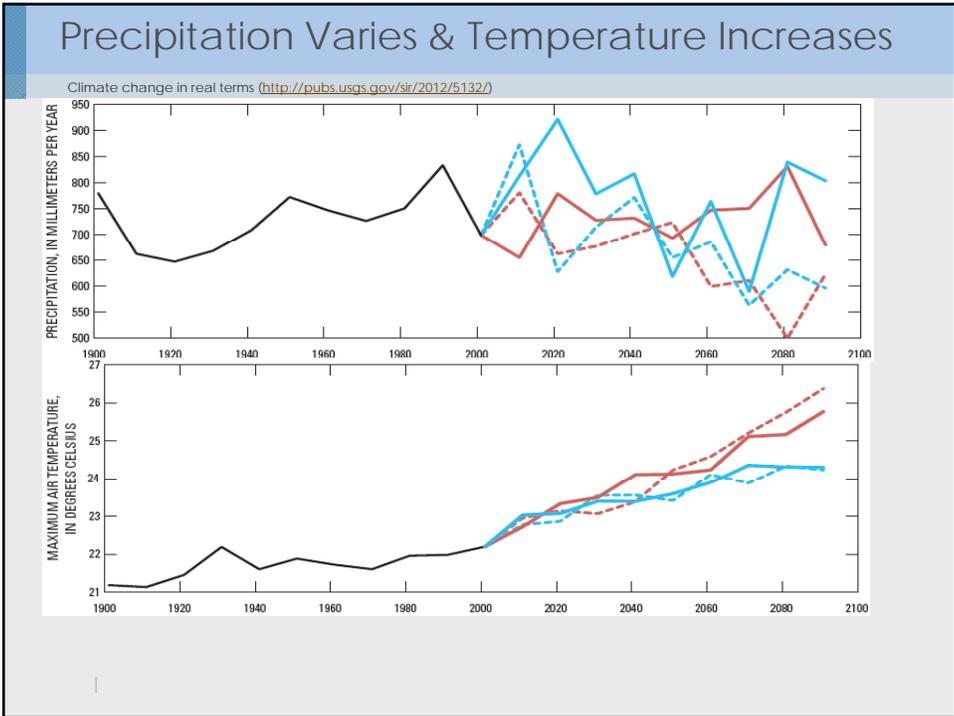
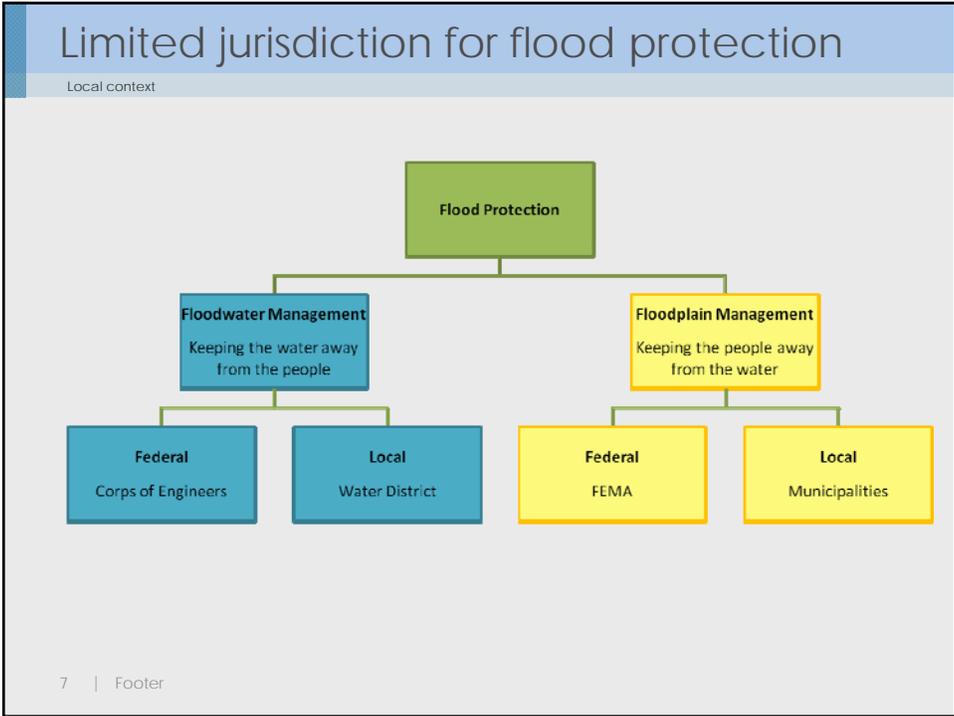
134 miles of
Transportati
on Facilities

133K
Population
Exposed

One in three Residents Exposed to Flooding

Local context <http://www.water.ca.gov/sfmp/>





SLR increases land vulnerable to flood

Climate change in real terms <http://tidesandcurrents.noaa.gov/sltrends/index.shtml>

Land Vulnerable to a 100-Year Flood Event

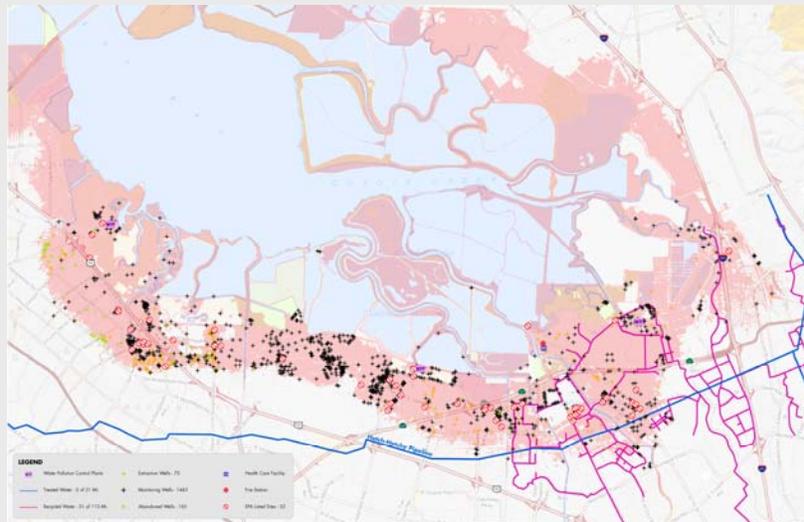
	Estimated Acreage in 2000	Estimated Acreage in 2100	Percent Change
Bay Area:	9,650	14,200	+32%



disclaimer

Assets affected with a 55-inch SLR Scenario

Based on overlays from: www.cal-adapt.org



District Policies

Policy

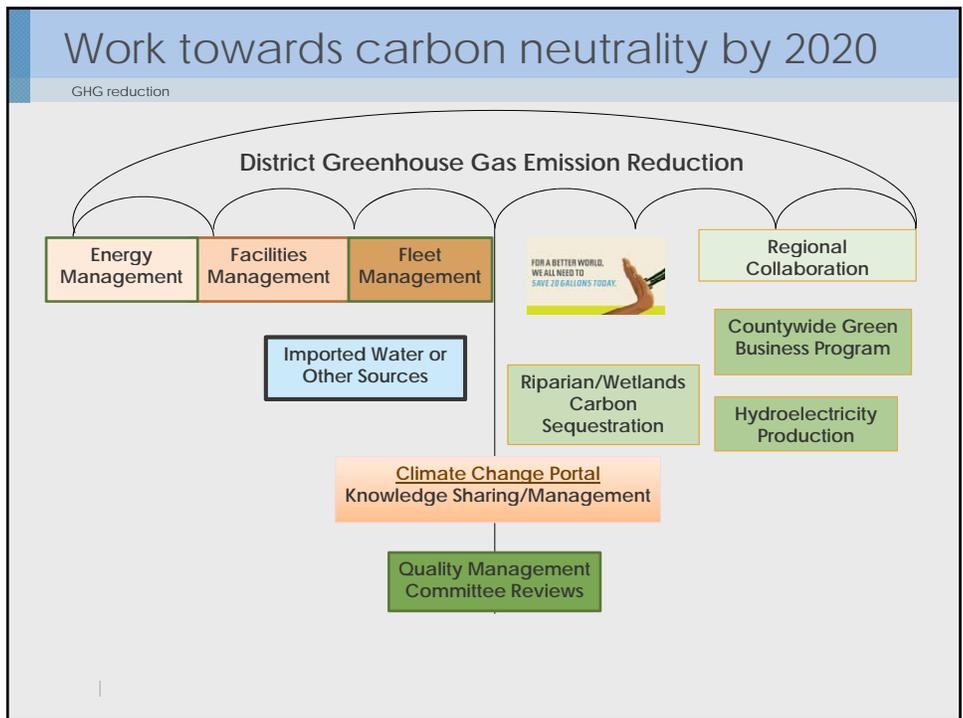
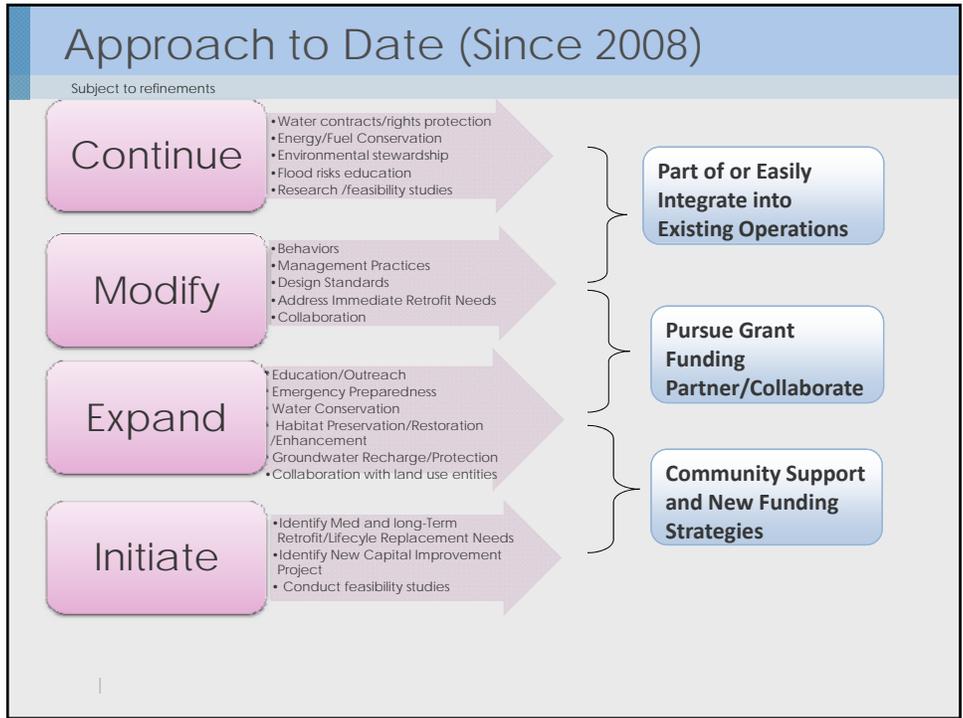
4.3.1. Reduce greenhouse gas emissions to achieve carbon neutrality by 2020.

EL6.4. Apply current understanding of climate change into District planning efforts.

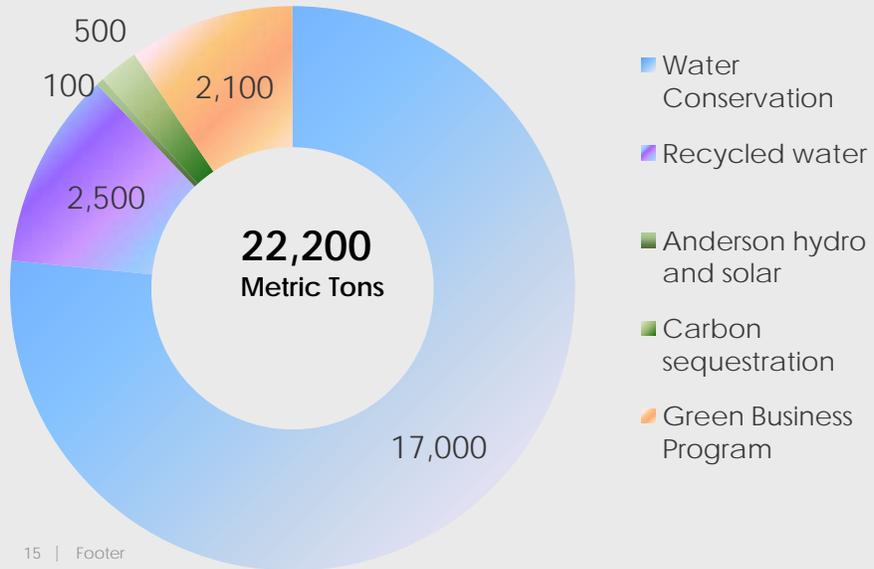
Conceptual Framework for Climate Action (2008)

Subject to refinements

Greenhouse Gas Emissions	Key Effects	Key Risks	Key Early/No-Regret Actions	Other Actions
District Owned/ Operated Facilities	Rising Temperature	Increase Demand Threaten Import Extended Drought	Emergency Preparedness	Influence Policy-Making
Product/Service Chain Related Emissions	Reduced Snow Pack	Severe/Changes in Flooding	Conservation/ Recycling	Strategize Funding
Trip Related or Other Community Related	Rainfall Pattern Changes	Tidal Flooding	Education/ Outreach (Promote CC BMPs)	Garner Support
	Sea Level Rise	More Wildfires Species /Habitat Loss/Migration	Update Analytical Tools(CEQA)	Expand Partnership/ Collaboration
			Identify/Refine Capital Projects Needs	
			Energy/Fuel Efficiency	
			Partnership/Collaboration	



Diversify GHG reductions portfolio



Plan for the future

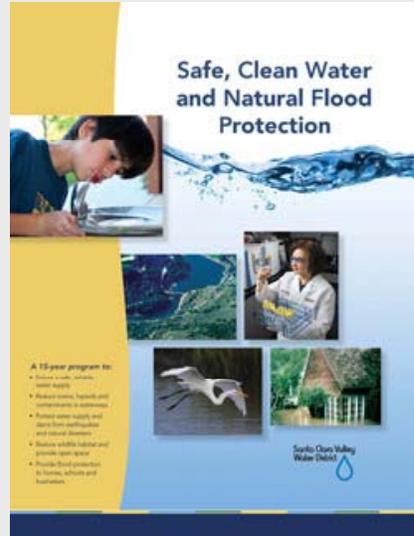
Integrating climate change into planning



15-Year Plan furthers climate resiliency

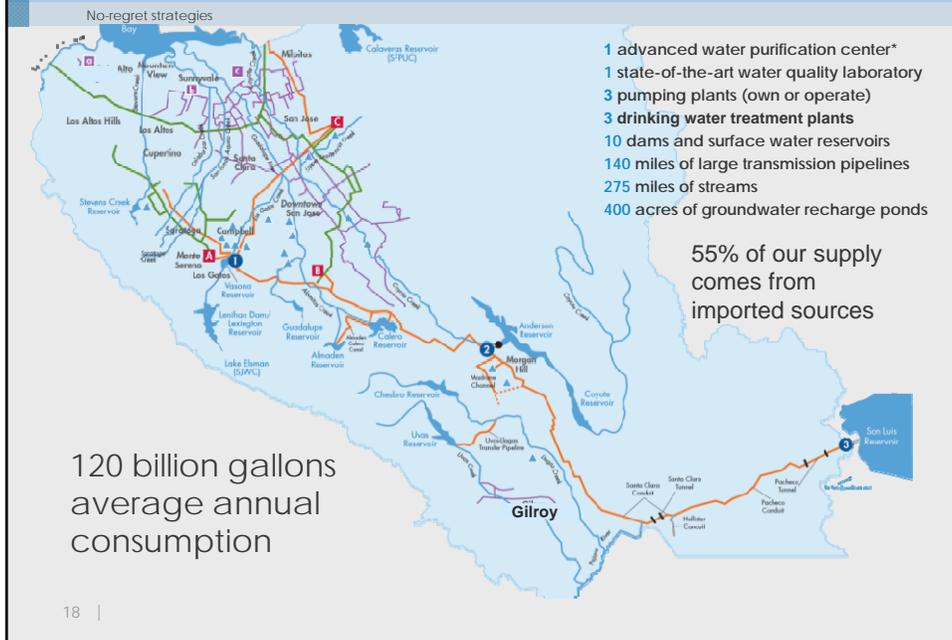
Integrating climate change into planning

- ▶ Ensure a safe reliable water supply
- ▶ Reduce toxins, hazards and contaminants in our waterways
- ▶ Protect our water supply from earthquakes and natural disasters
- ▶ Restore wildlife habitat and provide open space
- ▶ Provide flood protection to homes, businesses, schools, and highways

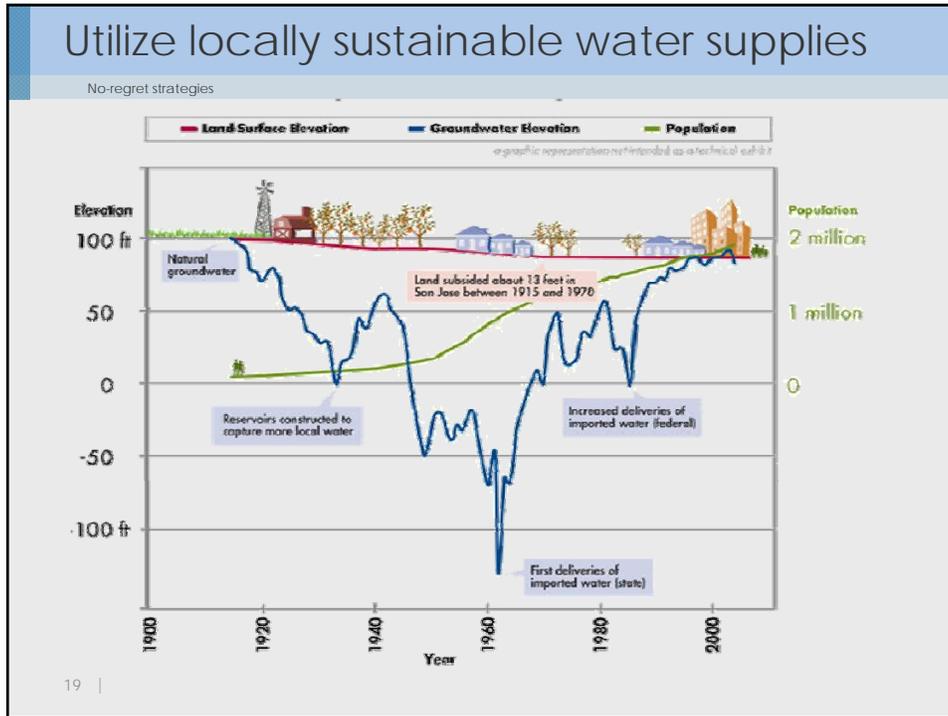


17 | Footer

A diversified, flexible water infrastructure



18 |



Engage in regional efforts

No-regret strategies

- ▶ Silicon Valley 2.0
- ▶ HCPs and NCPPs
- ▶ Bay area IRWMP
- ▶ South Bay Salt Pond Restoration
- ▶ Shoreline Protection



21 | Footer

Influence local land use decision making

No-regret strategies

115-245 North McCarthy Boulevard (Equity Office)

Last Updated by Milpitas on Mar 27



Project: The project adds 424,814 square feet of office space in six, five-story buildings and constructing a parking garage.

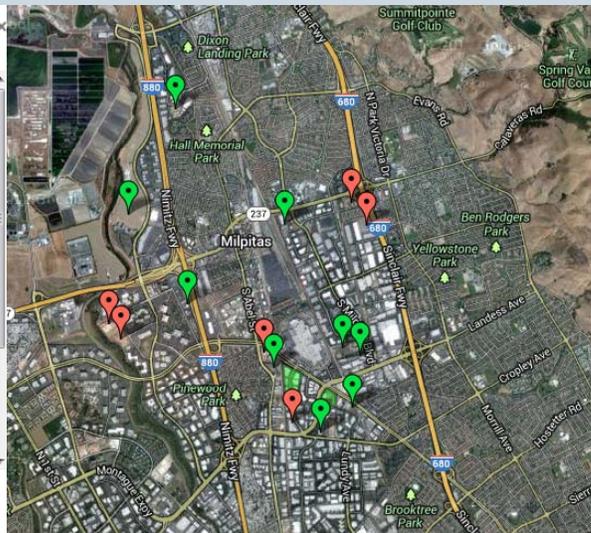
Location: 115-245 N McCarthy Blvd (APNs: 22-56-005, -008, -009, -007, -006)

Zoning: MP

Entitlement: Major Tentative Map, Site Development Permit, and Conditional Use Permit

Applicant: Equity Office

[Directions](#) [Search nearby](#) [Save to map](#) [more](#)



Consider flood zone, pipe lines, waterways
incorporate trails feasibility, groundwater impacts in site planning

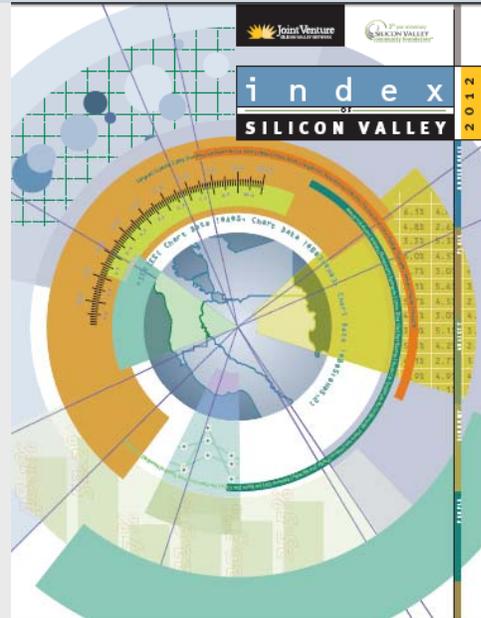
22 | Footer

Public-Private partnership/community support

No-regret strategies

"Water is one of the Region's **most precious resources**, serving a multitude of needs... Sustainability in the long run requires that households, workplaces, and agriculture operations **efficiently use and reuse water.**"

23 |



Integrating climate science

Personal perspectives

- ▶ Establish, collect, analyze local data
- ▶ Review, analyze trends at different geo scales
- ▶ Follow new design standards
- ▶ Integrate climate science as core competency
- ▶ Plan for flexibility and resiliency
- ▶ Diversify supplies and services (add more shades of green)
- ▶ Partner/Collaborate/Community Engagement

24 | Footer

Not as challenging as some may thoughts

Personal perspectives

- ▶ Risk management
- ▶ Trend tracking
- ▶ Broaden the perspectives
- ▶ Apply new tools /analytics
- ▶ Communicate new dimensions to old problems

Apply Adaptation Strategies for Water Sector

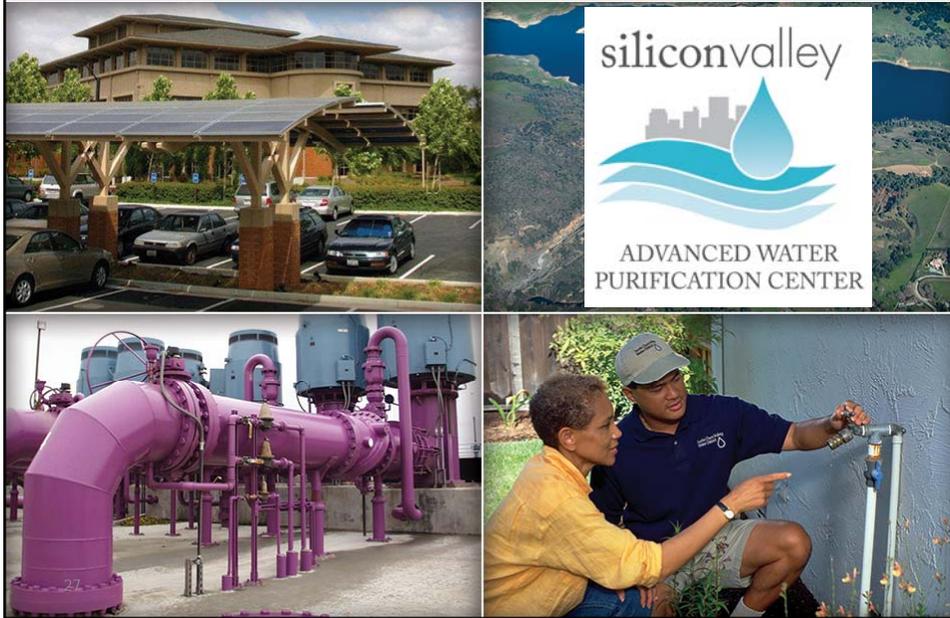
From: http://resources.ca.gov/climate_adaptation/docs/Statewide_Adaptation_Strategy.pdf

- ▶ Provide Sustainable Funding for Statewide and Integrated Regional Water Management
- ▶ Fully Develop the Potential of Integrated Regional Water Management
- ▶ Aggressively Increase Water Use Efficiency
- ▶ Practice and Promote Integrated Flood Management
- ▶ Enhance and Sustain Ecosystems
- ▶ Expand Water Storage and Conjunctive Management of Surface and Groundwater Resources
- ▶ Fix Delta Water Supply, Quality and Ecosystem Conditions
- ▶ Preserve, Upgrade and Increase Monitoring, Data Analysis and Management
- ▶ Plan for and Adapt to Sea-Level Rise
- ▶ Identify and Fund Focused Climate Change Impacts and Adaptation Research and Analysis

26 | Footer

Invest in local green infrastructure

Key strategies for moving forward



Emergency preparedness

Key strategies for moving forward

CAL FIRE

- Five Year Cooperative Fire Protection Reimbursement Agreement (PL-566 and Lexington Hills Community Wildfire Protection Plan)
- Water Tender Dispatch Program



Santa Clara County Office of Emergency Services (OES)

- Partnered with County OES to promote AlertSCC



ALLERTSCC.gov

Be proactive and lead the way

Key strategies for moving forward



Climate Registered™



CALIFORNIA
SUSTAINABILITY
ALLIANCE

2010 Sustainability
Showcase Award



29 | Footer



Questions/Comments

<http://bit.ly/2BVhT> for climate change portal

www.valleywater.org

syoung@valleywater.org

(408)630-2468

Santa Clara Valley
Water District

