



# A Utility of the Future: Investing in Our City and Creating Jobs

**Harlan Kelly, General Manager**  
*San Francisco Public Utilities Commission*

**Congressional Briefing**  
**Water Week 2014**

**\$4.8**  
**Trillion**





240,000





300,000

# STATE OF EMERGENCY



**CBS**  
THIS  
MORNING

**STATE OF EMERGENCY**

CHEMICAL SPILL CUTS WATER TO 300K, FORCES CLOSURES



62





17

# Severe water shortages

State health officials on Tuesday identified 17 small community water districts in 10 counties that are at risk of running out of water in 60-120 days due to the drought.



Source: California Department of Public Health

BAY AREA NEWS GROUP



26,000

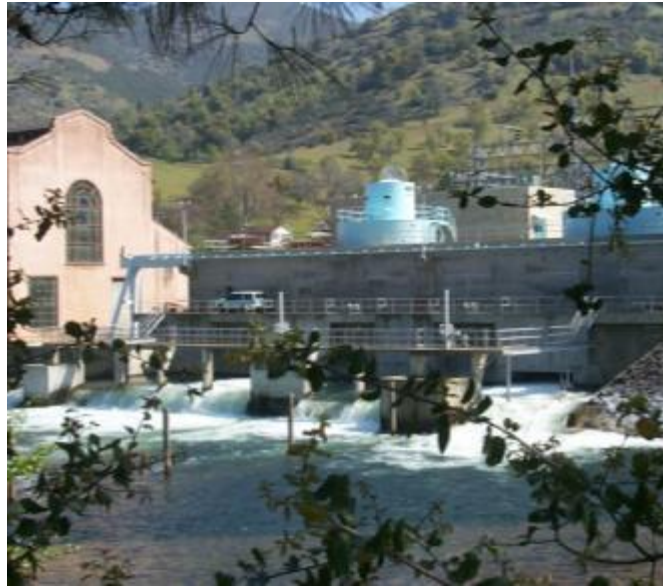




# San Francisco Public Utilities Commission



*Water: Delivering high quality  
water every day*



*Power: Generating clean  
energy for vital City services*

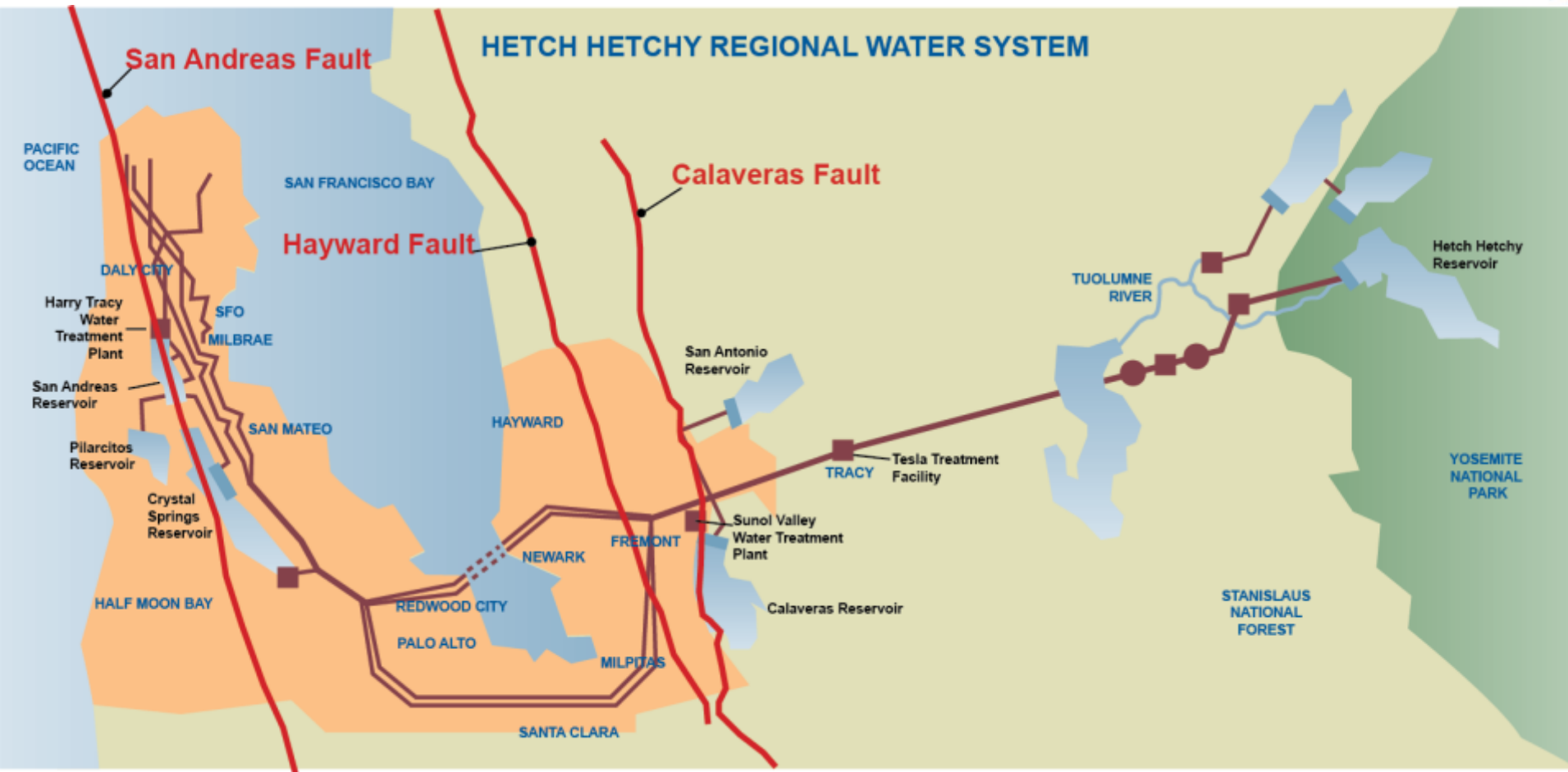


*Sewer: Protecting public health  
and the environment*



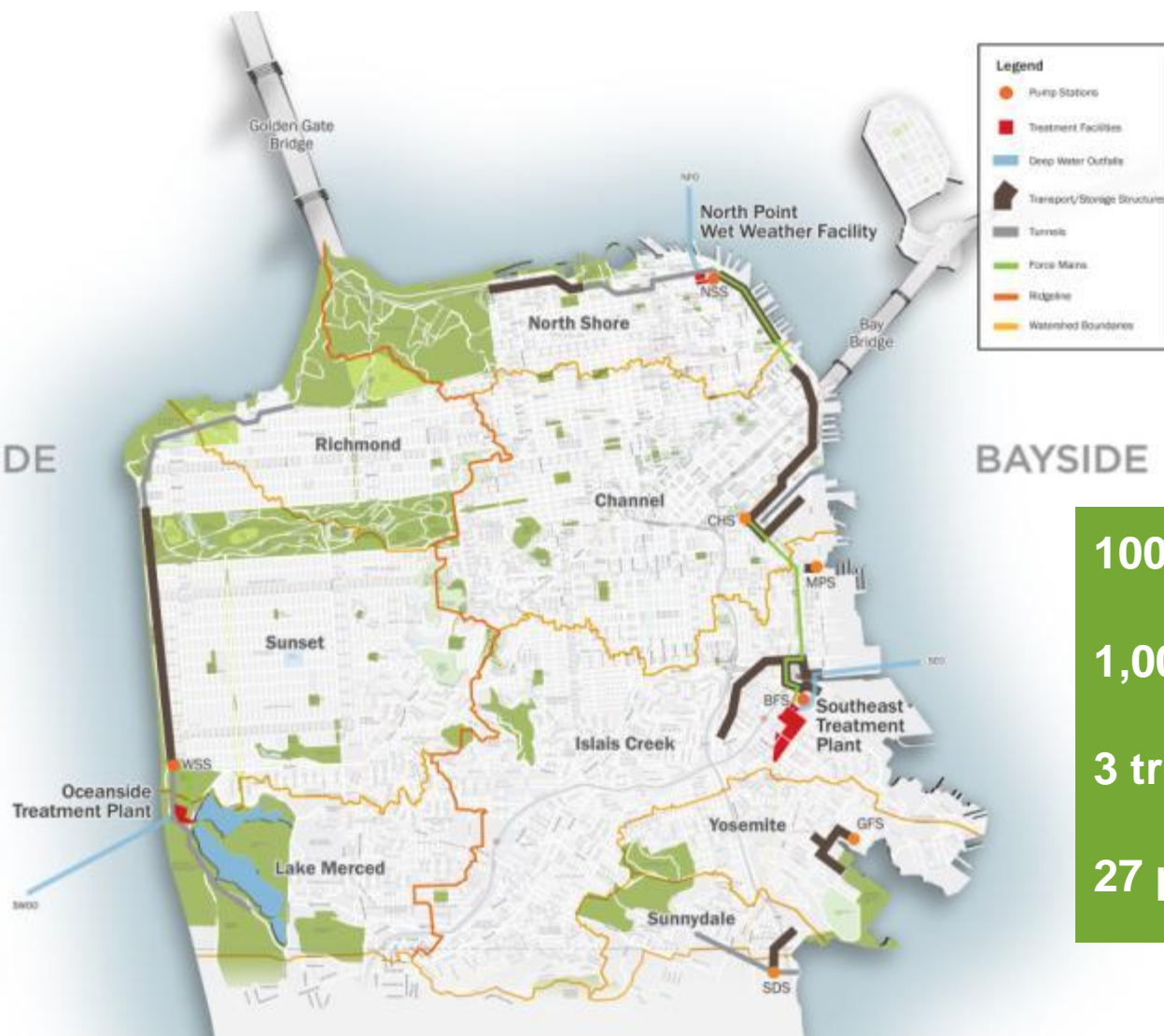


# Our Regional Water System





# Our Combined Sewer System



100-year-old system

1,000 miles of pipes

3 treatment plants

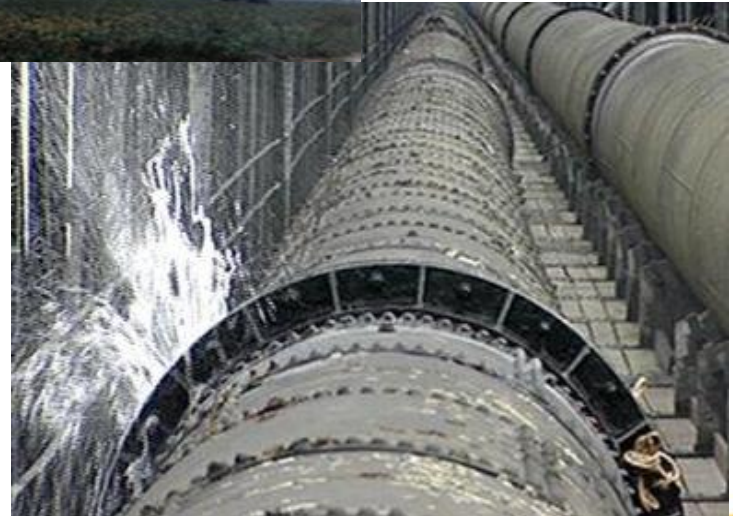
27 pump stations

# SFPUC Infrastructure Improvement Programs



# The Need to Rebuild the Water System

- Aging system
- Lack of redundancy
- Seismic Reliability



# Water System Improvement Program

- \$4.6 billion program
- 80% complete
- Award-winning program
- 11,000 jobs and 6 million craft hours created
- 81 projects including new dam, treatment plants, pipeline replacement and state's largest UV treatment plant





# Today's Sewer Challenges

Aging System



Excess Stormwater



Future Regulations



Seismic Concerns



Operations Optimization



Climate Change





# Sewer System Improvement Program

**Grey.**

**Green.**

**Clean.**



**SYSTEM & SEISMIC  
RELIABILITY & REDUNDANCY**



**INNOVATIVE STORMWATER  
MANAGEMENT SOLUTIONS**



**PROTECTING OUR BAY  
& PACIFIC OCEAN**



# Levels of Service Goals

- Provide a Compliant, Reliable, Resilient, & Flexible System that **Respond to Catastrophic Events**
- Integrate Green & Grey Infrastructure to **Manage Stormwater**
- Provide **Benefits** to Impacted **Communities**
- Modify the System to **Adapt to Climate Change**
- Achieve **Economic & Environmental Sustainability**
- Maintain **Ratepayer Affordability**



# SSIP Climate Change Evaluation- Risk Analysis and Adaptation Planning



King Tide at the Embarcadero

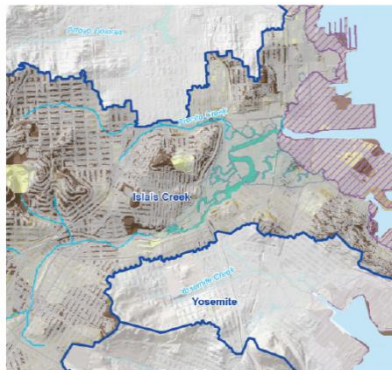
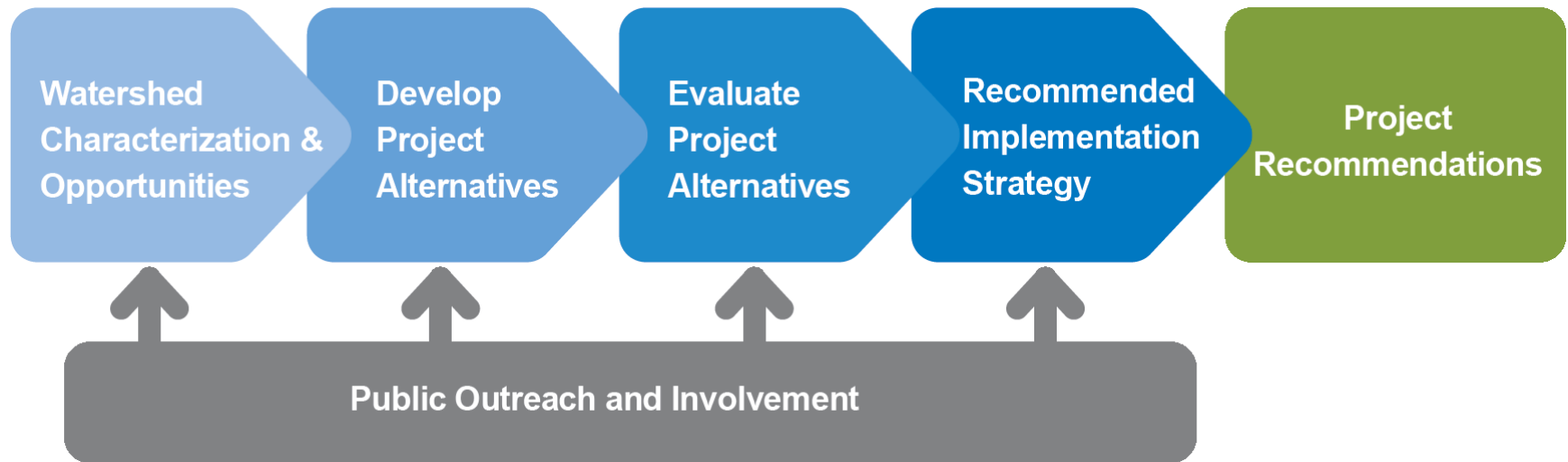




# SSIP Urban Watershed Assessment

September 2011

December 2015



CHARACTERIZATION



PUBLIC OUTREACH



TRIPLE BOTTOM LINE  
ANALYSIS

# SSIP Triple Bottom Line Analysis

## Indicators

### Financial (LCA)

Annualized Capital Costs

Annualized Other Costs

### Environmental

Climate

Air Quality

Water Quality

Water Use

Habitat

Natural Resource Inputs

### Social

System Resilience

Ratepayer Affordability

Employment

Bicycle and Pedestrian  
Environment

Recreation / Open Space

Cultural Resources

Odors

Noise

Land Use Adjacency

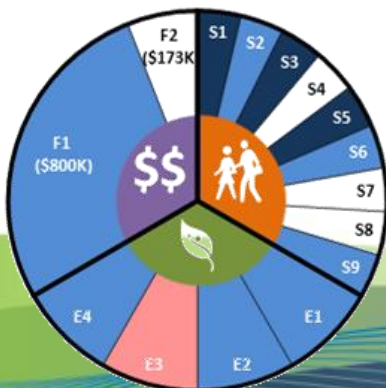
Construction Impacts

Worker Safety

## Output

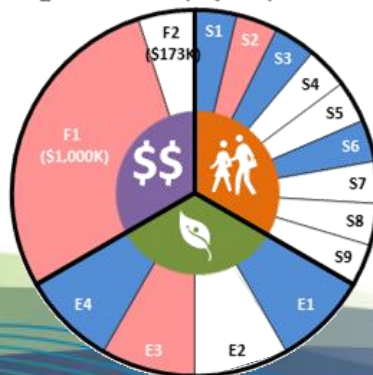
Alt 1

Islais\_GS-a - Islais Cr - project A (Valencia St)



Alt 3

Islais\_GS-c - Islais Cr - project C (Guerrero St)



# Being A Good Neighbor

Environmental Justice Policy (2009) & Community Benefits Policy (2011) guide the SFPUC to be a “good neighbor” by providing additional benefits and lessening environmental impacts.







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