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

Harlan Kelly, General Manager
San Francisco Public Utilities Commission
$4.8 Trillion
240,000
300,000
STATE OF EMERGENCY

Chemical spill cuts water to 300k, forces closures.
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.

1. **AMADOR COUNTY**
   - Jackson Valley Irrigation District

2. **FRESNO COUNTY**
   - Shaver Lake Heights Mutual Water Co.
   - Sierra Cedars Community Services District

3. **KERN COUNTY**
   - Boulder Canyon Water Association
   - Camp Condor
   - Cypress Canyon Water System
   - Lake of the Woods Mutual Water Co.

4. **MADERA COUNTY**
   - Bass Lake Water Co.

5. **MARIPOSA COUNTY**
   - Whispering Pines Apartments

6. **MENDOCINO COUNTY**
   - Brooktrails Township Community Services District
   - Redwood Valley Community Water District
   - Willits

7. **NEVADA COUNTY**
   - Washington Ridge Conservation Camp

8. **PLACER COUNTY**
   - Ophir Gardens

9. **SANTA CRUZ COUNTY**
   - Lompico County Water District

10. **SONOMA COUNTY**
    - Cloverdale
    - Healdsburg

Source: California Department of Public Health
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


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

Watershed Characterization & Opportunities

Develop Project Alternatives

Evaluate Project Alternatives

Recommended Implementation Strategy

Project Recommendations

Public Outreach and Involvement

CHARACTERIZATION

PUBLIC OUTREACH

TRIPLE BOTTOM LINE ANALYSIS
## SSIP Triple Bottom Line Analysis

### Indicators

<table>
<thead>
<tr>
<th>Financial (LCA)</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualized Capital Costs</td>
<td>Climate</td>
</tr>
<tr>
<td>Annualized Other Costs</td>
<td>Air Quality</td>
</tr>
</tbody>
</table>

### 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](Isla/Cr - project A (Valencia St))

![Alt 3](Isla/Cr - project C (Guerrero St))

<table>
<thead>
<tr>
<th>Alt 1</th>
<th>Alt 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 ($800K)</td>
<td>F1 ($1,000K)</td>
</tr>
<tr>
<td>E1, E4</td>
<td>E1, E2</td>
</tr>
<tr>
<td>S1, S2</td>
<td>S1, S2</td>
</tr>
<tr>
<td>S3, S4</td>
<td>S3, S4</td>
</tr>
<tr>
<td>S5, S6</td>
<td>S5, S6</td>
</tr>
<tr>
<td>S7, S8</td>
<td>S7, S8</td>
</tr>
<tr>
<td>S9</td>
<td>S9</td>
</tr>
</tbody>
</table>

![Pie Chart 1](Alt 1)

![Pie Chart 2](Alt 3)
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.
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