2014 Drought:
Water Supply Situation and Drought Response Plan

City of Santa Cruz Water Department
June 17, 2014
Water Service Area

Areas served:
• Santa Cruz
• County
• Capitola

Population:
• 94,000

Governing body:
• City Council
Water Sources

North Coast Streams 32%
San Lorenzo River 47%
Loch Lomond Reservoir 17%
Live Oak Wells 4%
North Coast Streams 32%
Water Production

• Average **9-10 million gallons per day (mgd)**
• 6-7 mgd in winter
• 12-13 mgd in summer
• Entirely **local sources** from winter rains
• **No water is imported to the City from**
  outside the County or from another agency
• **GPCD = 97 gallons/capita/day**
Statewide Drought Status

U.S. Drought Monitor
California

June 10, 2014
(Released Thursday, Jun. 12, 2014)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>D0-D1</th>
<th>D1-D2</th>
<th>D2-D3</th>
<th>D3-D4</th>
<th>D4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>0.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>76.68</td>
<td>24.77</td>
</tr>
<tr>
<td>Last Week</td>
<td>0.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>76.68</td>
<td>24.77</td>
</tr>
<tr>
<td>3 Months Ago</td>
<td>0.01</td>
<td>99.99</td>
<td>94.56</td>
<td>90.81</td>
<td>65.89</td>
<td>22.37</td>
</tr>
<tr>
<td>Start of</td>
<td>2.61</td>
<td>97.39</td>
<td>94.25</td>
<td>87.53</td>
<td>27.59</td>
<td>0.00</td>
</tr>
<tr>
<td>Calendar Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/31/2013</td>
<td>2.63</td>
<td>97.37</td>
<td>95.95</td>
<td>84.12</td>
<td>11.36</td>
<td>0.00</td>
</tr>
<tr>
<td>Start of Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 10/1/2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ago 6/1/2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Matthew Rosencrans
CPC/NCEP/NWS/NOAA

http://droughtmonitor.unl.edu/
Local Water Conditions

3 Dry Years

2012 Rainfall 69%
Runoff 49%

2013 Rainfall 59%
Runoff 59%

2014 Rainfall 43% (year to date)
Runoff 13%
Loch Lomond Reservoir
Water Shortage Contingency Plan

• Required of urban water suppliers by State of California
• Must address water shortages of up to 50 percent
• Water Department: comprehensive update in 2009
## Water Shortage Contingency Plan

### Stage Title and Magnitude of Water Shortage

<table>
<thead>
<tr>
<th>Stage</th>
<th>Magnitude of Water Shortage</th>
<th>Stage Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-5%</td>
<td>Water Shortage Alert</td>
</tr>
<tr>
<td>2</td>
<td>5-15%</td>
<td>Water Shortage Warning</td>
</tr>
<tr>
<td>3</td>
<td>15-25%</td>
<td>Water Shortage Emergency</td>
</tr>
<tr>
<td>4</td>
<td>25-35%</td>
<td>Severe Water Shortage Emergency</td>
</tr>
<tr>
<td>5</td>
<td>35-50%</td>
<td>Critical Water Shortage Emergency</td>
</tr>
</tbody>
</table>

### Type of Water Use

<table>
<thead>
<tr>
<th>Priority</th>
<th>Type of Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td><strong>Health and safety:</strong> Indoor domestic use for personal care</td>
</tr>
<tr>
<td>Next highest</td>
<td>Business (protect jobs/economy)</td>
</tr>
<tr>
<td>Lowest</td>
<td>Landscape, yard, or garden irrigation and other outdoor uses</td>
</tr>
</tbody>
</table>
City Council Action

Timeline:
• 2012 and 2013: Stage 1 Water Shortage Alert declared
• October 2013: Stage 1 Alert extended indefinitely
• February 2014: Water Shortage Emergency declared – Stage 3
• May 2014: Regulations became effective
Key Water Use Regulations in Stage 3

1. Residential accounts: **Water rationing** for single family and multi-family accounts

2. Commercial customers: Mandatory facility audits, conservation plans, signage, irrigation restrictions

3. Large irrigation accounts: **Water rationing** based on landscape water budgets

4. Outdoor water **restrictions** for all customers
Water Use by Customer Category

- Single Family Residential: 41%
- Multiple Residential: 23%
- Business: 19%
- UCSC/Industrial: 7%
- Municipal: 2%
- Irrigation: 4%
- Golf Course Irrigation: 3%
- Coast Irrigation: 1%
Single Family
Residential Allotments

• Basic monthly allotment of **10 CCF**
• Accommodates ordinary indoor needs for a family of up to four
• 249 gallons/day or **62 gallons/person/day**
• Each additional permanent resident: +2 CCF
• Penalty for excessive use:
  
  $25 - 50 per CCF
Multi-Family Residential Allotments

- 2,700+ accounts, 17,000+ households
- 110+ Homeowner associations
- Allotment varies depending on number of dwelling units at the account
- Alternative allotment methods
- Penalty for excessive use: $25 - 50 per HCF
## Multi-Family Residential Allotments

<table>
<thead>
<tr>
<th>Dwelling Units</th>
<th>Allotment * (CCF/dwelling unit/month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-4</td>
<td>7</td>
</tr>
<tr>
<td>5-20</td>
<td>6</td>
</tr>
<tr>
<td>Over 20</td>
<td>5</td>
</tr>
</tbody>
</table>

* Subtract 1 CCF for properties with separate irrigation accounts
Utility Bill Changes

SANTA CRUZ MUNICIPAL UTILITIES
212 Locust Street, Suite D, Santa Cruz, CA 95060
Customer Service: (831) 420-5220 | www.cityofsantacruz.com

ACCOUNT NUMBER: 007-01190-003
SERVICE ADDRESS: 
SERVICE DAYS: 20
ACCOUNT TYPE: SINGLE FAMILY DWELLING (02)
# OF UNITS: 
REFUSE PICKUP DAY: FRIDAY
BILLING ADDRESS: 

Please Note The Following:

Usage Analysis:

Water Consumption Charges (11 CCF):
- 4 CCF @ 1.57
- 5 CCF @ 4.00
- 2 CCF @ 5.14
Excessive Use Penalties
- 1 CCF @ $25.00
Refuse - 68 Gallon Cart (1)
Sewer - Single Family
Utility Tax @8.5%:
Franchise Tax - Water 3%, Sewer 3%, Refuse 12%

Past Due: 373.78
Payment - thank you -373.78
PAST DUE BALANCE - DUE NOW: 0.00
- Current Charges - Water - Ready to Serve 5/8"
17.41
Water consumption this period: 8,228 gallons
Average water use this period: 264 gallons/day

NOTE:
Exceptions

Increased allocation may be granted where there is a documented need due to the following circumstances:

• Health
• Safety
• Sanitation
• Fire protection
Large Landscape Accounts

- Monthly allocation varies based on landscape water budget
- 1/3 of normal use
- Penalty for excessive use: $25-50 per CCF
Outdoor Water Use Restrictions

- No landscape watering **10 am - 5 pm**
- **Waste of water strictly prohibited**
- Hose nozzles required
- No washing down hard/paved surfaces
- Washing buildings/structures prohibited
- No initial filling or draining/filling swimming pools & outdoor spas
- Plumbing leaks must be repaired in 24 hours
- Penalties: after warning; **$100 up to $500**
Monthly water production and consumption goals – *20% less than 2012/13*

Monthly & end of season reservoir storage goals – *At or above 45% on October 31*

Monthly & end of season groundwater elevation goals

**Fundamental Goal:** Managing 2014 to ensure adequate carryover storage is available in 2015 in case drought continues
Loch Lomond Reservoir

Percent of Reservoir Capacity (%)

2014 Forecast
2014 Actual

Apr 68.3 68
May 67.7 67
Jun 64 64
Jul 59 59
Aug 54 54
Sep 49 49
Oct 45 45
Temporary Urgency Change Petition

- Approved by SWRCB February 2014
- Reduced bypass flows
- Estimated to save ~ 100 million gallons in storage
- City to report back in July