CONCEPTUAL MANDATORY WATER RATIONING PROGRAM, REVISITED

PHASED APPROACH

JANUARY 7, 2014
Public Hearing

2012 & 2013

5180 Soquel Drive, Soquel

The Soquel Water District's Board of Directors will consider establishing District policy to pursue specific programs and projects to significantly reduce the use of groundwater until this resource has adequately recovered to protect against seawater intrusion.

The proposed policy states that if the desalination project currently being evaluated does not proceed, then the District will pursue mandatory water rationing designed to reduce water use by 35% for at least 20 years in order to assure a safe and sustainable groundwater supply.

475-8500  www.soquelcreekwater.org
WE’VE COME A LONG WAY!

1995
11,744 Single Family Homes
95 gallons per person per day

2005
12,257 Single Family Homes
87 gallons per person per day

2010
12,447 Single Family Homes
68 gallons per person per day

Mandatory Water Rationing Approach

53 gallons per person per day
WATER RATIONING

Residential households
Given a water budget

53 gallons per person per day (gppd)

Low Water Users
30 gppd
Under Water Budget

Typical Water Users
70 - 80 gppd
25 - 35% decrease in use

High Water Users
150 gppd
65% decrease in use
2012 MANDATORY WATER RATIONING
WHERE ARE WE NOW?

ADD SUPPLY:
- Desalination
- Deep Water
- Water Transfer
- Recycled Water
- Other?

SELECTED SOLUTION...

FISCAL CLIFF

REDUCE DEMAND:

PHASE 1

PHASE 2

PHASE 3

Supply(ies)

WHERE ARE WE NOW?

Short List

PHASE 1

PHASE 2

PHASE 3

FISCAL CLIFF

WHERE ARE WE NOW?

Supply(ies)

WHERE ARE WE NOW?

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WHERE ARE WE NOW?

Supply(ies)
PHASED WATER USE REDUCTION

PHASE 1  PHASE 2  PHASE 3

What does this mean?
PHASE 1

Implementation of First Measures

Proof of Concept Testing and Studies

INFORM

PHASE 2

Are supply sources available?

YES
No additional phases necessary

NO
Go to Phase 2
Additional Phases Needed

Are supply sources available?

Select Program Components

IMPLEMENT PHASE 2

No additional phases necessary

YES

NO Go to Phase 3
MANDATORY RATIONING

PHASE 3
It gets harder with each phase.
PHASE 1:

**DO**
- Direct Install Commercial Toilets
- Enhanced Rebates
- Water Use Reports (WaterSmart)
- Water Demand Offset
- Water Waste Enforcement
- Outreach and Education

**TEST**
- Monthly Billing
- Pricing
- Other Critical Actions
- Direct Install Proof of Concept
- Water Budgets
- (WaterSmart)
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Commercial Toilets
Direct Install

PHASE 1:
Direct Installs

NO PHASE 2 or 3
(completed in phase 1)
PHASE 1: Expand to All Single-family

PHASE 2: Expand to Multi-family and Commercial

PHASE 3: Incorporate Mandatory Water Budgets
Monthly Billing

**PHASE 1:**
Implement January 2014

**PHASE 2:**
Ongoing – Implement Bill Readability and Improvements

**PHASE 3:**
Ongoing
**PHASE 1:** Study Water Demand Offsets (WDO)

**PHASE 2:** Continue WDO or Moratorium

**PHASE 3:** ?
Enhanced Rebates

PHASE 1: Enhanced Rebates for Turf Replacement, Graywater and Rain Water Harvesting

PHASE 2: Consider Additional Enhancements

PHASE 3: Consider Additional Enhancements

Contact us for more information:
831.475.8500 or savewater@soquelcreekwater.org
soquelcreekwater.org
Outreach & Education

PHASE 1:
Enhanced Outreach

PHASE 2:
Expand Outreach and School Education Program

PHASE 3:
Continue to Expand as Appropriate

DO MORE TO USE LESS
{plant drought tolerant}
Other Critical Actions

PHASE 1:

• Perform an economic analysis
• Begin dialogue with private well owners
• Evaluate water trading scenarios
• Evaluate funding options beyond Phase 1
• Evaluate new technology and concepts
• Policy and code changes
• Evaluate case studies
PHASE 1:
Educate Customers, Enforce Water Waste Prohibitions

PHASE 2:
Consider Additional Enforcement

PHASE 3:
?
PHASE 1: Evaluate Changes to Irrigation & Commercial Rates

PHASE 2: Additional Price Increase Needed

PHASE 3: Substantial Price Increase (Nearly Double); Penalty Pricing for Exceeding Budget
PHASE 1:
Water Use Surveys and Pilots

PHASE 2:
Expand Retrofits

PHASE 3:
Fully Implement Direct Installs
Proof of Concept Pilots

1. Residential – install indoor/outdoor retrofits
   20 single-family homes
   2 multifamily complexes

2. Submetering of 10 multifamily complexes

3. Commercial – survey 200 sites; install indoor/outdoor retrofits at 17 sites
   Focus on common sectors (e.g., restaurants, hotels, schools, offices, grocery stores, etc.)
Water Budgets

PHASE 1:
Educational for Single-family Residential

PHASE 2:
Add Water Budgets for Multi-family and Commercial

PHASE 3:
Mandatory for All Customer Types; Penalty Pricing for Exceeding Budget
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# Phase 1 Estimated Costs and Water Savings

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<th>Costs ($)(^1)</th>
<th>Water Savings (acre-feet/year)</th>
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<td>First Measures</td>
<td>$4 M</td>
<td>300</td>
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<td>Proof of Concept Pilots</td>
<td>$1.25 M</td>
<td>To Be Determined</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td><strong>$5.25M</strong></td>
<td><strong>300 +</strong></td>
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\(^1\) Estimated costs are in addition to the regular Conservation Department budget of approximately $250,000 per year.
What does this mean to us?
Impacts to quality of life and economy
Consequence:

If mandatory water rationing is unsuccessful or we don't secure a supplemental supply, We will continue to see seawater intrusion occurring.

Risks and Consequences

• Highly Dependent on Community Participation
• Rationing for 20+years at this level is not proven
• Disparity of conditions between District customers and others
• Customers could seek to drill own well
Community

Understanding

Participation

Commitment to Solution