

Catalina Island Stage 2 Water Rationing Update

**Avalon City Council
May 19, 2015**

Middle Ranch Reservoir Level Update

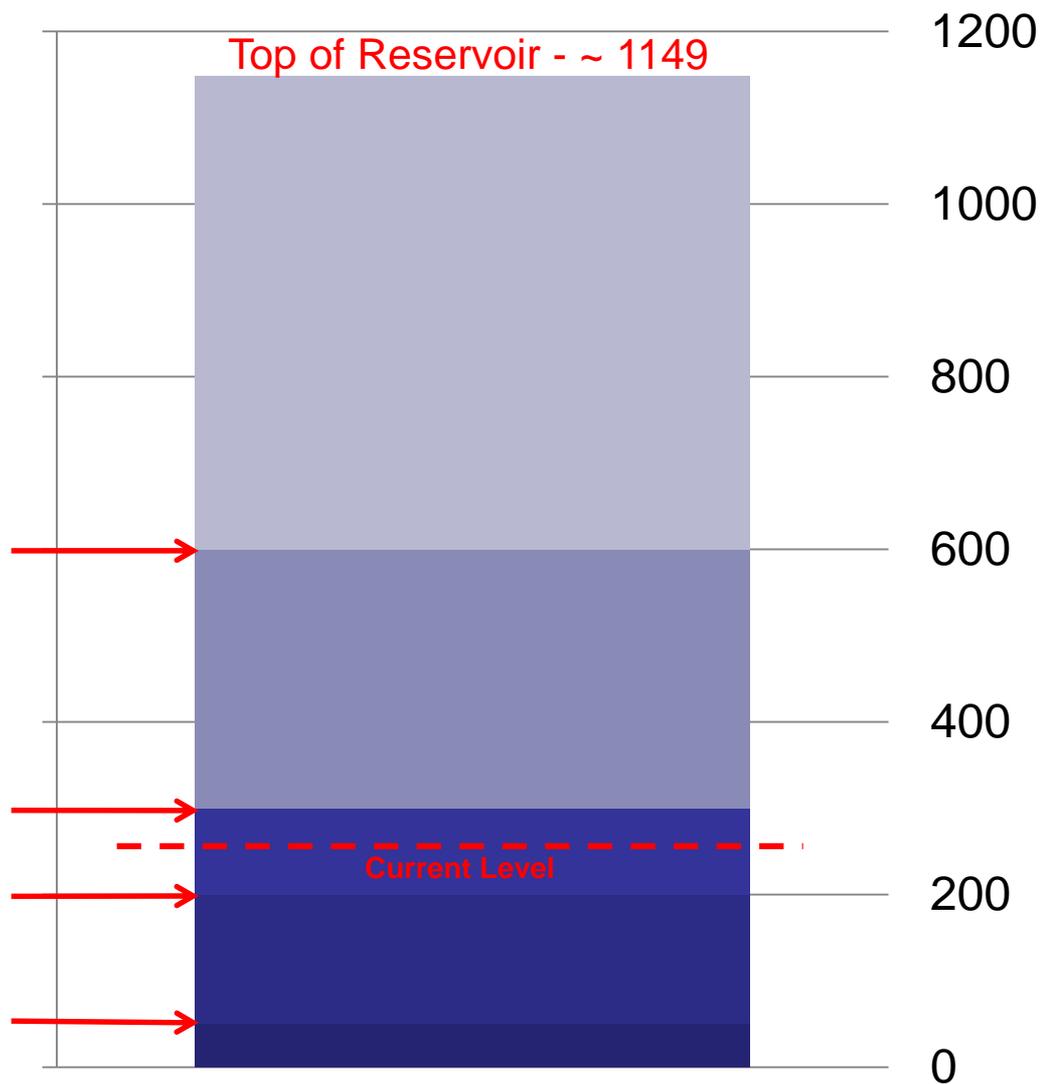
- Stage 2 Water Rationing began on August 11, which is triggered when the Middle Ranch Reservoir's water level falls below 300 acre
- As of May 7, 2015, the Reservoir water level was **257 acre feet**.

Stage 1 Mandatory Water Conservation - Customers are restricted in certain ways from using water when the reservoir reaches **600 acre feet**

Stage 2 Mandatory Water Rationing - Customers' water usage will be reduced to **75%** of their base water usage amount if the reservoir reaches **300 acre feet**

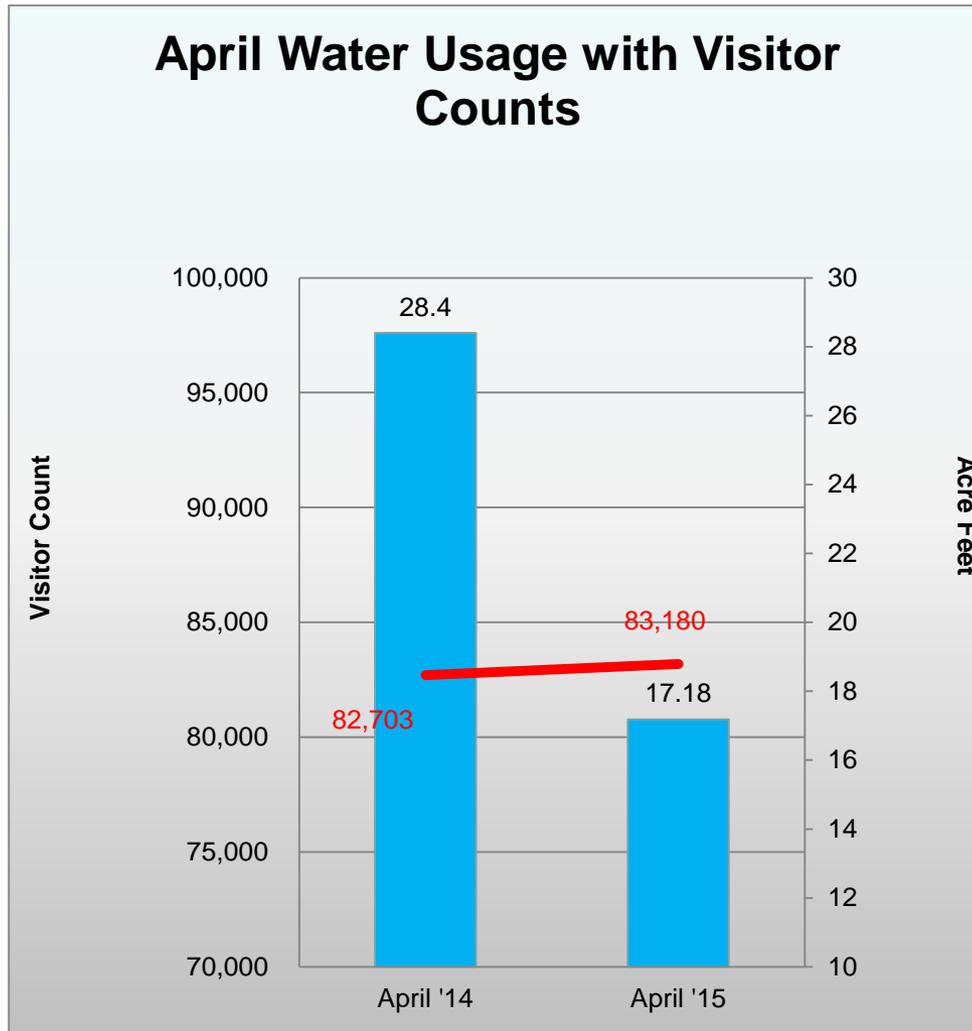
Stage 3 Mandatory Water Rationing - Customers' water usage will be reduced to **50%** of their base water usage amount if the reservoir reaches **200 acre feet**

Stage 4 Mandatory Water Rationing - Customers' water usage will be reduced to **25%** of their base water usage amount if the reservoir reaches **50 acre feet**



Water Usage with Visitor Counts

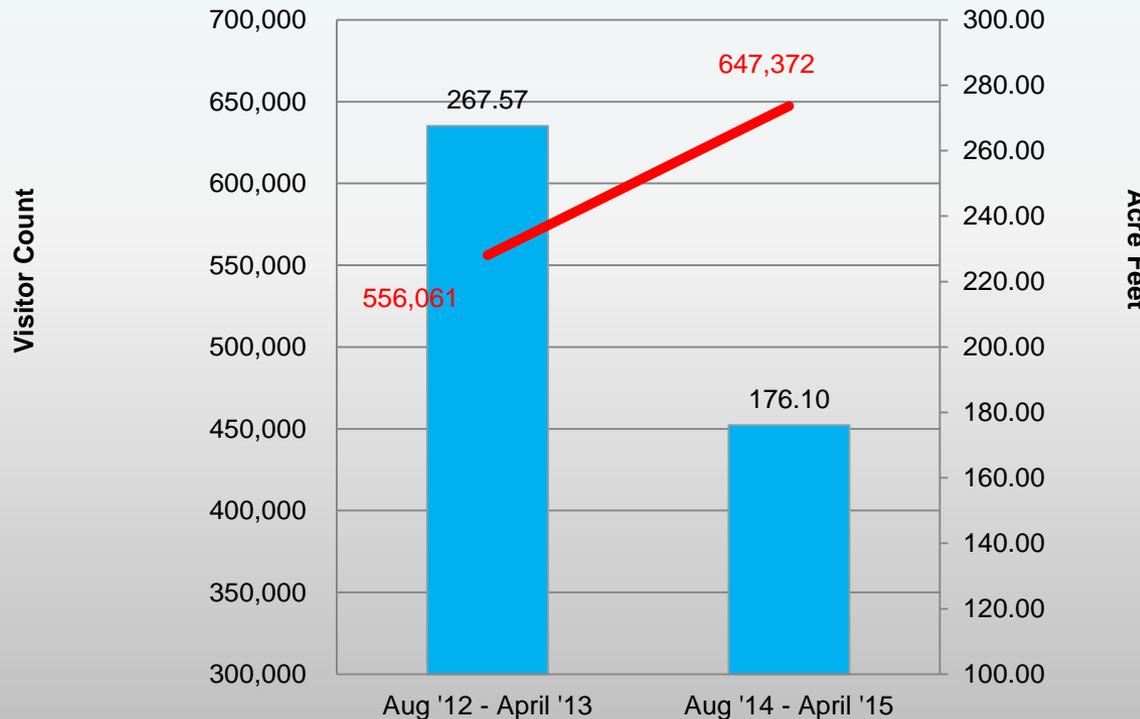
April 2015 Compared to Prior Year



- April Usage ↓ 39.51% from last year
- April Visitors Counts ↑ 0.58% from last year

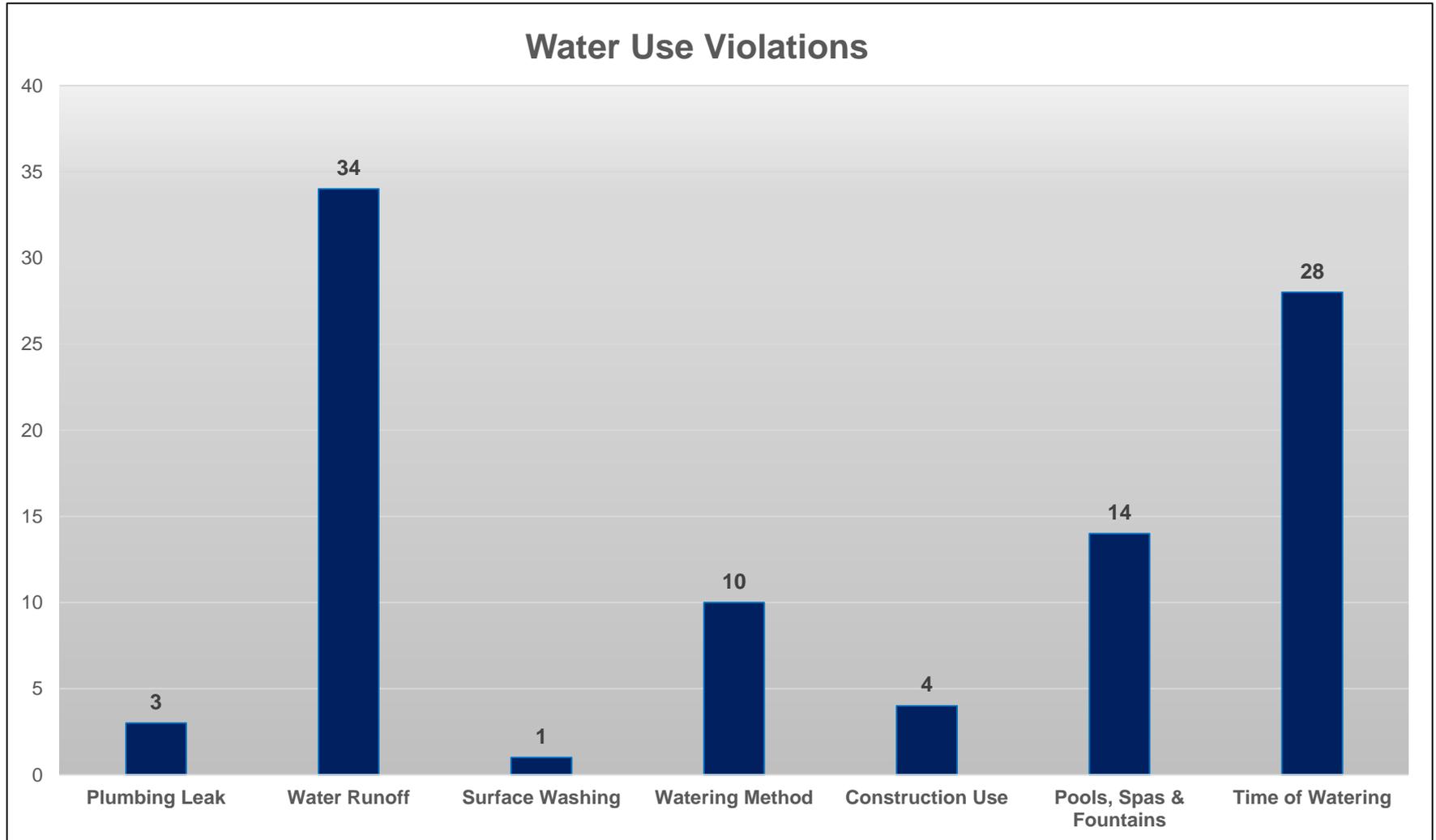
Water Usage Stage 2 Compared to 2012-13 (Baseline)

Aug - April, 2015 Water Usage with Visitor Counts

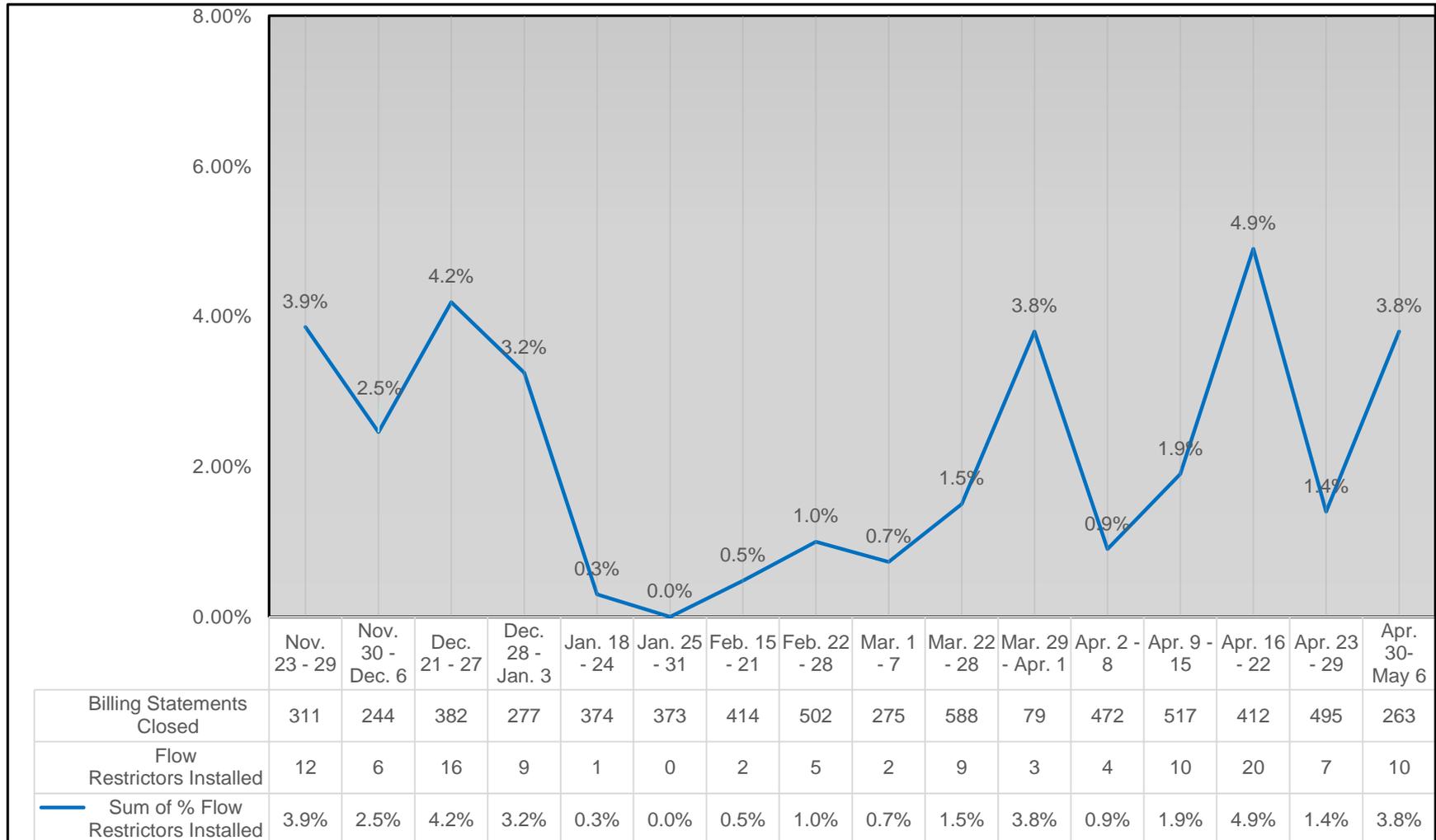


- Aug - April Usage
↓ 34.18% from 2012 Baseline
- Aug - April Visitors
↑ 16.42% from 2012 Baseline

Water Use Violations – 94 Violations (As of May 19, 2015)

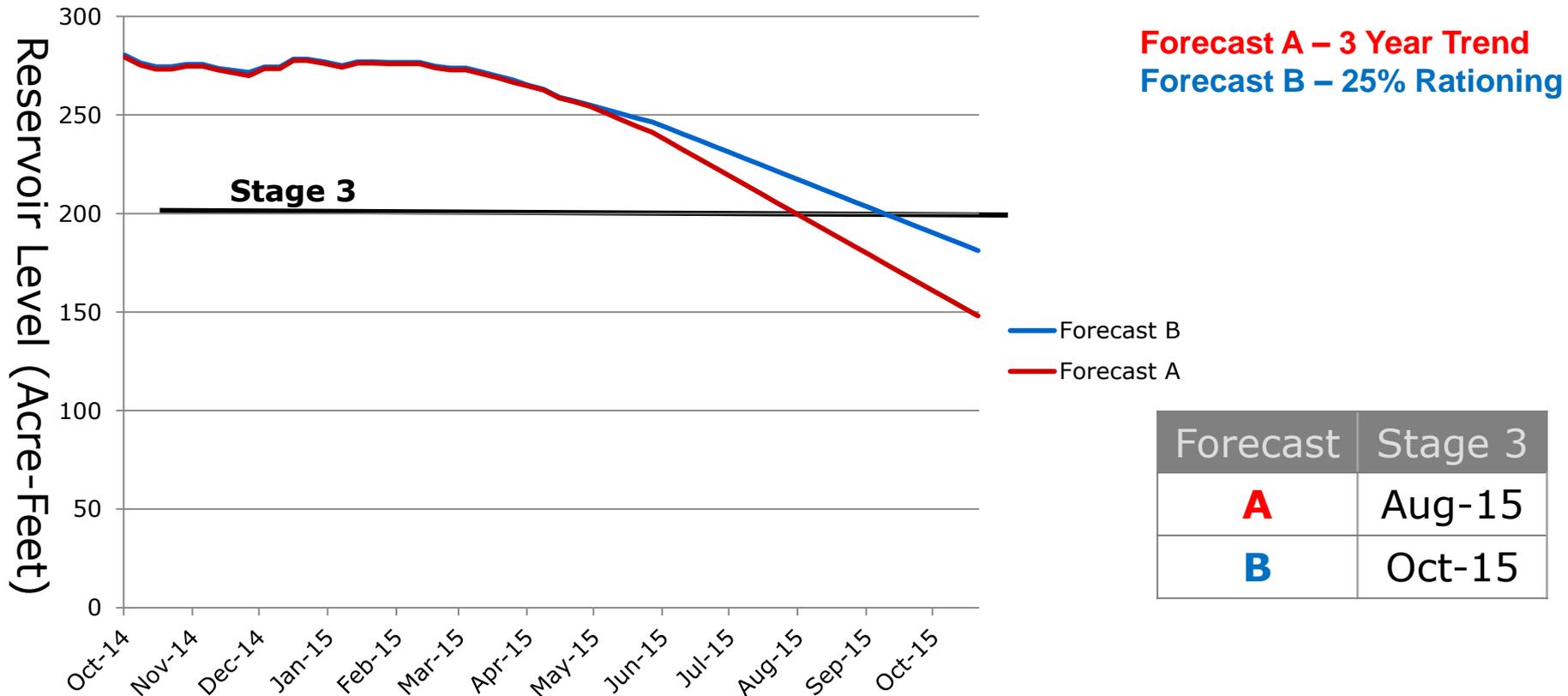


Water Allotment Violations – Flow Restrictors Issued



Stage 3 Forecast

Successful Stage 2 Rationing may potentially extend the implementation of Stage 3 Rationing through Summer 2015



Based on 3 year monthly average water sales with little or no rainfall.

EnviroLogic Resources, Inc.

Short-Term Contingency Plan Options Report

Study Objective: Identify a short-term water supply option for Catalina that will alleviate the need for additional stages of rationing

Goal: Identify an additional water supply of 200 acre-feet/year, or 180,000 gallons per day (gpd), which will eliminate rationing on an average annual basis.

Report Structure: Three Categories

1. Sources of Additional Water Supply
2. Conservation and Recycling Options
3. Operational Conservation and Technology Options

Sources of Additional Water Supply

Item	Description	Short Term or Long Term	Feasible (Further Analysis Needed)
Impermeable Surfaces Precipitation	Precipitation collection from impermeable surfaces such as roofs and roadways	LT	Yes
Offshore Precipitation	Precipitation collection on barges located near the island	LT	Yes
Import Water	Importing water to the island from the mainland via barge or bladders	ST	Yes
Cloud Seeding	An attempt to change the amount or type of precipitation that falls during rain events by dispersing substances into the atmosphere that serve as cloud condensation or ice nuclei	LT	No
Groundwater Reserves	Drilling and construction of additional water supply wells	LT	Yes

Conservation and Recycling

Item	Description	Short Term or Long Term	Feasible (Further Analysis Needed)
Aquifer Storage and Recovery (ASR)	Injection of potable water into aquifer for later recovery and use	LT	Yes
Reverse Osmosis (RO) - Plant Expansion	Expand use of reverse osmosis unit at Desalination Plant	LT	Yes
Spreading Basins	Develop spreading basins for recharge of aquifers. Applies water over a specified ground surface area to increase percolation	LT	Yes
Reservoir Evaporation Mitigation	Apply a compound to open air reservoirs designed to reduce surface water evaporation	LT	Yes
Gray Water Initiation	Implement use of gray water by capturing water from sinks, showers, baths, dishwashers, and washing machines and recycling for irrigation, toilet flushing, etc.	LT	Yes

Operational Conservation and Technology

Item	Description	Short Term or Long Term	Feasible (Further Analysis Needed)
Reverse Osmosis (RO) - Portable Expansion	Add a portable desalination unit	ST	Yes
Groundwater Sustainability Program	Add groundwater supplies from existing wells through well efficiency, rehabilitation, or re-establishment	ST	Yes, but results are speculative
Water Storage Expansion	Providing additional storage through the purchase and/or construction of additional water storage facilities	ST/LT	Yes
Solar Stills	Desalination units operated by solar energy	LT	No

Short-term Plan: Water Sources

- Consultant's Report evaluated several possible short-term water supply solutions (Estimated cost up to \$2.2 Million)
 - Purchase and install portable desalination units
 - Potential to produce 220,000 gpd from portable unit at Pebbly Beach
 - Contract with maritime vessel to barge water
 - Can provide 966,000 gallons per weekend
 - Well assessments and rehabilitation
 - Installing new wells
 - Upgrade existing desal units
 - Water storage expansion

Short-term Plan: Tariff Changes

- Implement 4 new state-mandated conservation measures
 - Prohibit irrigating turf or ornamental landscapes during and 48 hours following measurable precipitation
 - Require operators of hotels/motels to provide guests with the option of choosing not to have towels and linens laundered daily and prominently display such notice
 - Prohibit irrigation of ornamental turf on public street medians
 - Prohibit irrigation outside of newly constructed homes and buildings not in accordance with emergency regulations or other requirements established in the California Building Standards Code

Work with stakeholders to make new measures more restrictive (if feasible) and seek input on other measures to reduce water use

- Implement larger fines for not adhering to Stage 2 water allotments and mandatory conservation measures.
 - Current fine structure is limited to increments of \$25
 - Increase increments increases for subsequent violations, not exceeding \$500 per violation per day consistent with emergency state regulations

Short-term Plan: Other

- Increase home/business inspections for conservation devices
- Increase communications to have customers install conservation devices
- Increase signage for visitors coming to the island
- Work with City to identify potential grass to turf conversions and/or other programs that could help reduce water use
- Stage 3 Mandatory Water Rationing
 - Plan to execute or defer dates based on successful Stage 3 deferral
 - If Reservoir at or near 200 acre-feet in Q4 2015, consider deferring Stage 3 to 2016 due to lower winter-months demand and desalination plant production
 - Implement Stage 3 at a reduced percentage of mandatory rationing

Funding Opportunities

- SCE and City of Avalon to partner on upcoming State funding opportunities.
- Currently Pursuing Membership in Gateway Water Management Authority (GWMA).
 - Membership will allow access to Proposition 1 and Proposition 84 funds.
 - SCE and City of Avalon meetings held on 5/7 and 5/18 to coordinate partnership, membership in GWMA, and project submittals.
 - Gateway Water Management Steering Meeting attended jointly by the City of Avalon and SCE representatives on 5/19.

Prop 84	Prop 1
<ul style="list-style-type: none"> • Grant will fund up to 75% of project. 	<ul style="list-style-type: none"> • SCE attended a seminar on 4/16 at Eastern Municipal Water District. • Grant will likely fund 35% of project.

For More Information

- If you have any general questions, a dedicated Catalina customer service representative can assist you at **1-800-367-8851** (*Monday through Friday 8:00 a.m. to 5:00 p.m.*).
 - Report potential water use violations
- **SCE's Web page for Catalina Island customers -** <http://www.sce.com/catalina>
 - Stage 2 FAQ and variance request forms also available

Water Conservation Tips

- **Save Our Water** – <http://www.saveourh2O.org>