

Water Resource Analysis

Presentation to the
San Miguelito Mutual Water Company
Board of Directors Meeting
11/18/2015

Presentation Overview

- Existing Supplies
- Water Needed at Build-Out
- Additional Water Needed for Build-Out
 - Worst Case Scenario
- Potential Additional Supplies
- Recommendations

Existing Supplies

Source	Recent Production 2009-2014 (AFY)	Maximum Annual Yield (AFY)
Existing Wells	28 - 100	189
State Water	95 - 173	275
Total	185 - 213	464

Water Needed at Build-Out

- Existing Uses
 - Convert Part-time to Full-time Occupancy
 - Build-out Existing Residential Developments
 - Planned Small Non-Residential Developments
 - Potential Large Non-Residential Developments
 - Un-metered System Uses
-
- **Total Water Needs at Build-Out**

Water Needed at Build-Out

<u>Water Use</u>	Low (AFY)	High (AFY)
Existing Uses	189.85	189.85
Part-time to Full-time	7.39	7.39
Build-out Exist. Resid.	9.15	20.16
Small Non-Resid. Devel.	4.88	6.72
Large Non-Resid. Devel.	45.09	45.09
Un-metered System Uses	30.76	32.31
Total	287.12	301.52

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 - Worst Case Scenario

Worst Case Scenario

Source	Current Capacity (AFY)
Local Groundwater (Wells 4, 5, and 6)	189
State Water	275
Total	464

Worst Case Scenario Examined

- Use of existing wells is restricted to historic pumping rates.
- State Water deliveries are 5% of Table A.
- SLO County has re-allocated their excess allocation to some other users.

Worst Case Examined

Water Source and Use	AFY
Well Supply	189.00
State Water Supply	
5% Table A	13.75
5% Drought Buffer	13.75
Total Supply	216.50
Total Use	301.52
Additional Water Resources Needed	85.02

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- Potential Additional Supplies

Potential Additional Supplies

- Local Groundwater
 - Hot Water Well
 - Golf Course Well
 - East Harford Wells
 - New Well
- Reclaim Wastewater for Irrigation
- More State Water Drought Buffer

Potential Additional Supplies

<u>Source</u>	<u>Quantity Available</u>	<u>Quality Issues</u>
Hot Water Well	73 AFY	Temperature, odor, minerals, turbidity
East Harford Wells	100 AFY	Hydrogen sulfide
New Well	Unknown	Unknown
Golf Course Well	100 AFY	Similar to Existing Wells
Reclaim wastewater	100 AFY	Disinfection
State Water drought buffer	Buying 275 additional AFY yields 31 AFY on average.	Delivered fully treated.

Potential Additional Supplies

<u>Source</u>	<u>Cost per AFY</u>	<u>Reliability</u>	<u>Threats to Future Use</u>
Hot Water Well	\$1,000	Good, taps into a deep aquifer.	Aquifer volume?
East Harford Wells	\$1,200	Good, taps into a deep aquifer.	Aquifer volume?
New Well	\$830 to \$1,620	Unknown	Aquifer volume?
Golf Course Well	\$570	Moderate, small aquifer.	Extended drought.
Reclaim wastewater	\$430	Good.	None identified.
State Water drought buffer	\$931/AFY	Increases reliability	Multiple

Recommendations

- Acquire additional water sources to meet needs under worst-case scenario.
- Protect existing supplies:
 - Insure that flow remains in SLO creek year-round.
 - Urge the SLO County Flood Control District to continue to use its excess allocation of State Water for the benefit of existing subcontractors.
- Adopt policy changes that will require applicants of new development to demonstrate water use will not exceed existing allocations.

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