

# SOUTHERN CALIFORNIA GOLF & WATER SUMMIT

August 18, 2022



# Facility Strategic Planning

Justin Mandon, Golf Course Superintendent/  
Pasatiempo Golf Club

# The Pasatiempo Story

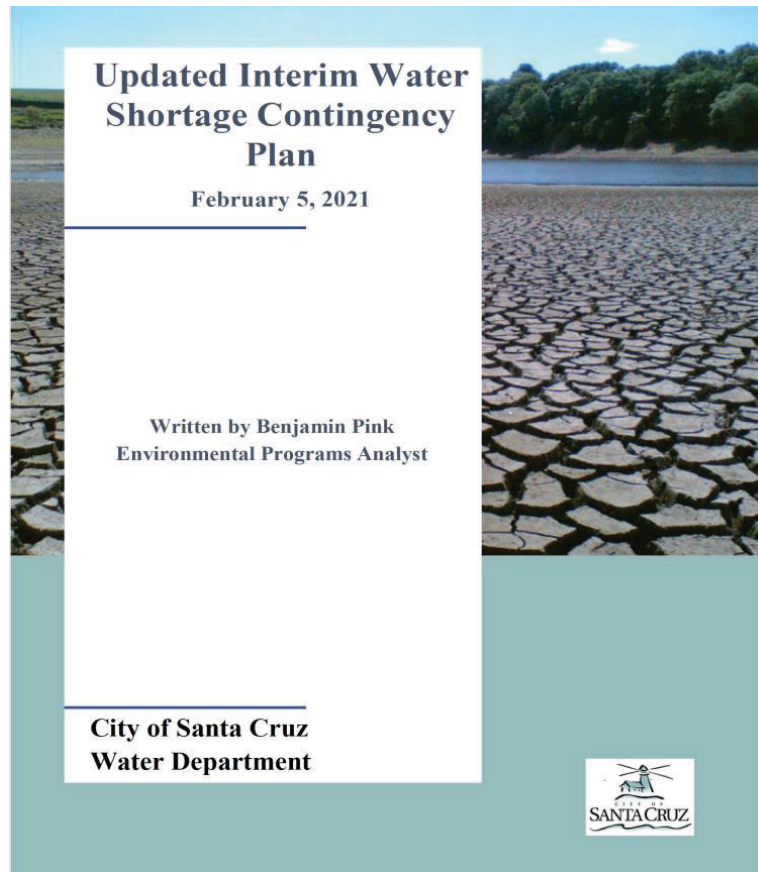
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# Where Does Your Water Come From?



- Who is your provider?
- Specifically who is making the decisions?
- Become familiar with you local policy?
- Be the most knowledgeable person in the room

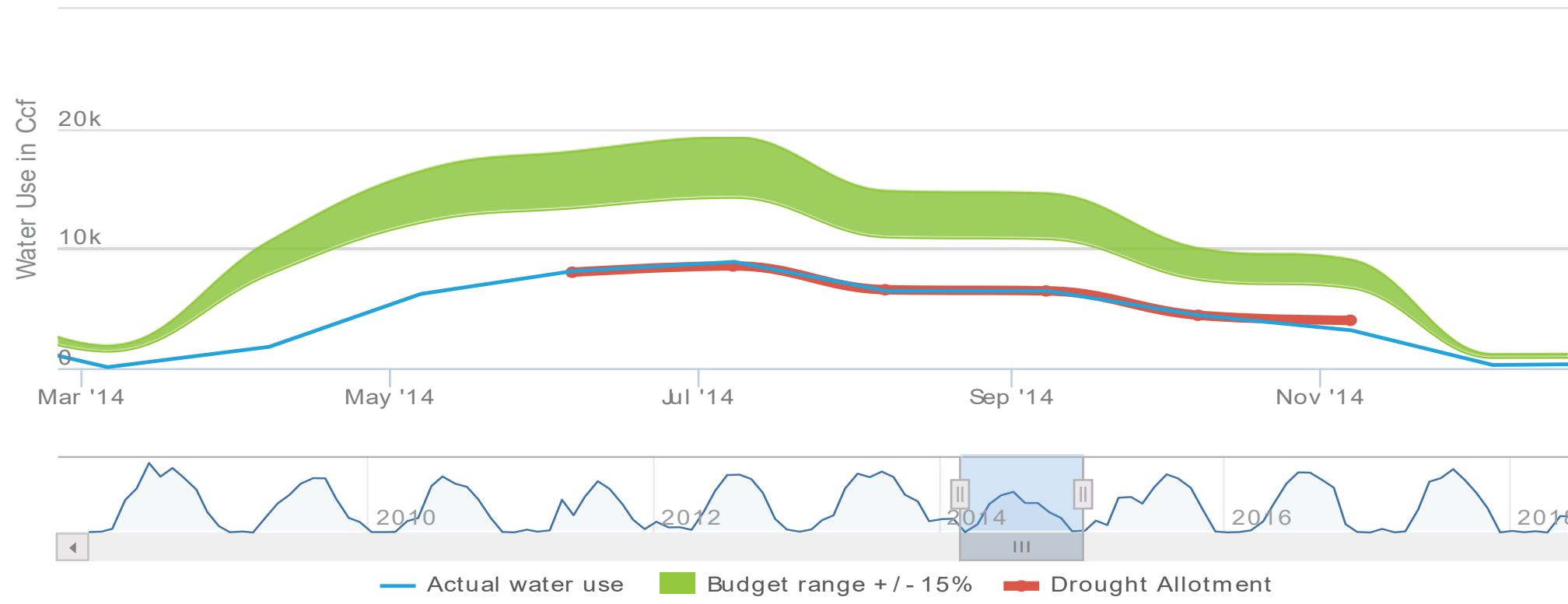
# Know Your Irrigation System

- Your goal is to know exactly what you are putting out and where it is going
- Annual irrigation audit
- Track your usage now

# Pasatiempo Golf

## Monthly Water Use

Score Applied Budget % Budget





# Drought Contingency Plan

- Form a committee
- What are your local drought stages 1,2,3,4,5?
- Develop a plan to reduce water usage for each stage
- Communication Plan?

# Drought Stages

## Water Contingency Plan

Location	Gal/Year Current	Average 225 Days	Current %	Stage 2 27% Cut 55M	Stage 3 49% Cut 55M	Stage 4 66% Cut 55M	Stage 5 80% Cut 55M
Greens	2320000	10311	4.20%	2320000 100%	2320000 100%	2320000 100%	2320000 100%
Tees	2080000	9244	3.60%	2080000 100%	2080000 100%	2080000 100%	2080000 100%
Approaches	1000000	4444	1.70%	1000000 100%	1000000 100%	1000000 100%	1000000 100%
Fairways	33000000	146667	58.60%	31820000 96%	18090000 54%	8290000 25%	2660000 8%
Roughs	10900000	48444	19.30%	0 0%	0 0%	0 0%	0 0%
Driving Range	1830000	8133	3.20%	0 0%	0 0%	0 0%	0 0%
Bunkers	1000000	4444	1.70%	1000000 100%	1000000 100%	1000000 100%	1000000 100%
Perimeters	1710000	7600	3.00%	1710000 100%	1710000 100%	1710000 100%	1710000 100%
Other	220000	978	0.30%	220000 100%	220000 100%	220000 100%	220000 100%
Green Surrounds	2080000	9244	3.60%	2080000 100%	2080000 100%	2080000 100%	2080000 100%
<b>Total</b>	<b>56140000</b>	<b>249511</b>	<b>100%</b>	<b>40150000</b>	<b>28500000</b>	<b>18700000</b>	<b>10990000</b>

# Communication Plan

- How do you communicate to your customers?
- Are you going to reduce green fees, dues?
- Think in creative ways (vouchers)

# Long & Short Term Solutions

- Technology
- Turf Conversions
- Turf Reductions
- Alternative Water Sources



# Turf Reduction/Native Restoration

• 2009

• 2010



# Well Development



# Recycled Water Project

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# History

- Pipeline stubbed to Pasatiempo in 1978
- Pasatiempo engaged to purchase water for several decades
- 225 million gallons of secondary flowed past Pasatiempo annually
- Contract needed to secure long term water rights



- Risk Avoidance
- Guaranteed Supply
- Fixed Cost



# Return on Investment

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- 2013 Potable Water Cost \$5.60/unit
- Current Potable Water Cost \$15.00/unit
- Rate will Increase 40% over the next 5 years
- Annual Potable Cost at Current Rate \$1,100,000
- \$500,000 lost green fee revenue in 2014
- Started at 13 years probably < 10 years

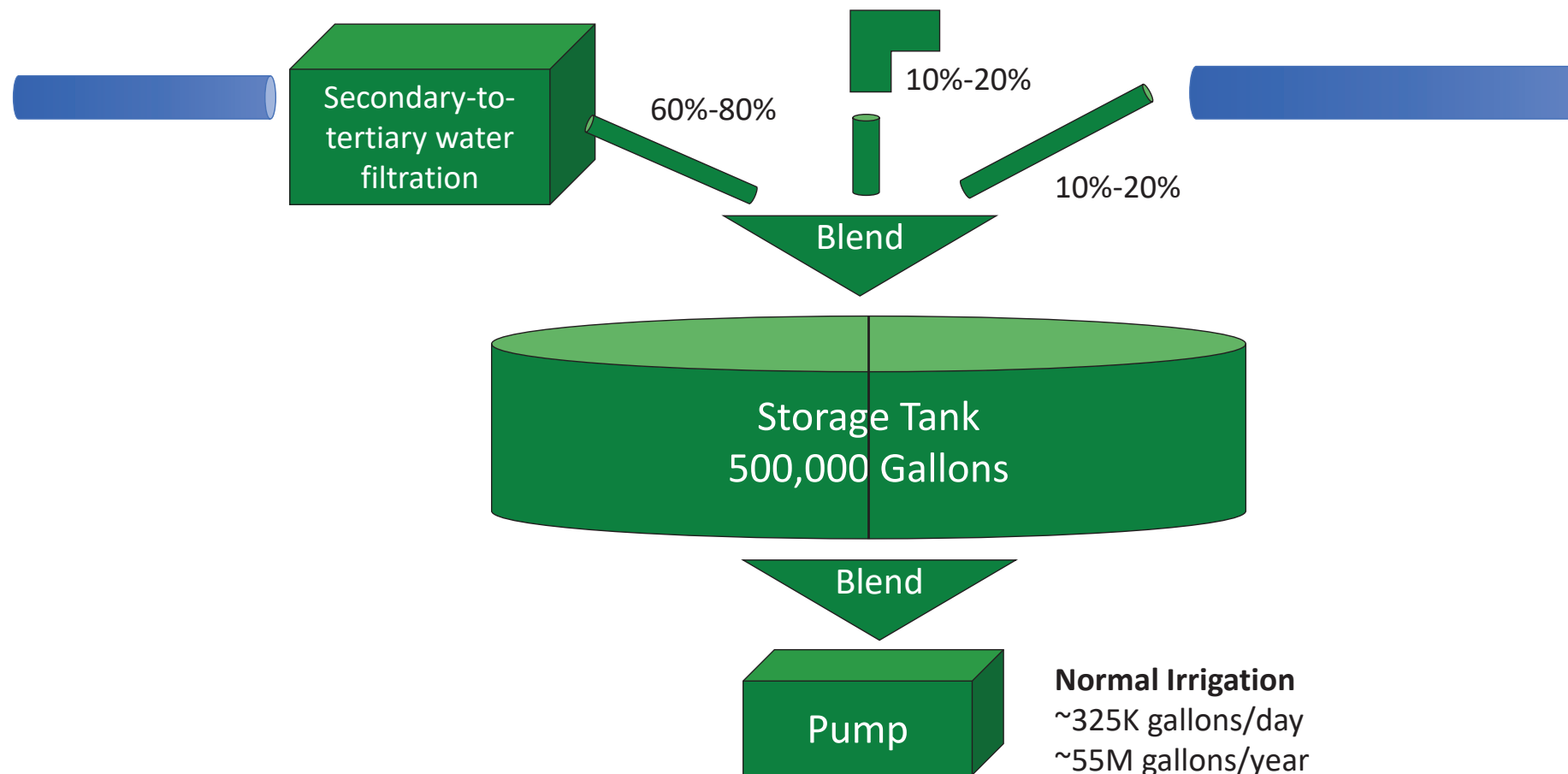
# Pasatiempo Water Project

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**Scotts Valley secondary water**  
170K gallons/day guaranteed for 30/y  
Additional as available/needed at 50% discount

**Pasatiempo well**  
Tested at 160 gallons/min  
High salt & potassium

**Santa Cruz City potable water**  
2014 Allocation: 28M gallons  
2015 Allocation: 42M gallons  
Future Allocations: Unknown



# Pre-Construction

- 2 Years of Contract Negotiations (13 iterations)
- City Counsel, Water Board, Mayor, County Supervisors, State Senators, State Assembly Members, Governor's Office, Hired 2 political Lobbyist Groups
- Major self funded infrastructure required long term deal and water rights

# Contract Details

- 30 years
- Guaranteed 175K gallons/day
- Access to the Excess
- \$1.6 Million paid in 5 years



# Treatment Plant

## Amiad AMF370K



## Amiad Pre-Filters

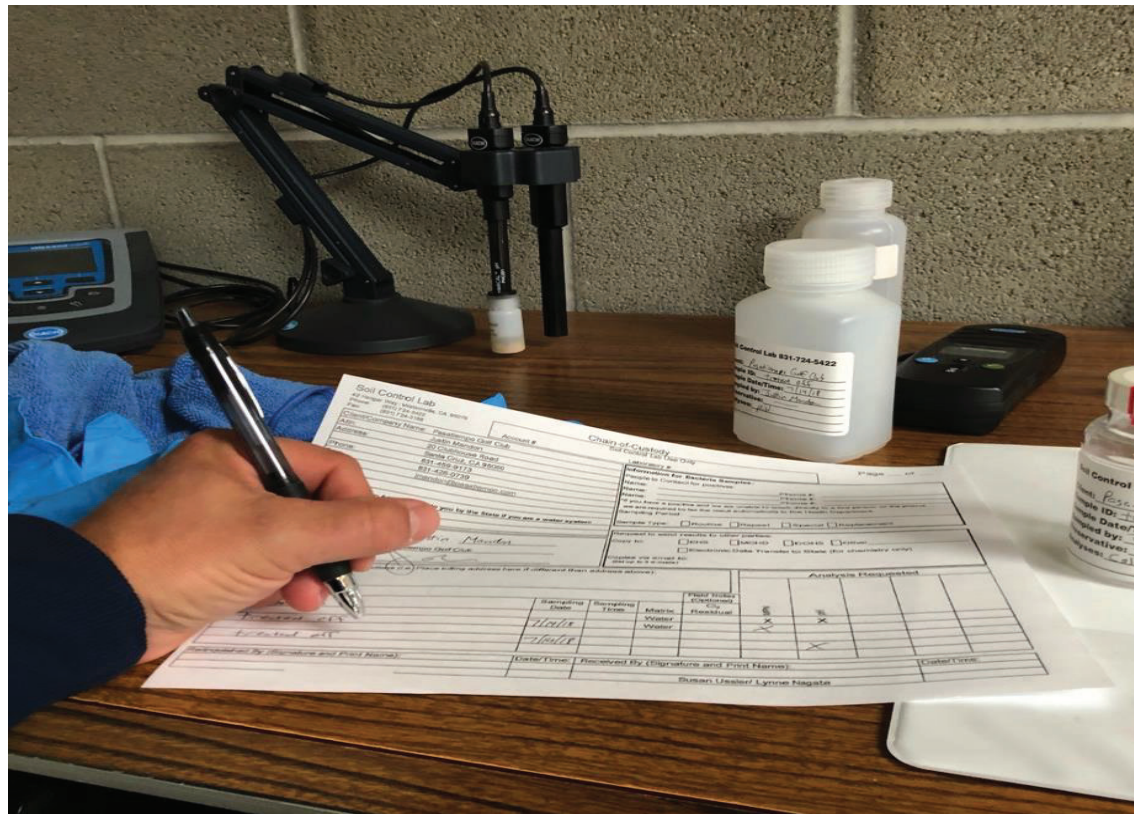






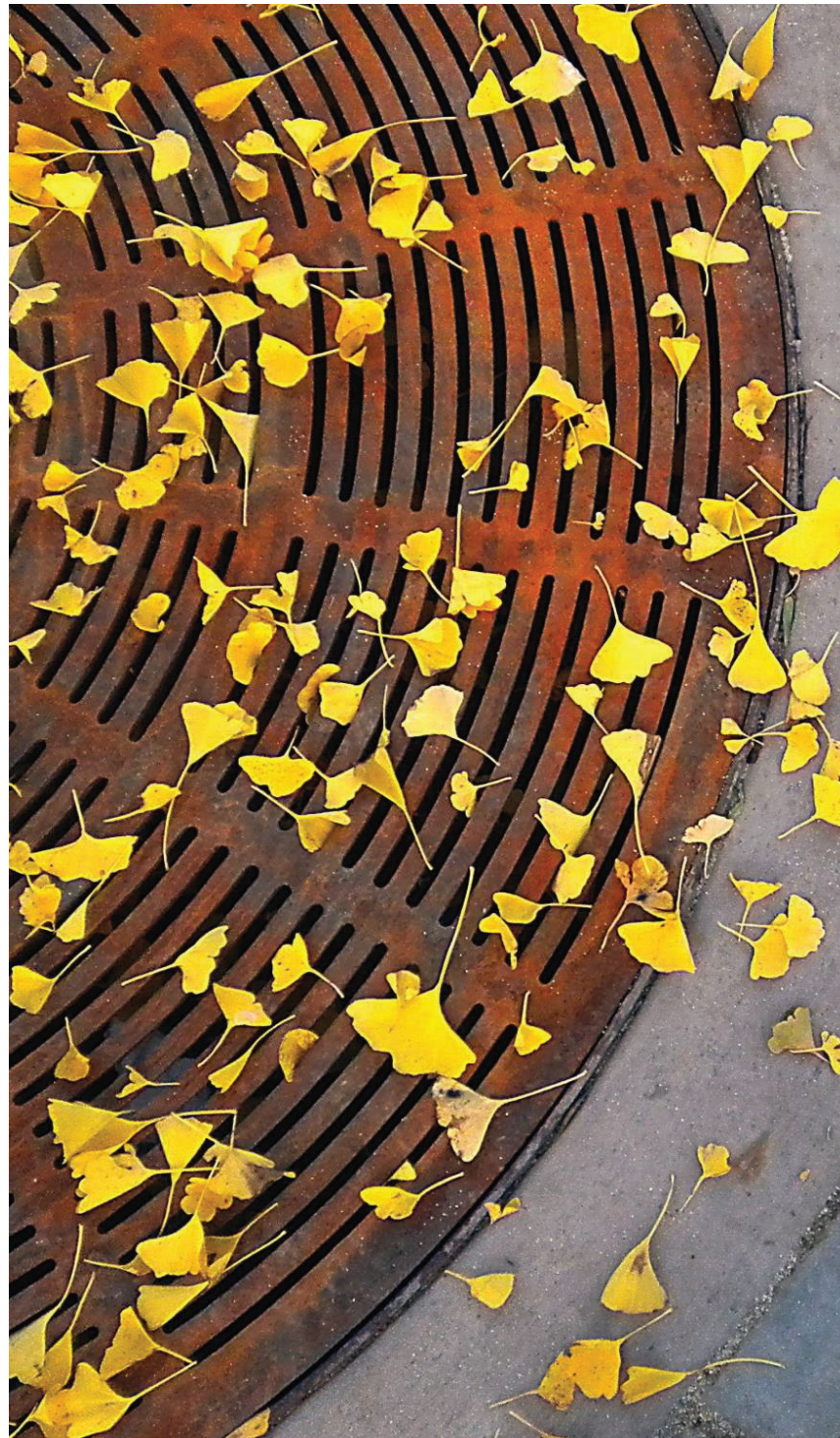
# Waste Water Treatment Operator

## Onsite Lab



## Daily Coliform





## Design Team



### **SSA Landscape Architects**

*Project/Design Lead*

### **Bowman and Williams**

*Civil Engineering and Site Surveying*



### **Mesiti-Miller Engineering**

*Structural Engineering*



### **DN Tanks**

*Tank Design and Engineering*



### **Watertronics**

*Custom Pump System Engineering*



### **Water Works Engineers**

*Mechanical Design and Engineering*



### **Dennis Diego Architect**

*Architect*



### **Prime Design Group**

*Electrical Design and Engineering*



### **ENGEO**

*Geotechnical Engineering*



### **BioSphere Consulting**

*Wastewater Septic System Design*



### **Archaeological Resource**

**Management**

# Build Relationships

- Find Champions for your projects
- Be the most knowledgeable person



Have we done everything possible to reduce our water usage and maintain or improve our playability?