Montecito Water District
Adapting to Changing Water Supply Conditions

Water Education Foundation
August 28, 2019

Outline

About Us: Facts & Figures
Our Water Supplies
Strategy for an Ongoing Reliable Supply
Recent Initiatives
District Overview

- Incorporated on November 10, 1921
- Serve communities of Montecito & Summerland
- Service Area 9,888 acres (15.4 Square Miles)
- Population served 11,370
- Number of service connections ± 4,600
- Current annual water sales ±3,900 AF
- Annual revenue ±$19M
- 5 member elected Board of Directors; 28 employees

Mission Statement

"The mission of the Montecito Water District is to provide an adequate and reliable supply of high-quality water to the residents of Montecito and Summerland, at the most reasonable cost."

District Infrastructure

- Jameson Lake & Juncal Dam
- Doulton Tunnel
- Two Surface Water Treatment Plants
- 9 Pump Stations
- 10 Reservoirs
- 12 Active Groundwater Wells
- 114 Miles of Water Distribution Pipe
Customer Base

<table>
<thead>
<tr>
<th>Type</th>
<th>Service Connections</th>
<th>Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFR</td>
<td>92%</td>
<td>74%</td>
</tr>
<tr>
<td>MFR</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Commercial</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Institutional</td>
<td>2.7%</td>
<td>7%</td>
</tr>
<tr>
<td>Agricultural</td>
<td>1%</td>
<td>9%</td>
</tr>
<tr>
<td>Non-Potable</td>
<td>0.3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Service Connections

Water Use

Customer Demand

- Total annual production varied from 7,100 to 3,500 AF
- Significant reduction in 2014 (Allocations/Penalties & Meter Moratorium)
- Demands consistently remain between 40-50% below 2013 levels
- Factors influencing future water use
  a) Permanent changes in customers water use behaviors
  b) Installation of drought tolerant landscaping
  c) Installation of private groundwater wells
  d) Compliance with State’s Urban Water Use Regulations (SBX7-7)
Our Water: Current Sources of Supply

Jameson Lake, December 2016 at 10% of Capacity

Our Water Supplies

Doulton Tunnel
Local Groundwater
150-800 AFY

Our Water Supplies

Our Water Supplies
Our Water: Current Sources of Supply

Groundwater
Local
(300-700 AFY)
MGB near historic low

Our Water Supplies

Cachuma Project
Regional Surface Water
±76% Capacity
WY 2019&20 – 100% allocation
(2,651 AFY)

Our Water Supplies
Our Water: Current Sources of Supply

Lake Cachuma, December 2016 at 8% of Capacity
WY 2016 - 0% Allocation

Our Water Supplies

Our Water: Current Sources of Supply

State Water Project
Imported Surface Water
3,300 AFY
Long Term Reliability 48%

Our Water Supplies
Our Water: Current Sources of Supply

Water Supplies
- Rainfall dependent
- Highly susceptible to drought
- Increasingly unreliable

Supplemental Water
Imported Water

State Water Project
Imported Surface Water
3,300 AFY
Long Term Reliability 48%

Cachuma Project
Regional Surface Water

Jameson Lake
Local Surface Water

Doulton Tunnel
Local Infiltration Water

Groundwater
Local
Our Water Supplies

Water Supply Reliability

State Water Project

![Bar chart showing SWP Allocation and Average (Since 1997) for Water Supply Reliability. The chart includes data from 1997 to 2019, with specific allocation values marked for the years 2007 and 2019. The average allocation from 1997 to 2019 is indicated as 64%.]

Our Water Supplies

Water Supply Reliability

State Water Project

![Bar chart showing SWP Allocation, Average (Since 1997), and Last 20 yrs for Water Supply Reliability. The chart includes data from 1997 to 2019, with specific allocation values marked for the years 2007 and 2019. The average allocation from 1997 to 2019 is indicated as 59%.]

Our Water Supplies
Our Water Supplies

Water Supply Reliability

State Water Project

 Allocation (AF)

SWP Allocation

Last 10 yrs

Average (Since 1997)

Last 20 yrs

Our Water Supplies
Our Water Supplies

Water Supply Reliability

Utilization of Water Supplies
Projected Water Availability  
(based on average availability over last 20 years)

<table>
<thead>
<tr>
<th>Source</th>
<th>Quantity (AF)</th>
<th>Percent of Total MWD Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cachuma Project</td>
<td>1,750</td>
<td>34%</td>
</tr>
<tr>
<td>Jameson Lake</td>
<td>1,100</td>
<td>22%</td>
</tr>
<tr>
<td>State Water Project</td>
<td>1,600</td>
<td>32%</td>
</tr>
<tr>
<td>Doulton Tunnel</td>
<td>325</td>
<td>6%</td>
</tr>
<tr>
<td>Groundwater</td>
<td>325</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>5,100</td>
<td>100%</td>
</tr>
</tbody>
</table>

Rainfall Dependent; Highly Susceptible to drought

Our Water Supplies

Water Supply Strategy

2015 UWMP Update

- 3 Pronged Strategy to Improve Water Supply Reliability
  - **Enhance Groundwater Storage** (local and/or regionally)
  - **Develop Additional Local Drought-proof Supplies**
    (desalination, recycled water, and/or other)
    - Established a goal of achieving 85% reliable supplies by 2025
  - **Manage Demand** through ongoing **Voluntary Conservation**
- Maximum urban water use limited to 4,800AFY (Senate Bill X7-7)
- Regulatory Compliance by 2020

Strategy for Ongoing Reliable Supply
Water Supply Strategy

Strategy for Ongoing Reliable Supply

Adapting to Changing Conditions

Strategy for Ongoing Reliable Supply
Desalinated Water

- Local rainfall independent supply and regional partnership; nearly 100% reliable water supply;

**Initiative & Status:**

- Water Supply Agreement with City of Santa Barbara
  - Term Sheet approved by the governing bodies in January 2019
  - Developing a Water Supply Agreement (WSA)
  - MWD Board / City Counsel consideration and approval (MWD approval requires Prop. 2018 rate setting process)
  - Timeline for execution of WSA is early 2020

**Recent Initiatives**

Desalinated Water

**Initiative & Status:**

- Some Key Governing Principles of WSA:
  - City owns and operates the plant and conveyance facilities
  - City will deliver and District will pay for an annual supply of water irrespective of hydrological conditions
  - City agrees to provide MWD a **reliable** water supply for the term of the agreement; excuse for non-delivery only under certain rare circumstances (excludes drought)
  - City has right to supply the District with water from any of the City’s potable water supplies but agrees to maintain the plant’s ability to produce water
Desalinated Water

Initiative & Status:
➤ Summary of Key Terms of WSA:
  ▪ Term of Agreement: 50 years
  ▪ Volume of Water: 1,430 AFY
  ▪ Source of Water: At City’s option
  ▪ Quality of Water: state/federal primary water quality requirements
  ▪ Sharing Force Majeure & Change in Law Risks
  ▪ Unit Price: $2,700 - $3,000 / AF (based on capacity of plant)
  ▪ Commencement of Deliveries: January – June 2021

Groundwater Storage

➤ Improve dry year reliability by banking surplus supplies in local and/or regional groundwater basin for use during dry periods

Initiative & Status:
➤ Semitropic Groundwater Banking Program (April 2017)
  ▪ Guaranteed recovery 1,500 AFY
  ▪ Total storage 4,500 AF
  ▪ Regional storage for surplus SWP and supplemental water
➤ Total 2,000 AF banked in 2018 & 2019
➤ Used during periods of below average rainfall to supplement the reduction or loss of surface water supplies
Montecito Groundwater Basin (MGWB)

- Groundwater is a local reliable supply. A healthy basin is important for all users; protection is critical.

**Initiative & Status:**

- **Sustainable Management (SGMA)**
  - District has limited annual groundwater production (±700 AFY)
  - Over ±1,000 private wells (unknown quantity & yield)
  - GSA formation Initiated (Oct 2016)
  - BBM, Public Outreach, Basin Reprioritization
  - MGB GSA formed (Nov, 2018)
  - MGWB rated medium priority by DWR (Feb, 2019)

**Montecito Groundwater Basin (MGWB)**

**Recent Initiatives**

- **Sustainable Management (SGMA)**
  - MGB GSA is meeting quarterly; 1st meeting held in April, 2019
  - Considerable public outreach; encouraging stakeholder involvement
  - Preparation of a GSP
    - Data gathering; building a data management system; assessing basin setting and existing conditions; considering the development of a groundwater model; establishing the sustainable management criteria, monitor and measure progress; development of required projects and/or management actions
  - GSP development funded by MWD; assessing other funding options
  - Projected timeline for GSP adoption is 2021/22; extended due to reprioritization
Recycled Water

- Highly reliable, local, drought proof supply

Initiative & Status:

- Recycled Water Feasibility Study completed in Nov. 2018
- Identified Benefits of Recycled Water
  - Locally controlled
  - Nearly 100% reliable; improving overall water supply reliability
  - Environmentally friendly
  - Reduce use of potable supplies for landscape irrigation
  - Possible augmentation of groundwater supplies
  - Allows for use in excess of SBX7-7 urban water use limit
  - Further diversification of water supply portfolio

Recent Initiatives

Recycled Water

- RWFS - Recommended Project
  - Identifies large Non-Potable Reuse (NPR) project for irrigation
  - Source of supply is Montecito Sanitary District (±367AFY)
  - Up to 0.6 MGD Water Reclamation Facility (Ultrafiltration, Reverse Osmosis, Disinfection)
  - ±4 mile Distribution Pipeline
  - Large End-Users: Large commercial/Institutional customers (2 local golf courses, a cemetery, others)
  - Additional technical studies underway to refine project scope (i.e. Groundwater Augmentation Feasibility Analysis)
  - Maintain the option to pursue Groundwater Augmentation
  - Estimated Capital Cost: $15.8M (NPR)
  - Estimated Unit Cost: $3,300/AF (NPR)
Recycled Water

Recent Initiatives

Large Non-Potable Reuse Project

Recycled Water

Initiative & Status:
- RWFS recommended NPR project was accepted by MWD Board (Jan, 2019)
- MWD / MSD joint committees meeting regularly
- Discussing possible project phasing
- Groundwater Augmentation Feasibility Study to be completed in late 2019
- Assessing grant / loan opportunities
Rate Study

- Improved water supply reliability = Increased costs
- Rate Study underway (Proposition 218)
  - Established an updated 5-yr Financial Plan
  - Incorporating recent initiatives (WSA w/ City of SB, SGMA, GW Banking, Recycled Water)
  - Evaluating the financial impacts of improved water supply reliability
  - Target completion – 1st Qtr. 2020; on parallel path with WSA development / approval

Summary

- Changing hydrologic conditions; Adverse impact on water supplies
- Current water supplies are becoming less reliable
- Targeting rainfall independent water supplies to achieve the UWMP objective of 85% reliable water supplies by 2025
- Acquired regional groundwater banking rights in Semitropic to improve the reliability of the SWP
- Implementing SGMA for the Montecito Groundwater Basin to protect this local reliable supply
- Finalizing a Water Supply Agreement (Desal) w/ City of SB
- Developing a recycled water project w/ MSD