

December 28, 2016

MEETING NOTICE & REQUEST FOR RSVP

TO: AGRICULTURAL WATER ADVISORY COMMITTEE

Jurisdiction

District 1
District 2
District 3
District 4
District 5
District 6
District 7
Santa Clara County Farm Bureau
Loma Prieta Resource Conservation District
Private Well Owner (Non Retail)

Representative

Mitchell Mariani
James Provenzano
William Cilker
Russ Bonino, Hon. Sig Sanchez
Jan F. Garrod, Michael Miller
Robert Long
David Vanni
Sheryl O. Kennedy
Vacant
Dhruv Khanna

The regular meeting and tour of the Agricultural Water Advisory Committee is scheduled to be held on **Monday, January 9, 2017, at 12:00 p.m., in the Conference Room, located at the Silicon Valley Advanced Water Purification Center, 4190 Zanker Road**, San Jose, California. Lunch will be served.

Enclosed are the meeting agenda and corresponding materials. Please bring this packet with you to the meeting. Additional copies of this meeting packet are available on-line at <http://www.valleywater.org/About/AgriculturalWaterAdvisoryCommittee.aspx>.

A majority of the appointed membership is required to constitute a quorum, which is fifty percent plus one. A quorum for this meeting must be confirmed at least 48 hours prior to the scheduled meeting date or it will be canceled.

Further, a quorum must be present on the day of the scheduled meeting to call the meeting to order and take action on agenda items.

Members with two or more consecutive unexcused absences will be subject to rescinded membership.

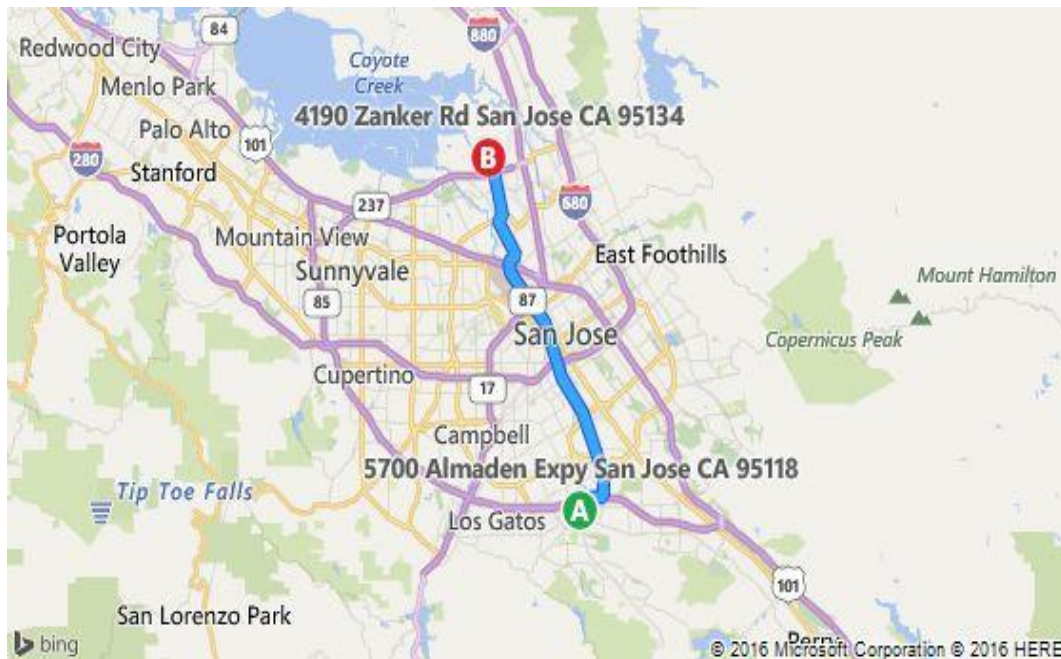
Please confirm your attendance by contacting Michelle Critchlow at 1-408-630-2883, or mcritchlow@valleywater.org

Enclosures



Silicon Valley Advanced Water Purification Center

4190 Zanker Road, San Jose CA 95134



<p><u>From Oakland:</u></p> <ul style="list-style-type: none"> • Take 880 South to • To 237 West/Calaveras toward Mountain View • Take Zanker Road Exit • Turn Left on Zanker Road to 4190 • Last Intersection Thomas Chew Foo Way <p>if you reach Los Esteros Road, you've gone too far</p>	<p><u>From Morgan Hill/Gilroy:</u></p> <ul style="list-style-type: none"> • Take 101 North • Take 680 North to 237 West/Calaveras toward Mountain View • Take Zanker Road Exit • Turn Right on Zanker Road to 4190 • Last Intersection Thomas Chew Foo Way <p>If you reach Los Esteros Road, you've gone too far</p>
<p><u>From Sunnyvale:</u></p> <ul style="list-style-type: none"> • Take 237 East/Calaveras • Take Zanker Road Exit • Turn Left on Zanker Road to 4190 • Last Intersection Thomas Chew Foo Way <p>if you reach Los Esteros Road, you've gone too far</p>	<p><u>From San Francisco:</u></p> <ul style="list-style-type: none"> • Take 101 South • Take 237 East/Calaveras • Take Zanker Road Exit • Turn Left on Zanker Road to 4190 • Last Intersection Thomas Chew Foo Way <p>If you reach Los Esteros Road, you've gone too far</p>
<p><u>From Downtown San Jose:</u></p> <ul style="list-style-type: none"> • Travel North on First Street • Take 88 North to 237 West/Calaveras toward Mountain View • Take Zanker Road Exit • Turn Right on Zanker Road to 4190 • Last Intersection Thomas Chew Foo Way <p>If you reach Los Esteros Road, you've gone too far</p>	<p><u>From Walnut Creek, Concord and East Bay areas:</u></p> <ul style="list-style-type: none"> • Take 680 South to 237 West/Calaveras toward Mountain View • Take Zanker Road Exit • Turn Left on Zanker Road to 4190 • Last Intersection Thomas Chew Foo Way <p>If you reach Los Esteros Road, you've gone too far</p>



Committee Officers

Robert Long, Committee Chair
Ralph Santos, Committee Vice Chair

Board Representative

Nai Hsueh, Alternate
Richard P. Santos, Board Representative
John L. Varela, Board Representative

AGENDA

AGRICULTURAL WATER ADVISORY COMMITTEE

MONDAY, JANUARY 9, 2017

12:00 p.m. – 3:00 p.m.

Silicon Valley Advanced Water Purification Center

**Conference Room
4190 Zanker Road
San Jose CA 95134**

**Time Certain:
12:00 p.m.**

- 1. Call to Order/Roll Call**
- 2. Time Open for Public Comment on Any Item Not on Agenda**
Comments should be limited to two minutes. If the Committee wishes to discuss a subject raised by the speaker, it can request placement on a future agenda.
- 3. Approval of Minutes**
3.1 Approval of Minutes – October 3, 2016, meeting
- 4. Election of Chair and Vice Chair**
- 5. Action Items**
 - 5.1. Review and Approve 2016 Annual Accomplishments Report for Presentation to the Board (Committee Chair)
Recommendation: This is an action item to provide comments to the Committee Chair to share with the Board as part of the Accomplishments Report presentation pertaining to the purpose, structure, and function of the Committee.
 - 5.2 Water Supply Update and Drought Response (Vanessa De La Piedra)
Recommendation: This is a discussion item and no action is required.
 - 5.3 Riparian Ordinance Report (Vincent Gin)
Recommendation: Receive the information, discuss and provide comments to the Board as applicable
 - 5.4 Review Agricultural Water Advisory Committee Work Plan, the Outcomes of Board Action of Committee Requests and the Committee's Next Meeting Agenda (Committee Chair)
Recommendation: Review the Board-approved Committee work plan to guide the committee's discussions regarding policy alternatives and implications for Board deliberation.
- 6. Clerk Review and Clarification of Committee Requests to the Board**
This is a review of the Committee's Requests, to the Board (from Item 5). The Committee may also request that the Board approve future agenda items for Committee discussion.

7. Reports

Directors, Managers, and Committee members may make brief reports and/or announcements on their activities. Unless a subject is specifically listed on the agenda, the Report is for information only and not discussion or decision. Questions for clarification are permitted.

7.1 Director's Report

7.2 Manager's Report

7.3 Committee Member Reports

8. Adjourn: Adjourn to next regularly scheduled meeting at 1:30 p.m., **April 3, 2017**, in the Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, CA 95118

9. Tour begins Silicon Valley Advanced Water Purification Center

All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at the Office of the Clerk of the Board at the Santa Clara Valley Water District Headquarter Building, 5700 Almaden Expressway, San Jose, CA., 95118, at the same time that the public records are distributed or made available to the legislative body.

The Santa Clara Valley Water District will make reasonable efforts to accommodate persons with disabilities wishing to attend committee meetings. Please advise the Clerk of the Board office of any special needs by calling 1-408-630-2277.

Agricultural Water Advisory Committee Purpose and Duties

The Agricultural Water Advisory Committee of the Santa Clara Valley Water District (District) is established per the District Act to assist the District Board of Directors (Board) with policies pertaining to agricultural water supply and use.

The specific duties are:

- Providing input on policy alternatives for Board deliberation, when requested by the Board.
- Providing comment on activities in the implementation of the District's mission that the Board will consider or refer to staff.
- Producing and presenting to the Board an Annual Accomplishments Report that provides a synopsis of the Committee's discussions regarding specific topics and subsequent policy recommendations, comments, and requests that resulted from those discussions.

In carrying out these duties, the Board's Committees bring to the District their respective expertise and the interests of the communities they represent. In addition, Board Committee members may bring information regarding District activities to the communities they represent.



AGRICULTURAL WATER ADVISORY COMMITTEE MEETING

DRAFT MINUTES

MONDAY, OCTOBER 3, 2016
1:30 PM

(Paragraph numbers coincide with agenda item numbers)

A regularly scheduled meeting of the Agricultural Water Advisory Committee was held on October 3, 2016, in the Headquarters Boardroom at the Santa Clara Valley Water District Headquarters, 5700 Almaden Expressway, San Jose, California.

1. CALL TO ORDER/ROLL CALL

Chairperson Mr. Robert Long called the meeting to order at 1:35 p.m.

Members in attendance were:

Jurisdiction

District 1

District 3

District 4

District 5

District 6

District 7

Private Well Owner (Non Retail)

Representative

Mitchell Mariani

Ralph Santos

William Cilker

Russ Bonino

Jan F. Garrod*

Robert Long

David Vanni

Dhruv Khanna

Members not in attendance were:

Jurisdiction

District 2

District 4

District 5

Santa Clara County Farm Bureau

Representative

Zachariah Lewis

James Provenzano

Sig Sanchez

Michael Miller

Sheryl O. Kennedy

*Committee member arrived as indicated below.

Board members in attendance were: Director Richard P. Santos and Director John Varela, Board Representatives, and Director Nai Hsueh, Alternate.

Staff members in attendance were: Aaron Baker, Glenna Brambill, Michelle Critchlow, Jerry De La Piedra, Vanessa De La Piedra, Jim Fiedler, Marty Grimes, Garth Hall and Tracy Hemmeter.

2. PUBLIC COMMENT

There was no one present who wished to speak.

3. APPROVAL OF MINUTES

3.1 Approval of Minutes

It was moved by Mr. David Vanni, seconded by Mr. Ralph Santos, and unanimously carried, to approve the minutes of the April 13, 2016, and July 11, 2016, Agricultural Water Advisory Committee meetings, as presented.

4. ACTION ITEMS

4.1 WATER SUPPLY UPDATE

Ms. Tracy Hemmeter reviewed the materials as outlined in the agenda item.
Mr. Garth Hall, Directors Santos and Varela were available to answer questions.

No action was taken.

4.2 DISCUSSION ON FINDING WAYS THAT PRIVATE WELL OWNERS (FARMERS) CAN RECHARGE THEIR AQUIFERS

Ms. Vanessa De La Piedra reviewed the materials as outlined in the agenda item.

Mr. Doug Muirhead, a member of the public spoke on this item.

*Mr. Jan Garrod arrived at 2:08 p.m.

No action was taken.

4.3 WATER CONSERVATION PROGRAMS

Chairperson Mr. Robert Long and Ms. Glenna Brambill reviewed the materials as outlined in the agenda item.

Mr. Jim Fiedler was available to answer questions.

No action was taken.

4.4 REVIEW AGRICULTURAL WATER ADVISORY COMMITTEE WORK PLAN, THE OUTCOMES OF BOARD ACTION OF COMMITTEE REQUESTS AND THE COMMITTEE'S NEXT MEETING AGENDA

Ms. Glenna Brambill reviewed the materials as outlined in the agenda item.
Mr. Jim Fiedler advised the Committee that the Riparian Corridor Report would be going to the Board at a special meeting on October 18, 2016.

No action was taken.

5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS TO THE BOARD

Ms. Glenna Brambill reported there were no action items for the Board's consideration.

6. REPORTS

6.1 Director's Report

Directors Nai Hsueh, Richard P. Santos and John L. Varela reported on the following:

- Board Action
- Water District News
- Water Supply
- Flood Protection
- Community Outreach

6.2 Manager's Report

Mr. Jim Fiedler reported on the following:

- Recycled Water Projects received grant of \$3mil from United States Bureau of Reclamation(USBR)
- WateReuse California DPR Draft Report event was held at the District on September 29th, great turnout
- Ground Water Management Plan will be updated per new legislation (Groundwater Sustainability Act) with a public hearing held in November 2016
- Guadalupe/Coyote Resource Conservation District joint Boards meeting, on November 1, 2016, at the District's Headquarters Boardroom
- District's Board is interested in additional storage for carry over staff will be bringing a proposal in the planning process in the enlargement of the Las Vaqueros reservoir to the Board in October 2016.
- District assisted fighting the Loma Prieta fires with our fire tender trucks

6.3 Committee Member Reports

None.

7. ADJOURNMENT

Chairperson Long adjourned at 2:55 p.m. to the next regular meeting and tour on Monday, January 9, 2017, at 12:00 p.m., at the Silicon Valley Advanced Purification Center's Conference Room.

Michelle Critchlow
Office of the Clerk of the Board

Approved:



Committee: Agricultural Water
Meeting Date: 01/09/17
Agenda Item No.: 5.1
Unclassified Manger: Michele King
Email: mking@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: Approve 2016 Annual Accomplishments Report for Presentation to the Board

RECOMMENDED ACTION:

1. Approve the 2016 Accomplishments Report for presentation to the Board.
2. Provide comments to the Committee Chair to share with the Board as part of the Accomplishments Report presentation pertaining to the purpose, structure, and function of the Committee

SUMMARY:

This is an ACTION item:

The Accomplishments Report summarizes the committee's discussions and actions to prepare Board policy alternatives and implications for Board deliberation throughout 2016. The Committee Chair, or designee, presents the Accomplishments Report to the Board at a future Board meeting.

The Committee may provide feedback to the Committee Chair, at this time, to share with Board as part of the Accomplishments Report presentation pertaining to the purpose, structure, and function of the Committee.

BACKGROUND:

Governance Process Policy-8:

The District Act provides for the creation of advisory boards, committees, or commissions by resolution to serve at the pleasure of the Board.

Accordingly, the Board has established Advisory Committees, which bring respective expertise and community interest, to advise the Board, when requested, in a capacity as defined: prepare Board policy alternatives and provide comment on activities in the implementation of the District's mission for Board consideration. In keeping with the Board's broader focus, Advisory Committees will not direct the implementation of District programs and projects, other than to receive information and provide comment.

Further, in accordance with Governance Process Policy-3, when requested by the Board, the Advisory Committees may help the Board produce the link between the District and the public through information sharing to the communities they represent.

ATTACHMENT(S):

Attachment 1: Agricultural Water Advisory Committee 2016 Accomplishments Report

2016 Annual Accomplishments Report: Agricultural Water Advisory Committee

Update: October 2016

GP8. Accordingly, the Board has established Advisory Committees, which bring respective expertise and community interest, to advise the Board, when requested, in a capacity as defined: prepare Board policy alternatives and provide comment on activities in the implementation of the District's mission for Board consideration. In keeping with the Board's broader focus, Advisory Committees will not direct the implementation of District programs and projects, other than to receive information and provide comment.

The annual work plan establishes a framework for committee discussion and action during the annual meeting schedule. The committee work plan is a dynamic document, subject to change as external and internal issues impacting the District occur and are recommended for committee discussion. Subsequently, an annual committee accomplishments report is developed based on the work plan and presented to the District Board of Directors.

ITEM	WORK PLAN ITEM BOARD POLICY	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
1	Annual Accomplishments Report	<ul style="list-style-type: none"> Review and approve 2015 Accomplishments Report for presentation to the Board. (Action) Submit requests to the Board, as appropriate. 	<p>Accomplished January 11, 2016: The Committee reviewed the 2015 Accomplishments Report for presentation to the Board.</p> <p>Accomplished April 4, 2016: The Committee reviewed the 2015 Accomplishments Report for presentation to the Board and took the following action:</p> <p>The Committee unanimously approved the Accomplishments Report for presentation to the Board</p> <p><i>The Board received the Accomplishments Report at their May 10, 2016, board meeting.</i></p>
2	Election of Chair and Vice Chair for 2016	<ul style="list-style-type: none"> Committee Elects Chair and Vice Chair for 2016. (Action) 	<p>Accomplished January 11, 2016: The Committee elected the 2016 Committee Chair and Vice-Chair, Mr. Robert Long and Mr. Ralph Santos respectively.</p>

Yellow = Update Since Last Meeting

Blue = Action taken by the Board of Directors

Attachment 1
Page 1 of 7

2016 Annual Accomplishments Report: Agricultural Water Advisory Committee

Update: October 2016

ITEM	WORK PLAN ITEM BOARD POLICY	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
3	Update on 2016 Water Supply and Drought Response	<ul style="list-style-type: none"> Receive update on water supply and drought response. (Information) Provide comments to the Board, as necessary. 	<p>Accomplished January 11, 2016:</p> <p>The Committee received information on the water supply and drought response and took no action.</p>
4	Review of Agricultural Water Advisory Committee Work Plan, the Outcomes of Board Action of Committee Requests and the Committee's Next Meeting Agenda	<ul style="list-style-type: none"> Receive and review the 2016 Board-approved Committee work plan. Submit requests to the Board, as appropriate. (Action) 	<p>Accomplished January 11, 2016:</p> <p>The Committee reviewed the 2016 Committee Work Plan and took the following action:</p> <p><u>Committee requested that the Board add the agenda items to the Committee's work plan:</u></p> <ol style="list-style-type: none"> 1. Progress of recharge costs upcoming for Fiscal Year 2017-2018; 2. Capital expansion update; and 3. Discussion of the water quality conditions of waterways (rivers/streams/systems) within the county if/and how does/does not agricultural water influence the water quality conditions. <p>2. Review the report, The Economic Contribution of Agriculture to the County of Santa Clara 2014 Report, and staff's review and analysis of the economic data (study) and implications from page 17 of the report, and include this analysis as part of the Open Space Credit/Groundwater Production Charges discussion for the Committee's April Agenda.</p> <p><i>The Board approved the Committee's requests (see April Agenda 4.4 Attachment 3) at its</i></p>

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Blue = Action taken by the Board of Directors

Attachment 1

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2016 Annual Accomplishments Report: Agricultural Water Advisory Committee

Update: October 2016

ITEM	WORK PLAN ITEM BOARD POLICY	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
			<p><i>February 23, 2016, meeting.</i></p> <p>Accomplished April 4, 2016: The Committee reviewed the 2016 Committee Work Plan and took no action.</p> <p>July 11, 2016: The Committee received information in the July meeting packet, however, there was no quorum for this meeting.</p> <p>Accomplished October 3, 2016: The Committee reviewed the work plan and took no action.</p>
5	Review and Comment to the Board on the Fiscal Year 2017 Proposed Groundwater Production Charges.	<ul style="list-style-type: none"> Review and comment to the Board on the Fiscal Year 2017 Proposed Groundwater Production Charges. <i>(Action)</i> Provide comments to the Board, as necessary. 	<p>Accomplished April 4, 2016: The Committee reviewed the Fiscal Year 2017 Proposed Groundwater Production Charges. and took the following action:</p> <p>The Committee unanimously approved to support the Fiscal Year 2016-2017 Proposed Groundwater Production Charges.</p> <p><i>The Board received this information at their May 10, 2016, board meeting.</i></p>

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Blue = Action taken by the Board of Directors

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2016 Annual Accomplishments Report: Agricultural Water Advisory Committee

Update: October 2016

ITEM	WORK PLAN ITEM BOARD POLICY	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
6	Review and Discuss The Economic Contribution of Agriculture to the County of Santa Clara 2014 Report, and staff's review and analysis of the economic data (study) and implications from page 17 of the report, and include this analysis as part of the Open Space Credit/Groundwater Production Charges Process.	<ul style="list-style-type: none"> Review the Economic Contribution of Agriculture to the County of Santa Clara 2014 Report. Staff's Review and Analysis of the economic data (study) and implications from page 17 of the report. (Action) Provide comments to the Board, as necessary. 	<p>Accomplished April 4, 2016: The Committee reviewed the Economic Contribution of Agriculture to the County of Santa Clara 2014 Report and took no action.</p>
7	Update on CA WaterFix (Bay Delta Conservation Plan and Imported Water with Respect to Board Ends Policy 2.1: Reliable Water)	<ul style="list-style-type: none"> Receive an update on the CA Water Fix (Bay Delta Conservation Plan and Imported Water with Respect to Board Ends Policy 2.1:Reliable Water). (Action) Provide comments to the Board, as necessary. 	<p>Accomplished April 4, 2016: The Committee received an update on the Bay Delta Conservation Plan and Imported Water with Respect to Board Ends Policy 2.1:Reliable Water and took no action</p> <p>October 3, 2016: <i>This agenda item was removed for this meeting because there was no new significant information for the Committee at this time. (removal approved by Committee Chair Long)</i></p>

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2016 Annual Accomplishments Report: Agricultural Water Advisory Committee

Update: October 2016

ITEM	WORK PLAN ITEM BOARD POLICY	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
8	Comprehensive Review of Safe, Clean Water (SCW) Program Grants and Partnership Projects	<ul style="list-style-type: none"> Review the SCW Program Grants and Partnership Projects. (Information) Provide comments to the Board, as necessary. 	July 11, 2016: The Committee received information in the July meeting packet, however, there was no quorum for this meeting.
9	Conceptual Development of a Pilot Mini-Grant Program for Wildlife Habitat Restoration Grants and Partnerships (Project D3) of the Safe, Clean Water (SCW) Program	<ul style="list-style-type: none"> Discuss the conceptual development of a pilot mini-grant program for wildlife habitat restoration grants and partnership (Project D3) of the SCW Program). (Information) Provide comments to the Board, as necessary. 	July 11, 2016: The Committee received information in the July meeting packet; however, there was no quorum for this meeting.
10	Discussion of the water quality conditions of waterways (rivers/streams/systems) within the county and if/how agricultural water does/does not influence water quality conditions.	<ul style="list-style-type: none"> Discuss the water quality conditions of waterways (rivers/streams/systems) within the county and if/how agricultural water does/does not influence water quality conditions. (Information) Provide comments to the Board, as necessary. 	July 11, 2016: The Committee received information in the July meeting packet; however, there was no quorum for this meeting.

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2016 Annual Accomplishments Report: Agricultural Water Advisory Committee

Update: October 2016

ITEM	WORK PLAN ITEM BOARD POLICY	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
11	Update on the Capital Expansion (CIP)	<ul style="list-style-type: none"> Receive an update on the Capital Improvement Plan. (Information) Provide comments to the Board, as necessary. 	July 11, 2016: The Committee received information in the July meeting packet; however, there was no quorum for this meeting.
12	Status Report on the Water Resources Master Plan.	<ul style="list-style-type: none"> Receive an update on the Water Resources Master Plan. (Information) Provide comments to the Board, as necessary. 	July 11, 2016: The Committee received information in the July meeting packet; however, there was no quorum for this meeting.
13	Riparian Ordinance Report	<ul style="list-style-type: none"> Review the Board-approved Riparian Ordinance Report for Board consideration. (Action) Provide comments to the Board, as necessary. 	October 3, 2016: <i>This item is postponed until staff gets the Board's direction as to what type of feedback they expect from the Committee regarding the Riparian Ordinance Report. (Committee Chair Long was apprised of this change).</i>
14	Discussion on finding ways that private well owners (farmers) can recharge their aquifers.	<ul style="list-style-type: none"> Discuss ways that private well owners (farmers) can recharge their aquifers. (Action) Provide comments to the Board, as necessary. 	Accomplished October 3, 2016: The Committee discussed ways that private well owners (farmers) can recharge their aquifers. The Committee took no action.

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Blue = Action taken by the Board of Directors

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2016 Annual Accomplishments Report: Agricultural Water Advisory Committee

Update: October 2016

ITEM	WORK PLAN ITEM BOARD POLICY	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
15	Update on the progress of recharge costs upcoming for Fiscal Year 2017-2018.	<ul style="list-style-type: none"> Received an update on the Progress of recharge costs upcoming for Fiscal Year 2017-2018. (Action) Provide comments to the Board, as necessary. 	October 3, 2016: <i>This information will be available during the Groundwater Production Charges discussion in April 2017. (Committee Chair Long was apprised of this change)</i>
16	Water Conservation Programs	<ul style="list-style-type: none"> Received information on Water Conservation Programs. (Information) Provide comments to the Board, as necessary. 	Accomplished October 3, 2016: The Committee discussed Water Conservation Programs and educating their respective communities. The Committee took no action.

Yellow = Update Since Last Meeting

Blue = Action taken by the Board of Directors

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Committee:	Agricultural Water
Meeting Date:	01/09/17
Agenda Item No.:	5.2
Unclassified Manager:	Garth Hall
Email:	ghall@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: Water Supply Update and Drought Response

RECOMMENDED ACTION:

This is an information only item and no action is required.

SUMMARY:

This information-only item summarizes water supply conditions and District drought response, including working with other entities on a Task Force to draft water efficiency guidelines for new developments.

BACKGROUND:

Current water supply conditions and District drought response activities are summarized in the following monthly reports: Drought 2016 Monthly Status Report (Attachment 1), Water Tracker (Attachment 2), and Groundwater Condition Report (Attachment 3).

On June 14, 2016, the District Board of Directors adopted a resolution calling for a 20 percent reduction in water use compared to 2013, and a limitation on outdoor watering of ornamental landscapes or lawns with potable water to three days per week through January 31, 2017. Due to improved water supply conditions, this call was a reduction from the 30 percent reduction and two day per week outdoor watering call issued in 2015. The call for 20 percent was based on current water supply conditions, projections of water use and supply in 2016, and is consistent with the District's Water Shortage Contingency Plan.

In response to the ongoing drought, the District held two Summits in 2015, one with elected officials and one with staff from local water suppliers, to discuss potential drought response efforts and improve collaboration. Several recommendations emerged, including more consistent policy throughout Santa Clara County. In response, District staff has participated with representatives from local cities, the county, Sustainable Silicon Valley, and Joint Venture Silicon Valley on a Task Force to draft water efficiency guidelines for new developments. The idea was to set the bar even higher in terms of water use efficiency. Language for alternate supplies such as graywater, rainwater harvesting, and on-site reuse was incorporated. The Task Force has completed an administrative draft (Attachment 4) and is currently seeking comments from interested stakeholders. Outreach efforts will include sharing the draft ordinance with the following entities:

- District Board of Directors' Water Conservation & Demand Management Committee (December 2016)
- Santa Clara County building officials (December 2016/January 2017)
- District Water Retailers Committee (December 2016)
- Santa Clara County City Managers Association (January 2017)
- Cities Association of Santa Clara County (January 2017)
- District Board of Directors' Water Commission (January 2017)
- District Board of Directors' Agricultural Water Advisory Committee (January 2017)
- District Board of Directors' Environmental Water Resources Committee (January 2017)

ATTACHMENT(S):

Attachment 1: Drought 2016 Monthly Status Report

Attachment 2: Water Tracker

Attachment 3: Groundwater Condition Report

Attachment 4: Draft Model Water Efficient New Development Ordinance

**NOVEMBER
2016**



Drought 2016 Monthly Status Report

**Santa Clara Valley
Water District**



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Executive Summary

Water Tracker

U.S. Drought Monitor

1. Water Use Reductions

- A. District Water Use Efficiency Strategies
- B. San Francisco Public Utilities Commission In-county Water Supplies
- C. Countywide Water Use and Savings
- D. Recycled Water Production

2. Retailers Water Use and Savings

- A. Water Savings by Retailer (Table)
- B. California Water Service Company
- C. Gilroy, City of
- D. Great Oaks Water Company
- E. Milpitas, City of
- F. Morgan Hill, City of
- G. Mountain View, City of
- H. Palo Alto, City of
- I. Purissima Hills Water Company
- J. San Jose Municipal Water System
- K. San Jose Water Company
- L. Santa Clara, City of
- M. Stanford University
- N. Sunnyvale, City of

3. Water Conservation Measures

- A. Santa Clara Valley Water District
- B. Water Retailers (Table)
- C. Other Entities (non retailer cities, the County of Santa Clara, untreated surface water users, independent wells)

4. District Drought Response Strategies

- A. Water supply and operations
- B. Water use reduction
- C. Drought response opportunities
- D. Administrative and financial management

5. Data Collection Methodology

- A. Water Use Data Disclaimer
- B. Treated Water Data
- C. Groundwater Data
- D. SFPUC Water Data
- E. Surface Water Data
- F. Recycled Water Use

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Executive Summary

EXECUTIVE SUMMARY

The purpose of this report is to provide a monthly water supply and water use reduction outlook in response to the ongoing drought. The data and analysis provided includes local and imported water conditions, in addition to detailed monthly water use and reductions as reported by the county's major water retailers.

Background

As a result of the multi-year drought and reduced water supply outlook, including projected groundwater storage, the Santa Clara Valley Water District's (district) Board of Directors (board) set a preliminary 2014 water use reduction target equal to 10 percent of 2013 countywide water use, and on February 25, 2014, increased the target to 20 percent. The resolution setting the reduction target also recommended retail water agencies, local municipalities and the County of Santa Clara (County) implement mandatory measures as needed to achieve the water use reduction target. As conditions have changed since early 2014, the board has updated its call for water use reductions and recommendations to achieve savings, as follows:

- November 25, 2014, extended the February 25, 2014, call for 20 percent reductions through June 30, 2015.
- March 24, 2015, the board called for 30 percent water use reductions, and recommended that retail water agencies, municipalities and the County implement mandatory measures as needed to accomplish that target, including a two day a week outdoor irrigation schedule.
- November 24, 2015, the board extended the call for 30 percent savings through June 30, 2016.
- June 14, 2016, the board approved a resolution to revise the call for water use reductions to 20 percent, and to increase the allowable days for outdoor irrigation from two to three days a week. The resolution is in effect to January 31, 2017, to coincide with the recently updated state emergency regulations.

The district's Drought Response Strategy (See Section 4) developed in February 2014 continues to support the board's call for water use reductions and has been an effective approach to respond to the drought. These actions are still the basis of our drought response. Certain strategies may change or increase as conditions change. The drought strategies are implemented by a cross-functional team from across the organization (convened when the Drought Response Strategy was formulated).

Summary of Response to Call for Water Use Reductions

From the beginning of the drought response initiated in 2014, the district has worked with water retailers, municipalities and the County to increase water conservation efforts and public outreach, and to implement other actions to reduce water use.

- Water retailers and the district increased their outreach and education efforts.
- Investor owned retailers implemented water allocation programs.

- 2015 water use data indicated that cumulative countywide retailer savings of 27 percent were realized compared to 2013.
- Preliminary 2016 data through October indicates that cumulative savings of 27 percent has been achieved, and 31 percent was achieved for the month of October when compared to October 2013.

In response to outcomes from two summits held by the district, one with the retailers and one with local elected officials, the district and retailers continue to effectuate the common theme that: messaging and policy development needs to be consistent and coordinated. The summits were held in 2015 to facilitate increased water use saving efforts and increased coordination to meet the 30 percent reduction target at that time. Even though the call for water use reductions has been lowered, coordination continues to be a focus for the water district and retailers in 2016 to help transition the response by the community to the change in water use reductions and restrictions called for by the board on June 14, 2016.

Current Drought and Water Supply Status

Severe to extreme drought conditions continue locally and throughout California (~62 percent), with no significant change from the November 8, 2016 report.

- The U.S. Drought Monitor for California November 8, 2016, reports that Santa Clara County drought severity ranges from 'D0 –Abnormally Dry' to 'D3-Extreme Drought', depending on the location within the county.
- The National Oceanic and Atmospheric Administration three-month outlook on drought conditions indicate that drought is likely to persist or remain through the winter in many regions currently experiencing drought, including much of California and the Southwest. A small geographic area in northern California shows improvement or 'Drought removal likely'.
- The district's current 2016 State Water Project (SWP) allocation is 60 percent of contract quantity. Central Valley Project allocations for agricultural water service contractors South-of-Delta are 5 percent of their contract quantity; and allocations for M&I water service contractors South-of-Delta are 55 percent.
- As of November 1, 2016, local reservoir storage is at 88 percent of the 20-year average for this time of year and 56 percent of restricted storage capacity, and storage in key northern California reservoirs is 73% to 102% of average for this time of year.
- Local and imported supplies are less constrained as compared to the last few years, and the district is taking advantage of the improved water supply conditions by increasing recharge operations compared to last year, in collaboration with regulatory agencies.
- Year to date managed groundwater recharge in the Santa Clara Plain is two and a half times the five-year average, and there has been much improvement in groundwater storage compared to last year. Staff continues to closely track groundwater conditions through monthly water level measurements at 225 wells and regular subsidence monitoring.

Report Format

This report begins with our current drought and water supply status as shown in the monthly Water Tracker report and Drought Monitor report. The remainder of the report focuses on water use and reduction data in Santa Clara County. Detailed 2016 water use and savings reports for the county and individual retailers are presented, as is a summary of 2013 data, which is provided for comparison as it is the base year set for water savings calculations. Data for 2014 and 2015 are also provided.

Disclaimer

The data presented within this report is preliminary and subject to change. The data is presented prior to complete QA/QC and validation in an effort to quickly identify trends in water supply conditions and water use within the county. Due to the critical nature of the ongoing drought, it is important that the district and the community have an understanding of conditions and effectiveness of water use reduction efforts. Please see the Data Collection Methodology section at the end of this report for further description and disclaimers regarding the water use data reported herein. The water use data presented in the monthly reports are based on water retailer water use, which comprises just above 80 percent of countywide water use. The remaining water use consists of small or independent groundwater well users, district untreated surface water customers and recycled water.

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A monthly assessment of trends in water supply and use for Santa Clara County, California

Outlook as of November 1, 2016

Santa Clara County residents and businesses reduced water use by 21% in September 2016 compared to September 2013. This brings the cumulative 2016 water savings through September to 27% compared to the same period of 2013. Realizing parts of the state were better off than others in terms of water supply, the State Water Resources Control Board adopted an updated Emergency Regulation in May that allowed water retailers throughout the state to determine their individual conservation standards based on local conditions.

At its June 14 meeting, the District's Board of Directors (Board) lowered its water use reduction target to 20% for the period extending through January 2017, but emphasized that residents should continue their efforts to conserve in this ongoing drought. The Board also called for local water providers to continue to institute mandatory measures, as needed, to reach the 20% target, and called for restrictions on watering schedules to a maximum of three times a week, up from the two day a week schedule most areas of the county have had in place since the spring of 2015.

In preparation for planned major facility outages in early 2017, 10,000 AF of imported supplies is currently being conveyed to Anderson Reservoir and recharge rates are being curtailed. Due to the reduced recharge, water levels in some of our percolation ponds may drop noticeably. Even with this reduction, groundwater recharge operations are expected to meet or exceed the 2016 recharge plan, which entails more recharge than in normal years.

Weather**Rainfall in San Jose**

- Month of October = 1.46 inches
- Rainfall year total = 1.46 inches or 113% of average to date (Rainfall year is July 1 to June 30)
- The average daily high temperature for October was 74.5 degrees Fahrenheit. Temperatures were above normal for the month

Local Reservoirs

- Total November 1 storage = 69,130 acre-feet
 - » 88% of 20-year average for that date
 - » 41% of total capacity
 - » 56% of restricted capacity (169,009 acre-feet total storage capacity limited by seismic restrictions to 122,924 acre-feet)
- Approximately 4,028 acre-feet of imported water delivered into local reservoirs during October 2016
- Total releases to streams (local and imported water) during October was 7,704 acre-feet

Groundwater

- Groundwater (GW) Storage: End of 2016 storage is predicted to fall near the boundary of Stage 2 (Alert) and Stage 1 (Normal) of the Water Shortage Contingency Plan

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
October managed recharge estimate (AF)	8,300	900	2,700
January to October managed recharge estimate (AF)	90,100	9,500	23,200
January to October managed recharge, % of 5-year ave.	256%	108%	136%
September pumping estimate (AF)	3,800	1,000	4,400
January to September pumping estimate (AF)	44,200	8,000	30,300
January to September pumping, % of 5-year average	67%	96%	92%
GW index well level compared to last October	Increase	Increase	Increase

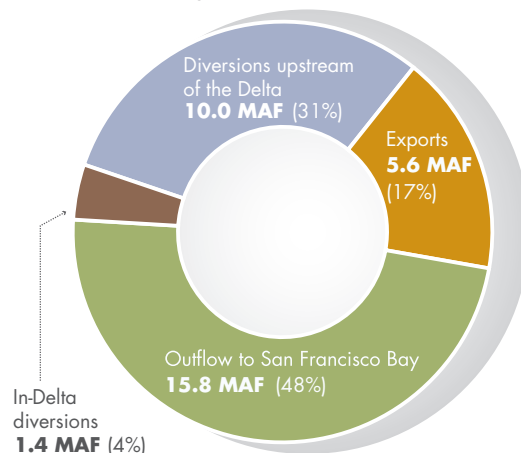
AF = acre-feet

Imported Water



- 2016 State Water Project (SWP) and Central Valley Project (CVP) allocations:
 - » 2016 SWP allocation: 60% = 60,000 acre-feet
 - » 2016 CVP allocations South-of-Delta: Municipal and Industrial water service contractors: 55% of historic use = 71,500 acre-feet, Agriculture water service contractors: 5% = 1,655 acre-feet
- Reservoir storage information, as of October 31, 2016:
 - » Shasta Reservoir at 60% of capacity (102% of average for this date)
 - » Oroville Reservoir at 44% of capacity (73% of average for this date)
 - » San Luis Reservoir at 28% of capacity (54% of average for this date)
- District's Semitropic groundwater bank reserves: An estimated 190,339 acre-feet as of October 31, 2016.
- Estimated Hetch Hetchy deliveries to Santa Clara County:
 - » Month of October = 3,829 acre-feet
 - » Year-to-date = 36,705 acre-feet
 - » Five-year average is 48,700 acre-feet

**Delta Watershed Diversions and Outflow
Typical Annual Balance
Average Years (32.8 MAF)**



Treated Water



- Above average demands of 10,560 acre-feet delivered in October
- This total is 103% of the five-year average for the month of October
- Year-to-date = 84,560 acre-feet or 85% of the five-year average

Conserved Water



- Saved 69,000 acre-feet in FY16 from long-term program (baseline year is 1992)
- Long-term program goal is to save nearly 72,000 acre-feet in FY17
- The Board has called for a 20% reduction and a limit of three days per week for irrigation of ornamental landscape with potable water
- Achieved a 27% reduction in water use through the first nine months of 2016, compared to 2013

Recycled Water



- Estimated October 2016 production = 1,900 acre-feet
- Estimated year-to-date through October = 17,338 acre-feet or 104% of the five-year average
- Silicon Valley Advanced Water Purification Center produced an estimated 4 billion gallons (12,400 acre-feet) of purified recycled water since March 25, 2014. The purified water is blended with existing tertiary recycled water for South Bay Water Recycling Program's customers

CONTACT US

For more information, contact **Customer relations** at **(408) 630-2880**, or visit our website at valleywater.org and use our **Access Valley Water** customer request and information system. With three easy steps, you can use this service to find out the latest information on district projects or to submit questions, complaints or compliments directly to a district staff person.

Follow us on:

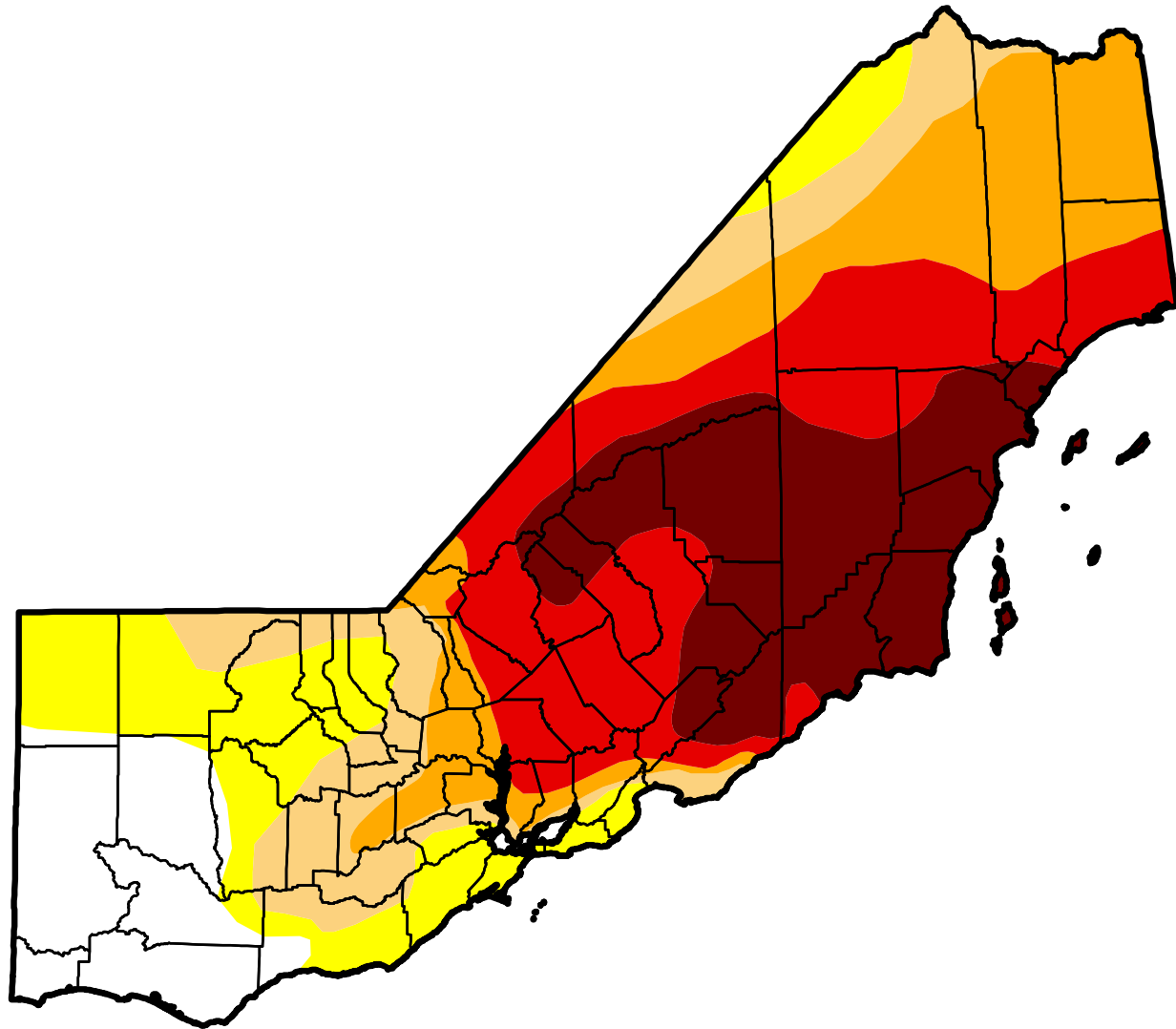
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To get eNews, text
VALLEYWATER
to **22828**.

U.S. Drought Monitor

California

November 8, 2016
 (Released Thursday, Nov. 10, 2016)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	12.03	87.97	73.04	60.27	42.80	21.04
Last Week <i>11/1/2016</i>	12.03	87.97	75.26	61.38	42.80	21.04
3 Months Ago <i>8/9/2016</i>	0.00	100.00	83.59	59.02	42.80	21.04
Start of Calendar Year <i>12/29/2015</i>	0.00	100.00	97.33	87.55	69.07	44.84
Start of Water Year <i>9/27/2016</i>	0.00	100.00	83.59	62.27	42.80	21.04
One Year Ago <i>11/10/2015</i>	0.14	99.86	97.33	92.27	70.55	44.84

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
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 National Drought Mitigation Center

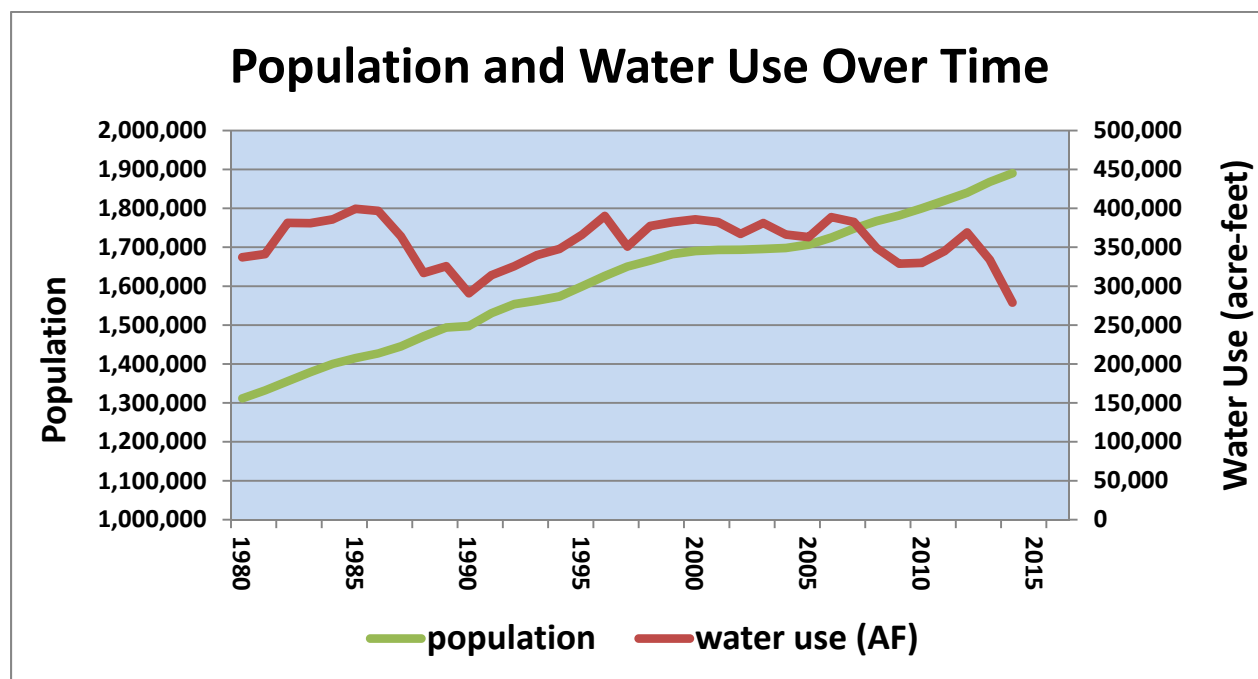


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Section 1. Water Use Reductions

The district and its water retailers have a long history of implementing water conservation and water use efficiency in Santa Clara County. Because of the investments the district and its water retailers have made in water conservation since 1992, water use in the county has remained relatively flat despite a 25 percent increase in population over the same time period.

FIGURE 1 POPULATION AND WATER USE



A. District Water Use Efficiency Strategies

This section provides the context of the district's existing long-term conservation programs to the efforts in response to the current drought.

Long-term Water Conservation

The district's 2012 Water Supply and Infrastructure Master Plan (Water Master Plan) acknowledges that further investments are needed to ensure adequate water supply reserves in drought years. The "Ensure Sustainability" strategy adopted by the board calls for significantly increasing the current levels of conservation from 69,000 acre-feet per year (AFY) to 98,800 AFY over the next 14 years, as well as other investments that will reduce the county's reliance on the Sacramento-San Joaquin Delta. Future growth in county water demands will be met through water conservation and recycled water. While the long-term Water Master Plan is being implemented, short-term gaps between annual supply and demand can occur as seen in the current severe drought. These gaps are addressed through the board-adopted Water Shortage Contingency Plan¹.

¹ Santa Clara Valley Water District 2015 Urban Water Management Plan, <http://www.valleywater.org/Services/WaterSupplyPlanning.aspx>

The district and its major water retailers have a cooperative relationship in the implementation of a variety of water conservation programs in an effort to permanently reduce water use in Santa Clara County; they are an important element in meeting long-term water reliability. Water conservation programs implemented since 1992 have had a large influence in continued demand reduction. This can be seen in Figure 1 with the relative stability of demands since the mid to late 1980s, even though population has increased significantly during the same period. Using the year 1992 as a baseline, the district saved approximately 69,000 AFY in year Fiscal Year 2016, which is over two-thirds of the district's long-term goal of 98,800 AFY by 2030.

Short-term Water Use Reductions

In addition to the district's long-term conservation programs, there are times, such as the current drought, when we need additional reductions. Short-term reduction generally refers to these behavioral changes that reduce water use over and above long-term conservation programs. When the district's board calls for short-term water use reductions, the cities and water retailers consider the implementation of their water shortage contingency plan actions identified in their Urban Water Management Plans in order to achieve the necessary shortage response. The board's calls for short term reductions during this drought included:

- 20 percent call in February 2014 and extended in November 2014
- 30 percent call in March 2015 and extended in November 2015
- 20 percent call in June 2016

The 2015 call for 30 percent reduction triggered certain actions by retailers or municipalities. Those actions are being adjusted as necessary in response to the recent board call for a 20 percent reduction. Actions to achieve the desired shortage response may be different for each city/water retailer depending on service area composition (commercial, industrial, residential) and source of water supplies. However, some actions are common to several of the cities/water retailers, providing for more consistent implementation and messaging. An example of a consistent approach was the coordinated two day/week watering schedule. As a result of the board approved resolution June 14, 2016, the watering schedule has been revised, and the district and those retailers continuing with a watering restriction will coordinate communication of this change to the community. The revised restriction on outdoor watering of ornamental landscapes or lawns with potable water is now for a maximum of three days a week (odd numbered and no addresses may water on Mondays, Thursdays and Saturdays; even numbered addresses may water on Tuesdays, Fridays and Sundays). The benefit of consistent approaches such as these include: reduced confusion among residents, increased ease of implementation, and easier compliance and enforcement if needed.

In response to the unprecedented water shortage situation in the last few years, the district increased and expanded its short-term measures and strengthened efforts to foster its partnerships with its water retailers to promote water conservation. To that end, the district works closely with the water retailers on program development, as well as water conservation outreach and education. Please see our website for more information on our long standing programs and new efforts and rebates available in response to the current drought (www.watersavings.org).

State Water Resources Control Board (State Board) Emergency Regulations

The State Board's initial emergency regulation to increase water use reduction practices for all Californians became effective July 28, 2014. The regulations target outdoor urban water use and establish the minimum level of activity that residents, businesses and certain water suppliers must meet as the drought deepens.

- March 17, 2015, the State Board extended and expanded the regulations. Among the new rules were many restrictions on water use by commercial, industrial and institutional water users and other restrictions on water waste.
- April 1, 2015, the governor directed the State Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent (extended through October 2016).
- May 5, 2015, the State Board updated the emergency regulations again (effective May 18, 2015, and extended in February 2016), to address the governor's April 1, 2015, Executive Order (Order). Some major accomplishments included:
 - the investor owned retailers implemented water allocation programs
 - the Order also required the California Energy Commission to establish standards that improve the efficiency of water appliances available for sale and installation in new and existing buildings. As a result, showerhead flow rate requirements have been reduced to 2.0 gallons per minute and will be reduced again in July 2018, to 1.8 gallons, and flow rates for faucets have been reduced to 1.2 gallons per minute (as of July 2016).
- May 9, 2016, Executive Order, the State Board extended and amended the Emergency Regulations on May 18, 2016, to include locally developed water use reduction standards, and requires water retailers to self-certify the availability of water supplies assuming three additional dry years. The amendment also calls for the wholesale suppliers such as the district to provide retailers with the supplies they anticipate being able to deliver in each of the three years. The district has worked closely with local water retailers to meet the requirements of the amended regulations, posted at <http://www.valleywater.org/SWRCBposting/>.

To support the regulations and the district board's resolutions, the district has been responding through other efforts as part of its aggressive drought response program that includes 15 strategies (see Section 4). These extra efforts included increasing efforts in communicating with and supporting our local water retailers, cities, and the County; expanding outreach and marketing; establishing a centralized system to report water waste; and hiring additional water waste inspectors to follow-up on reports of water waste. The following is a summary of the current 2016 call level to our drought hotline (408-630-2000), incoming emails to drought@valleywater.org, and the total number of water waste reports entered into Access Valley Water (through the web, the smart phone app, or entered by staff).

Monthly Activity 2016	Incoming calls to Hotline	Incoming emails to drought@valleywater.org	New "Access Valley Water" Water Waste Cases
January	31	39	274
February	31	26	326
March	34	32	266
April	29	14	171
May	59	33	157
June	63	55	181
July	46	71	180
August	37	46	142
September	51	47	117
October	40	44	108
2016 Totals	423	407	1,922

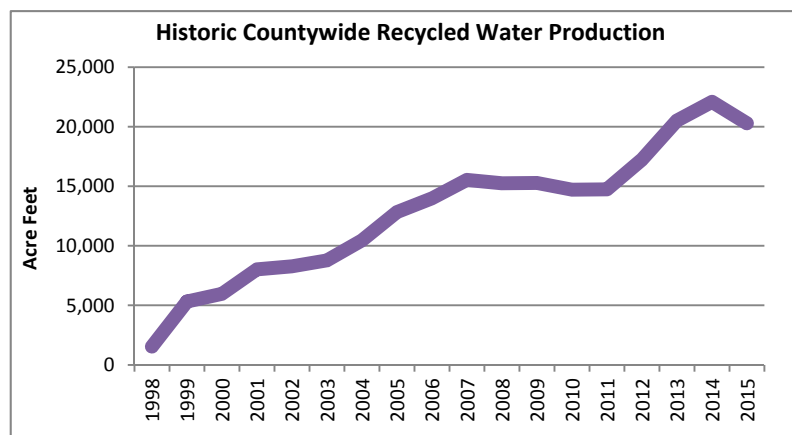
Recycled Water/Water Re-use

In addition to the district's water conservation programs, the district has partnered with cities and water retailers in the county to develop recycled water supplies to reduce demand on potable supplies. Recycled water helps in times of drought as it is an all-weather reliable source of water. Approximately 10 percent of the county's estimated total water use consisted of recycled water in 2015, limited primarily to landscaping irrigation, agriculture irrigation, cooling towers, and industrial processes. This usage is critical now and into the future to meet water supply reliability needs. For instance, just over 21,000 AF of recycled water was estimated to have been used in 2015 countywide, thereby preserving an equal volume of drinking water supplies. In August 2016, approximately 2,500 AF was produced. The district long term plans are to increase recycled and purified water used in this county to at least 10 percent of total use (approximately 40,000 AF) by year 2025, and its longer-term goal is 50,000 AF by year 2035.

In the near term, the continued and extreme drought conditions have prompted a review of the timing for developing recycled water and purified water projects. Staff continue to regularly inform and engage the board on the Expedited Purified Water Expansion Program.

The program also includes evaluating an extension of the Sunnyvale Wolfe Road Project (delivering recycled water to the new Apple campus) to deliver purified water for groundwater recharge. Expedited implementation of the five purified water projects could provide a capability for up to 45,000 acre-feet per year.

FIGURE 2



Recycled water use has continued to increase in recent years, even with a small decrease during the drought. Many cities cite their use of recycled water as a significant help in reducing demand for potable water in all years, not just during drought. Recycled water use data at the retailer level is not available on a monthly basis for all retailers; however, the most current production data at the four waste water treatment plants is being tracked and reported in this report.

B. San Francisco Public Utilities Commission (SFPUC) Supplies

Eight retail agencies in Santa Clara County contract with the SFPUC to receive water imported from the Tuolumne River watershed as well as from watersheds around the Bay Area. This imported water is conveyed through the Regional Water System owned and operated by the SFPUC. The district does not control or administer SFPUC supplies delivered to the county; however, this supply reduces the demands on district-supplied water. The 2015 SFPUC water use in Santa Clara County was approximately 42,000 acre-feet, or almost 19 percent of all water retailer use.

On January 31, 2014, the SFPUC officially asked all customers of the Regional Water System to voluntarily curtail water consumption. The goal is to reduce system-wide usage by 10 percent. The SFPUC announced it will be enforcing the July 28, 2014, State Board's emergency regulations through education, notices, and warning to customers. Repeated water waste after receiving notice and warnings from the SFPUC could result in a fine. On August 12, 2014, the SFPUC passed new emergency outdoor irrigation restrictions for all of its retail customers to reduce potable water use by 10 percent for outdoor irrigation of ornamental landscape and turf. Many of the Santa Clara County water retailers that rely on SFPUC for some, or all, of their supplies, have increased their call in response to either the district's call, the governor's Executive Order and/or the State Board's Emergency Regulations. On April 15, 2015, the SFPUC informed its customers that it would not be necessary to request further action from its customers system-wide in response to the governor's April 1, 2015, Executive Order directing the State Board to develop mandatory conservation across the state to achieve a 25 percent reduction below 2013 levels in water use. On June 28, 2016, the SFPUC Commission continued their call for voluntary 10 percent water use reductions and continued many of the previously called for water use restrictions.

C. Countywide Water Use Savings

The following pages in Section 1 contain detailed countywide water use and savings information for combined major retail water providers. Section 2 contains details of individual retail water provider water use and savings data and analysis reports. Please see Section 5, Data Collection Methodologies for explanation and disclaimers.

Water Savings Target and Calculations

The district bases its call for water use reductions and recommended actions on the district's Water Shortage Contingency Plan (Contingency Plan). For example, in the second year of the drought, the estimated 2015 water supply conditions showed that groundwater reserves could reach the Stage 4 ("Critical") level by the end of the calendar year if water use reduction measures were not implemented. The Contingency Plan calls for a 20 percent to 40 percent reduction at Stage 4. Staff recommended 30 percent based on modeled water supply outlook and projected conditions.

- On February 25, 2014, the board approved a resolution (extended on November 25, 2014, to be in place through June 30, 2015) setting a countywide water use reduction target equal to 20 percent of 2013 water use.
- On March 24, 2015, the board adopted a new resolution calling for 30 percent water use reductions, and recommending that retail water agencies, municipalities and the County implement mandatory measures as needed to accomplish that target, including a two day a week outdoor irrigation schedule.
- On November 24, 2015, the call for 30 percent was extended to June 30, 2016.
- On June 14, 2016, the board approved a resolution to revise the call for water use reductions to 20 percent of the 2013 use, and to increase the allowable days for outdoor irrigation from two to three days a week. This action was based on estimated 2016 water supply conditions that showed groundwater reserves would fall in Stage 2 ("Alert") level by the end of the calendar year. The resolution is in effect to January 31, 2017, to coincide with the recently updated state emergency regulations.

Water Use and Reductions Results

This monthly water use and savings report only contains data and progress towards the savings target for large water retailers, and does not provide a complete accounting of countywide water use.

Recycled water use is not subject to the water savings target because it is used in lieu of other potable water supplies. Recycled water is used primarily for irrigation, industry and agriculture. Using recycled water helps conserve drinking water supplies, provides a dependable, drought-proof, locally-controlled water supply, reduces reliance on imported water and helps preserve our saltwater and tidal habitat by reducing freshwater discharge to the bay. A small, but important and growing source of water is recycled water.

Water retailers' water use savings total from February to December 2014 was just above 13 percent for the year. After statewide and local efforts were increased, water savings in 2015 (January through December 2015, compared to the same period in 2013) totaled an estimated 27 percent. Preliminary cumulative savings for 2016 are 27 percent. October 2016 water use savings compared to October 2013 are 31 percent. The significant and sustained increases in water savings in 2015, and the 2016 savings, indicate that the messaging and tools implemented from the governor's office to the district to the retailers had an effect on water use behavior. Even with the June 14, 2016, call for 20 percent reductions, down from 30 percent, water use reductions are on track to be well above the 20 percent year-end target, while month to month savings are variable.

TABLE 1: CURRENT YEAR'S (2013 and 2016) RETAIL WATER USE AF AND SAVINGS

2013 (Base Year) and 2016 (Reporting Year) in Acre-feet

2013	North County Ground water	South County Ground water	Treated Water	SFPUC	SJWC Surface	2013 Monthly Use	2013 Cumulative Use
Jan	3,063	1,192	5,879	3,477	1,807	15,418	15,418
Feb	3,207	1,209	6,759	3,619	1,385	16,179	31,598
Mar	5,728	1,586	8,352	3,416	595	19,676	51,274
Apr	6,556	1,906	10,876	4,591	422	24,352	75,626
May	8,415	2,314	13,650	5,894	299	30,573	106,198
Jun	8,937	2,312	13,769	5,263	516	30,797	136,995
Jul	10,579	2,614	13,646	5,803	616	33,258	170,254
Aug	9,949	2,400	13,640	6,144	584	32,716	202,970
Sep	7,957	2,305	12,845	4,970	531	28,608	231,578
Oct*	8,074	2,154	11,612	4,685	502	27,027	258,604
Nov	6,826	1,692	8,749	3,671	326	21,265	279,869
Dec	6,852	1,398	7,182	3,108	203	18,744	298,613
Jan to Current Totals*	72,466	19,990	111,029	47,863	7,256	258,604	
Jan to Dec Totals	86,144	23,080	126,961	54,642	7,785	298,613	

2016	North County Ground water	South County Ground water	Treated Water	SFPUC	SJWC Surface	2016 Monthly Use	2016 Cumulative Use	Cumulative District Source Savings	Cumulative NonDistrict Source Savings	All Sources Cumulative %Savings from 2013 <+> savings	Statewide Cumulative Savings (since Jan 2016)
Jan	3,894	1,085	4,789	2,458	489	12,715	12,715	4%	44%	18%	17%
Feb	3,238	1,041	5,037	2,581	951	12,848	25,563	10%	37%	19%	15%
Mar	3,562	1,149	4,950	3,053	1,282	13,996	39,559	22%	24%	23%	19%
Apr	4,367	1,315	5,050	3,355	1,857	15,944	55,503	30%	17%	27%	21%
May	3,864	1,622	7,855	4,396	1,919	19,654	75,157	35%	12%	29%	22%
Jun	5,291	1,849	10,264	4,472	1,005	22,882	98,039	34%	11%	28%	22%
Jul	7,474	2,060	10,296	4,647	0.3	24,477	122,516	32%	14%	28%	21%
Aug	5,447	2,178	11,834	4,648	0.3	24,107	146,623	31%	16%	28%	21%
Sep	3,696	2,062	12,328	4,591	0.3	22,678	169,301	30%	16%	27%	20%
Oct*	2,905	1,788	10,561	3,162	0.3	18,416	187,717	30%	19%	27%	not available
Nov	-	-	-	-	-	-					
Dec	-	-	-	-	-	-					
*Jan to Current	43,738	16,148	82,963	37,363	7,505	187,717					
%Savings by Source of Supply	40%	19%	25%	22%	-3%	27%					

Current monthly water use data is preliminary and subject to change.

These water use data sets do not include recycled water or surface water sales by the District

Percent savings are shown in positive values where savings have been made and negative percent values where water use is higher than the base year period (2013)

* current month data does not include Stanford data - Not available at time of printing

TABLE 2: LAST YEAR'S RETAIL WATER USE AF AND SAVINGS (2015 Compared to 2013)

2013 (Base Year) and 2015 (Reporting Year) in Acre-feet

2013	North County Ground water	South County Ground water	Treated Water	SFPUC	SJWC Surface	2013 Monthly Total	2013 Cumulative Use
Jan	3,063	1,192	5,879	3,477	1,807	15,418	15,418
Feb	3,207	1,209	6,759	3,619	1,385	16,179	31,598
Mar	5,728	1,586	8,352	3,592	595	19,852	51,450
Apr	6,556	1,906	10,876	4,591	422	24,352	75,802
May	8,415	2,314	13,650	5,894	299	30,573	106,374
Jun	8,937	2,312	13,769	5,263	516	30,797	137,171
Jul	10,579	2,614	13,646	5,803	616	33,258	170,430
Aug	9,949	2,400	13,640	6,144	584	32,716	203,146
Sep	7,957	2,305	12,845	4,970	531	28,608	231,754
Oct	8,074	2,154	11,612	4,685	502	27,027	258,780
Nov	6,826	1,692	8,749	3,671	326	21,265	280,045
Dec	6,852	1,398	7,182	3,108	203	18,744	298,789
Jan to Current Totals*	86,144	23,080	126,961	54,818	7,785	298,789	
Jan to Dec Totals	86,144	23,080	126,961	54,818	7,785	298,789	

2015	North County Ground water	South County Ground water	Treated Water	SFPUC	SJWC Surface	2015 Monthly Use	2015 Cumulative Use	<i>Cumulative District Source Savings</i>	<i>Cumulative NonDistrict Source Savings</i>	All Sources Cumulative %Savings from 2013 <+> savings	Statewide Cumulative Savings (since Jan 2015)
Jan	5,656	1,144	5,616	2,908	339	15,663	15,663	-23%	39%	-2%	7%
Feb	5,172	1,126	4,307	3,085	1,020	14,711	30,374	-8%	29%	4%	5%
Mar	5,661	1,367	6,468	3,558	1,473	18,527	48,901	1%	14%	5%	4%
Apr	5,831	1,402	6,937	3,570	749	18,489	67,390	10%	14%	11%	7%
May	4,195	1,627	9,503	3,682	485	19,491	86,881	18%	19%	18%	13%
Jun	3,881	1,628	10,290	4,005	484	20,288	107,169	23%	19%	22%	16%
Jul	3,966	1,705	11,278	4,196	253	21,398	128,567	25%	21%	25%	19%
Aug	4,385	1,707	11,109	3,945	0.3	21,146	149,713	27%	24%	26%	20%
Sep	5,718	1,641	9,295	3,960	0.3	20,615	170,328	27%	25%	27%	22%
Oct	5,803	1,535	8,693	3,665	0.3	19,696	190,025	27%	25%	27%	22%
Nov	4,182	1,101	6,406	2,476	0.3	14,165	204,190	27%	26%	27%	22%
Dec	4,812	1,021	4,875	2,974	0	13,683	217,873	28%	25%	27%	21%
Jan to Dec Totals	59,261	17,005	94,778	42,025	4,804	217,873					
%Savings by Source of Supply	31%	26%	25%	23%	38%	27%					

Current monthly water use data is preliminary and subject to change.

These water use data sets do not include recycled water or surface water sales by the District

Percent savings are shown in positive values where savings have been made and negative percent values where water use is higher than the base year period (2013)

2013 data revised March 2016 due to Purissima correction (meter read adjustment)

Values may not add up due to rounding

TABLE 3: PAST YEAR'S RETAIL WATER USE AF AND SAVINGS (2014 Compared to 2013)

For the 2014 Water Use Savings Analysis, January was not incorporated. 2014 savings compared to 2013.

<u>2013</u>	<u>North County Ground- water</u>	<u>South County Ground- water</u>	<u>Treated Water</u>	<u>SFPUC</u>	<u>SJWC Surface</u>	<u>2013 Monthly Total</u>	<u>2013 Cumulative Use Feb to Dec</u>
January water use values are NOT used in water savings calculations or cumulative use values.							
Jan	3,062.9	1,191.7	5,879.1	3,477.5	1,807.1	15,418.3	15,418
Feb	3,207.4	1,208.5	6,759.1	3,619.5	1,384.8	16,179.3	16,179
Mar	5,727.9	1,585.7	8,351.9	3,591.6	594.9	19,851.9	36,031
Apr	6,556.1	1,906.2	10,876.4	4,591.3	422.2	24,352.2	60,383
May	8,415.4	2,314.3	13,650.4	5,893.9	298.6	30,572.7	90,956
Jun	8,937.2	2,311.7	13,769.1	5,262.6	516.2	30,796.8	121,753
Jul	10,579.1	2,613.8	13,645.9	5,803.2	616.3	33,258.3	155,011
Aug	9,948.6	2,399.5	13,640.2	6,143.7	584.1	32,716.1	187,727
Sep	7,957.1	2,305.2	12,844.7	4,970.5	530.6	28,608.1	216,335
Oct	8,074.3	2,153.7	11,612.2	4,684.9	501.5	27,026.6	243,362
Nov	6,826.2	1,692.3	8,749.4	3,671.2	326.0	21,265.1	264,627
Dec	6,852.4	1,397.7	7,182.5	3,108.5	202.8	18,743.8	283,371
Feb to Dec 2013 Totals	83,082	21,889	121,082	51,341	5,978	283,371	

<u>2014</u>	<u>North County Ground- water</u>	<u>South County Ground- water</u>	<u>Treated Water</u>	<u>SFPUC</u>	<u>SJWC Surface</u>	<u>2014 Monthly Use</u>	<u>2014 Cumulative Use Feb to Dec</u>	<u>Cumulative % Savings from 2013 <+> savings</u>
January water use values are NOT used in water savings calculations or cumulative use values.								Not Applicable
Jan	6,485.1	1,508.7	8,137.3	3,631.3	0.3	19,762.7	19,762.7	
Feb	5,769.3	1,164.3	5,173.0	2,616.7	0.3	14,723.6	14,723.6	9%
Mar	7,341.8	1,305.2	5,754.1	3,011.0	113.4	17,525.5	32,249.2	10%
Apr	8,290.4	1,521.2	6,501.1	4,047.5	110.0	20,470.3	52,719.5	13%
May	11,378.7	2,166.5	8,750.7	5,250.0	54.9	27,600.8	80,320.2	12%
Jun	11,808.4	2,301.6	9,648.4	4,539.0	4.6	28,302.0	108,622.2	11%
Jul	12,541.7	2,233.6	9,908.9	5,069.4	9.8	29,763.4	138,385.7	11%
Aug	10,760.6	2,154.8	10,182.3	4,754.4	404.9	28,257.0	166,642.7	11%
Sep	9,322.9	1,974.2	9,324.1	4,066.8	9.8	24,697.8	191,340.4	12%
Oct	8,970.0	1,775.6	8,216.0	4,172.4	0.3	23,134.3	214,474.7	12%
Nov	7,102.7	1,217.5	5,950.5	2,725.3	0.3	16,996.2	231,470.9	13%
Dec	5,618.2	1,052.3	4,046.9	2,814.3	583.6	14,115.3	245,586.2	13%
Feb to Dec 2014 Totals	98,905	18,867	83,456	43,067	1,292	245,586		
%Savings by Source of Supply	-19%	14%	31%	16%	78%	13%		

2013 data revised March 2016 due to Purissima correction (meter read adjustment)

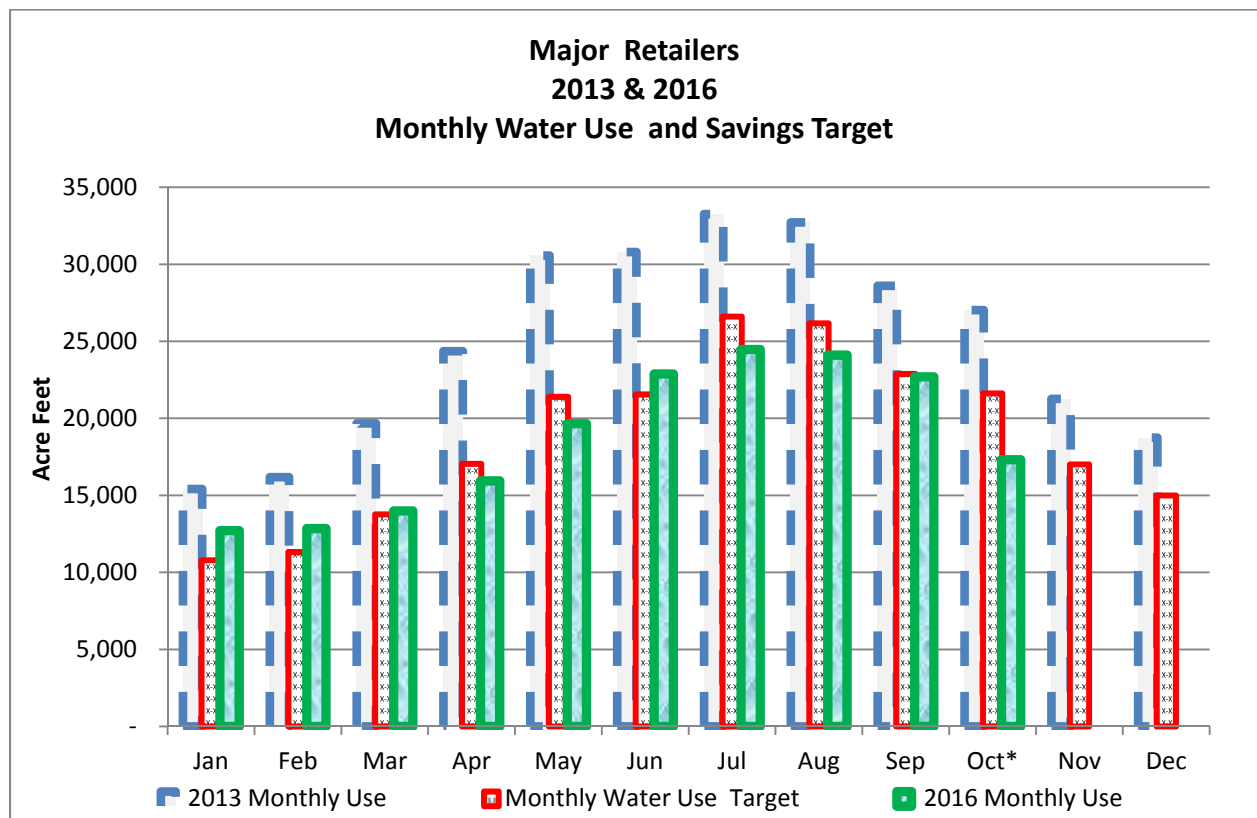
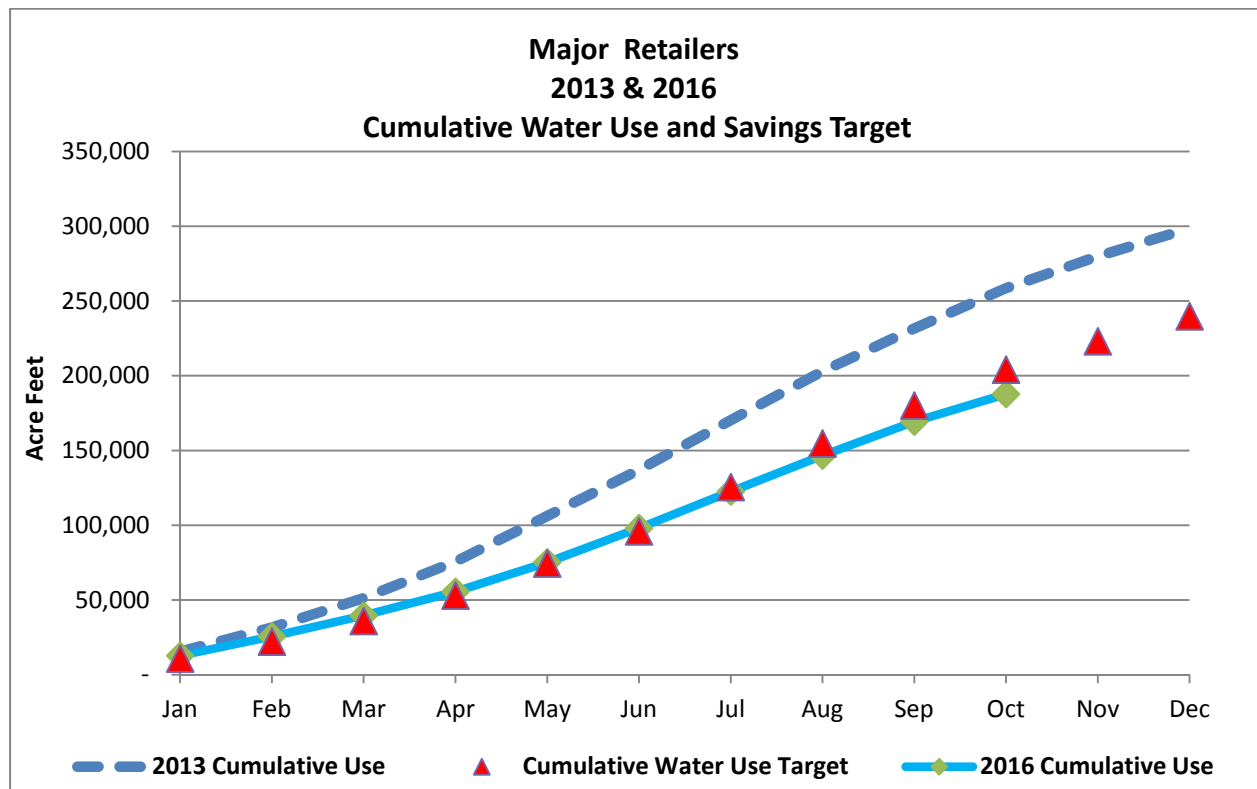
These water use data sets do not include recycled water or surface water sales by the District

Percent savings are shown in positive values where savings have been made and negative percent values

Cumulative total from February to current month

Savings Target for February is 10%. March through December is 20% of 2013 monthly use

FIGURE 3: TOTAL RETAILER WATER USE (2013 and 2016)



*current month data does not include Stanford current monthly water use- not available

FIGURE 4: TOTAL RETAILERS WATER USE BY SOURCE (2013 and 2016)

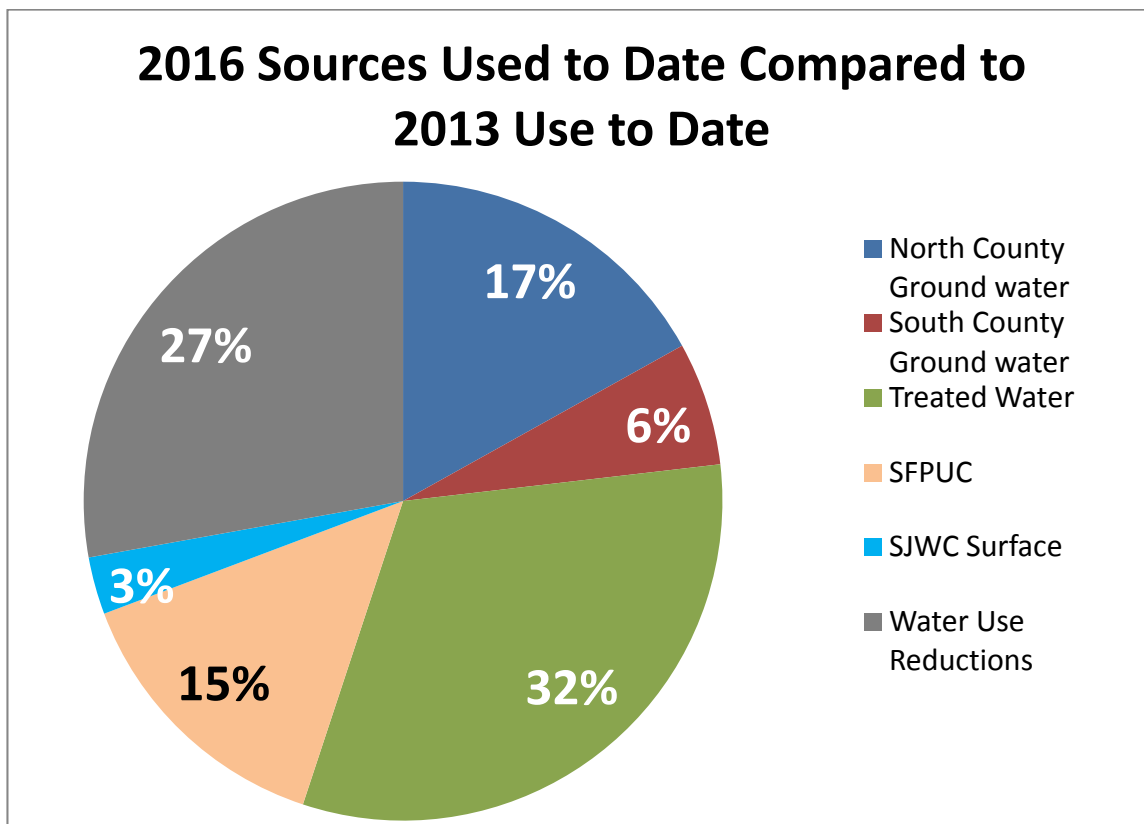
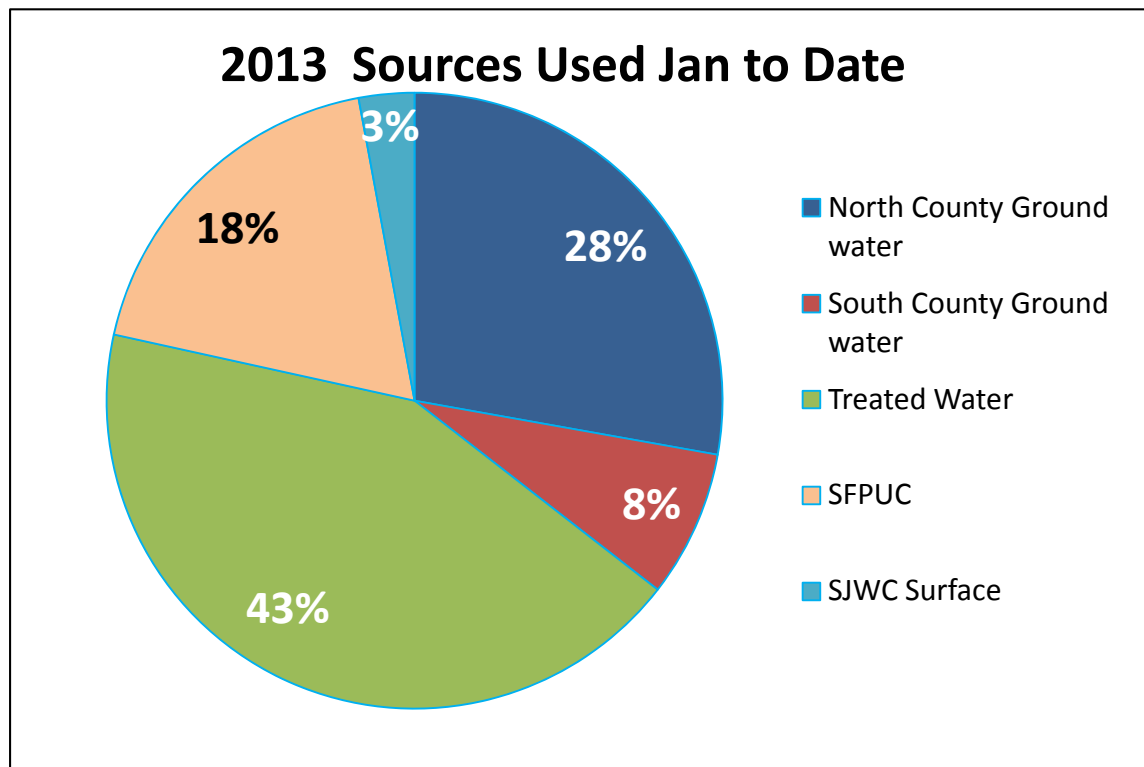


TABLE 4: COUNTY WIDE RECYCLED WATER USE 2013 and 2016
(September 2016 Data Not Available)

2013	<u>North County</u> Recycled SBWRP WTP	<u>South County</u> Recycled SCRWA WTP	<u>Palo Alto</u> WTP	<u>Sunnyvale</u> WTP
Jan	552.70	95.4	184.5	58.2
Feb	688.70	113.2	177.7	52.0
Mar	819.1	140.7	177.9	61.4
Apr	1,203.0	195.4	194.9	60.6
May	1,574.3	205.7	189.5	51.6
Jun	1,718.3	245.3	180.7	53.6
Jul	1,985.0	284.5	222.1	62.8
Aug	1,824.8	230.5	263.5	57.6
Sep	1,629.6	157.1	247.5	56.0
Oct	1,412.0	115.8	245.4	53.7
Nov	993.1	113.7	218.7	53.7
Dec	894.9	142.2	220.5	37.2
<i>Jan to Dec 2013 Totals</i>	15,295.5	2,039.5	2,522.9	658.4
<i>Jan to Current Month Totals</i>	10,365.9	1,510.7	1,590.8	457.8

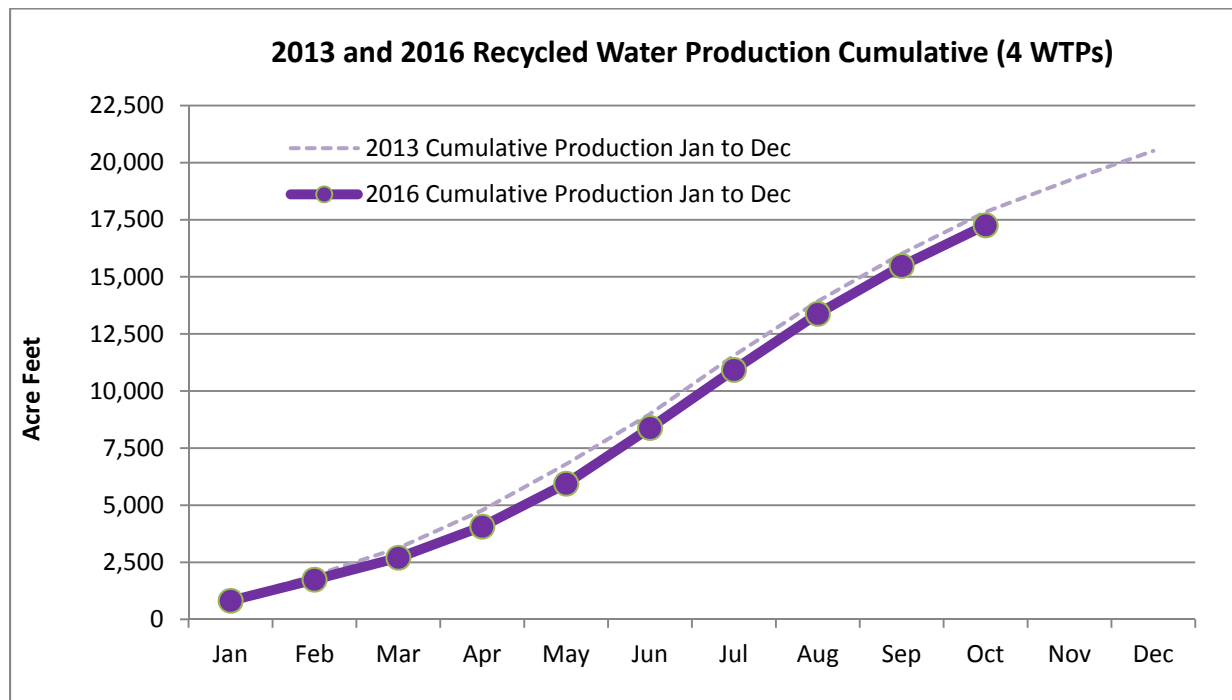
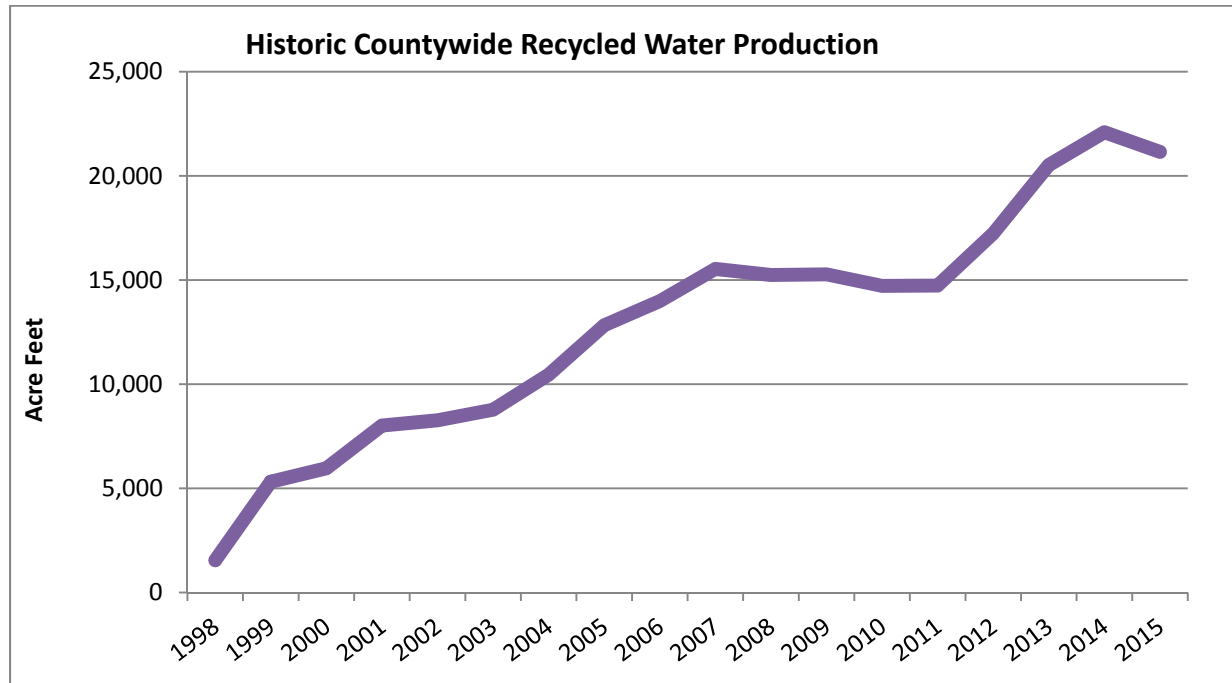
Waters use values are in acre feet

Red values are preliminary data, subject to change and validation

2016	<u>North County</u> Recycled SBWR WTP	<u>South County</u> Recycled SCRWA WTP	<u>Palo Alto</u> WTP	<u>Sunnyvale</u> WTP
Jan	431	118	254	15
Feb	542	117	242	24
Mar	507	136	292	25
Apr	773	183	354	52
May	1,187	204	377	114
Jun	1,673	233	405	128
Jul	1,898	236	409	0
Aug	1,725	261	399	70
Sep	1,491	166	329	113
Oct	1,280	141	337	18
Nov				
Dec				
<i>Jan to Current Totals</i>	11,507	1,795	3,398	558
<i>% of 2013 to DATE</i>	111%	119%	214%	122%

Tables contain recycled water volumes produced and sold for re-use in the county. Data does not account for system losses prior to end use. (Therefore, 'use' and 'production' are interchangeable terms in these tables.)

FIGURE 5: COUNTY WIDE RECYCLED WATER USE 2013 and 2016



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Section 2. Retailers' Water Use and Savings

This section contains detailed water use data from 2013 and 2016, summarizes cumulative water use saving percent, and illustrates cumulative and monthly trends in water use and savings at the water retailer level. [Please see Section 5, Data Collection Methodology for more information]

TABLE 5: 2016 RETAILER CONSERVATION ACTIONS AND SAVINGS SUMMARY

Water Retailer	Call for Savings	Cumulative Water Use (AF)	Monthly Savings October 2016	Cumulative Savings Jan to October 2016
San Jose Water Co.	20%	90,062	33%	29%
Santa Clara (City)	20%	14,669	27%	21%
Sunnyvale	15%	14,326	25%	23%
San Jose Municipal	20%	13,764	30%	27%
California Water Service	20%	9,142	37%	31%
Palo Alto	10%	8,650	35%	27%
Mountain View	10%	7,588	34%	29%
Great Oaks	20%	7,759	29%	29%
Milpitas	20%	7,416	23%	20%
Gilroy	20%	6,094	27%	25%
Morgan Hill	20%	5,566	34%	28%
Purissima Hills Water	10%	1,419	45%	29%
Stanford	10%	1263 (Sept ¹)	29% (Sept ¹)	34% (Sept ¹)
Total		187,717	31%	27%

Values may not add up due to rounding.

¹ Current month data not available as of 11/16/2016

TABLE 6: 2016 RETAILER CUMULATIVE AND MONTHLY SAVINGS SUMMARY

Cumulative Water Retailer Savings	<u>Jan to Jan</u>	<u>Jan to Feb</u>	<u>Jan to Mar</u>	<u>Jan to April</u>	<u>Jan to May</u>	<u>Jan to June</u>	<u>Jan to July</u>	<u>Jan to Aug</u>	<u>Jan to Sept</u>	<u>Jan to Oct</u>	<u>Jan to Nov</u>	<u>Jan to Dec</u>
San Jose Water Company	16%	17%	22%	27%	29%	29%	29%	29%	28%	29%		
Santa Clara, city	19%	16%	18%	20%	23%	23%	22%	22%	20%	21%		
Sunnyvale	14%	18%	21%	23%	27%	26%	26%	25%	23%	23%		
San Jose Municipal Water	11%	16%	22%	26%	29%	28%	28%	28%	27%	27%		
California Water Service	35%	33%	37%	39%	38%	35%	33%	31%	30%	31%		
Palo Alto	24%	29%	27%	30%	31%	29%	27%	28%	26%	27%		
Mountain View	30%	31%	28%	31%	34%	33%	32%	31%	29%	29%		
Great Oaks	19%	20%	25%	29%	32%	30%	31%	30%	29%	29%		
Milpitas	17%	18%	16%	18%	22%	21%	21%	21%	19%	20%		
Gilroy	8%	11%	20%	25%	26%	27%	26%	26%	25%	25%		
Morgan Hill	5%	13%	24%	31%	34%	31%	30%	28%	27%	28%		
Purissima Hills Water	59%	45%	49%	40%	39%	32%	29%	29%	26%	29%		
Stanford	34%	39%	36%	39%	38%	37%	35%	35%	34%	¹		
Combined Cumulative Savings	18%	19%	23%	27%	29%	29%	28%	28%	27%	27%		
Month to Month Water Retailer Savings	<u>Jan to Jan</u>	<u>Feb to Feb</u>	<u>Mar to Mar</u>	<u>April to April</u>	<u>May to May</u>	<u>June to June</u>	<u>July to July</u>	<u>Aug to Aug</u>	<u>Sept to Sept</u>	<u>Oct to Oct</u>	<u>Nov to Nov</u>	<u>Dec to Dec</u>
San Jose Water Company	16%	18%	31%	36%	36%	28%	28%	28%	26%	33%		
Santa Clara (City of)	19%	12%	22%	26%	29%	23%	17%	25%	5%	27%		
Sunnyvale	14%	22%	25%	28%	36%	22%	26%	20%	12%	25%		
San Jose Municipal Water	11%	22%	31%	33%	38%	25%	29%	25%	19%	30%		
California Water Service	35%	31%	44%	42%	37%	26%	24%	23%	24%	37%		
Palo Alto	24%	34%	23%	37%	35%	19%	14%	34%	11%	35%		
Mountain View	30%	32%	23%	35%	42%	27%	28%	27%	10%	34%		
Great Oaks	19%	21%	33%	38%	37%	26%	31%	26%	26%	29%		
Milpitas	17%	20%	12%	24%	31%	18%	22%	21%	5%	23%		
Gilroy	8%	13%	34%	33%	31%	28%	23%	23%	21%	27%		
Morgan Hill	5%	19%	38%	43%	41%	21%	27%	19%	22%	34%		
Purissima Hills Water	59%	26%	54%	22%	36%	11%	22%	25%	15%	45%		
Stanford	34%	43%	31%	44%	38%	30%	25%	35%	29%	¹		
Combined Month to Month 2015	18%	21%	29%	35%	36%	26%	26%	26%	21%	31%		

¹. Stanford data not available due to late month meter read by SFPUC

TABLE 7: 2015 RETAILER CUMULATIVE AND MONTHLY SAVINGS SUMMARY

Cumulative Water Retailer Savings	<u>Jan to Jan</u>	<u>Jan to Feb</u>	<u>Jan to Mar</u>	<u>Jan to April</u>	<u>Jan to May</u>	<u>Jan to June</u>	<u>Jan to July</u>	<u>Jan to Aug</u>	<u>Jan to Sept</u>	<u>Jan to Oct</u>	<u>Jan to Nov</u>	<u>Jan to Dec</u>
San Jose Water Company	-3%	1%	3%	10%	18%	22%	25%	27%	27%	27%	28%	28%
Santa Clara, city	2%	5%	4%	6%	11%	15%	16%	19%	18%	18%	19%	18%
Sunnyvale	-6%	7%	6%	12%	20%	23%	26%	27%	27%	26%	27%	26%
San Jose Municipal Water	-8%	2%	4%	11%	19%	22%	25%	26%	26%	26%	26%	26%
California Water Service	8%	11%	10%	15%	23%	27%	29%	31%	31%	32%	32%	33%
Palo Alto	10%	15%	12%	16%	25%	26%	27%	29%	29%	29%	29%	29%
Mountain View	0%	13%	10%	15%	22%	24%	25%	28%	28%	28%	28%	28%
Great Oaks	0%	5%	7%	13%	20%	24%	26%	28%	28%	29%	29%	29%
Milpitas	1%	6%	4%	8%	14%	16%	18%	20%	19%	19%	19%	18%
Gilroy	-5%	0%	5%	12%	18%	22%	25%	26%	26%	26%	27%	26%
Morgan Hill	-8%	-2%	6%	19%	24%	26%	30%	31%	31%	32%	33%	33%
Purissima Hills Water	-4%	14%	7%	21%	25%	29%	31%	31%	29%	27%	28%	29%
Stanford	-3%	6%	7%	13%	22%	24%	24%	26%	25%	26%	28%	28%
Combined Cumulative Savings	-2%	4%	5%	11%	18%	22%	25%	26%	27%	27%	27 %	27%
Month to Month Water Retailer Savings	<u>Jan to Jan</u>	<u>Feb to Feb</u>	<u>Mar to Mar</u>	<u>April to April</u>	<u>May to May</u>	<u>June to June</u>	<u>July to July</u>	<u>Aug to Aug</u>	<u>Sept to Sept</u>	<u>Oct to Oct</u>	<u>Nov to Nov</u>	<u>Dec to Dec</u>
San Jose Water Company	-3%	5%	7%	25%	36%	35%	38%	36%	31%	28%	33%	30%
Santa Clara (City of)	2%	7%	3%	11%	26%	29%	20%	33%	11%	17%	30%	16%
Sunnyvale	-6%	18%	4%	27%	38%	36%	37%	36%	25%	21%	29%	20%
San Jose Municipal Water	-8%	11%	7%	24%	39%	33%	35%	34%	25%	24%	30%	21%
California Water Service	8%	15%	8%	26%	40%	40%	39%	37%	34%	36%	42%	44%
Palo Alto	10%	19%	6%	25%	46%	31%	31%	38%	28%	32%	36%	26%
Mountain View	0%	24%	3%	27%	38%	33%	31%	41%	25%	27%	37%	19%
Great Oaks	0%	10%	10%	25%	38%	37%	36%	35%	33%	30%	34%	27%
Milpitas	1%	11%	-1%	17%	31%	24%	25%	32%	13%	16%	23%	10%
Gilroy	-5%	5%	13%	24%	34%	33%	35%	32%	28%	27%	30%	24%
Morgan Hill	-8%	3%	17%	39%	35%	35%	42%	34%	36%	35%	46%	38%
Purissima Hills Water	-4%	25%	-3%	40%	37%	40%	41%	27%	19%	8%	37%	47%
Stanford	-3%	13%	8%	29%	44%	35%	19%	42%	18%	37%	43%	37%
Combined Month to Month 2015	-2%	9%	7%	24%	36%	34%	36%	35%	28%	27%	33%	27%

TABLE 8: 2014 RETAILER CUMULATIVE SAVINGS SUMMARY

(Savings calculated from February 2014 to December 2014)

Cumulative Water Retailer Savings	Feb to Feb	Feb to Mar	Feb to April	Feb to May	Feb to June	Feb to July	Feb to Aug	Feb to Sept	Feb to Oct	Feb to Nov	Feb to Dec	Total Savings	Savings District Source	Savings SFPUC Supply
San Jose Water Company	3%	6%	10%	10%	9%	10%	10%	11%	11%	12%	13%	13%	13%	N/A
Santa Clara (City of)	7%	8%	9%	7%	8%	8%	8%	8%	8%	9%	10%	10%	9%	16%
Sunnyvale	16%	15%	17%	15%	14%	14%	14%	13%	13%	13%	14%	14%	7%	22%
San Jose Municipal Water	15%	16%	18%	14%	12%	12%	12%	12%	12%	12%	13%	13%	6%	4%
California Water Service	15%	18%	19%	15%	13%	13%	13%	13%	14%	14%	16%	16%	16%	N/A
Palo Alto	32%	25%	16%	17%	16%	13%	15%	15%	15%	16%	16%	16%	N/A	16%
Mountain View	24%	18%	18%	17%	14%	14%	14%	14%	14%	15%	16%	16%	-6%	19%
Great Oaks	7%	11%	16%	15%	13%	14%	14%	15%	15%	16%	16%	16%	16%	N/A
Milpitas	11%	11%	11%	11%	10%	10%	11%	11%	11%	11%	11%	11%	-1%	16%
Gilroy	2%	11%	17%	14%	13%	12%	12%	13%	13%	14%	14%	14%	14%	N/A
Morgan Hill	-7%	9%	15%	16%	16%	16%	15%	15%	16%	18%	19%	19%	19%	N/A
Purissima Hills Water	45%	34%	28%	14%	14%	12%	14%	14%	14%	16%	16%	16%	N/A	16%
Stanford	24%	21%	15%	10%	10%	7%	8%	8%	6%	8%	7%	7%	N/A	7%
Total Cumulative Savings	9%	11%	13%	12%	11%	11%	11%	12%	12%	13%	13%	13%	11%	16%

California Water Service Company

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Surface	2013 Monthly Use
Jan	215.0	510.0	-	-	725.0
Feb	254.0	477.0	-	-	731.0
Mar	446.0	544.0	-	-	990.0
Apr	439.0	786.0	-	-	1,225.0
May	672.0	906.0	-	-	1,578.0
Jun	709.0	930.0	-	-	1,639.0
Jul	690.0	1,049.0	-	-	1,739.0
Aug	437.0	1,241.0	-	-	1,678.0
Sep	321.0	1,221.0	-	-	1,542.0
Oct	363.0	1,068.0	-	-	1,431.0
Nov	183.0	844.0	-	-	1,027.0
Dec	262.0	626.0	-	-	888.0
Jan to Current Month	4,546.0	8,732.0	-	-	13,278.0
January to December Total	4,991.0	10,202.0	-	-	15,193.0

2016	Groundwater	Treated Water	SFPUC	Surface	2016 Monthly Use
Jan	264.0	208.0	-	-	472.0
Feb	288.0	216.0	-	-	504.0
Mar	260.0	298.0	-	-	558.0
Apr	200.0	514.0	-	-	714.0
May	124.0	868.0	-	-	992.0
Jun	107.0	1,101.0	-	-	1,208.0
Jul	126.0	1,195.0	-	-	1,321.0
Aug	123.0	1,171.0	-	-	1,294.0
Sep	74.0	1,100.0	-	-	1,174.0
Oct	244.0	661.0	-	-	905.0
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month	1,810.0	7,332.0	-	-	9,142.0
%Savings by Source of Supply	60%	16%			31%

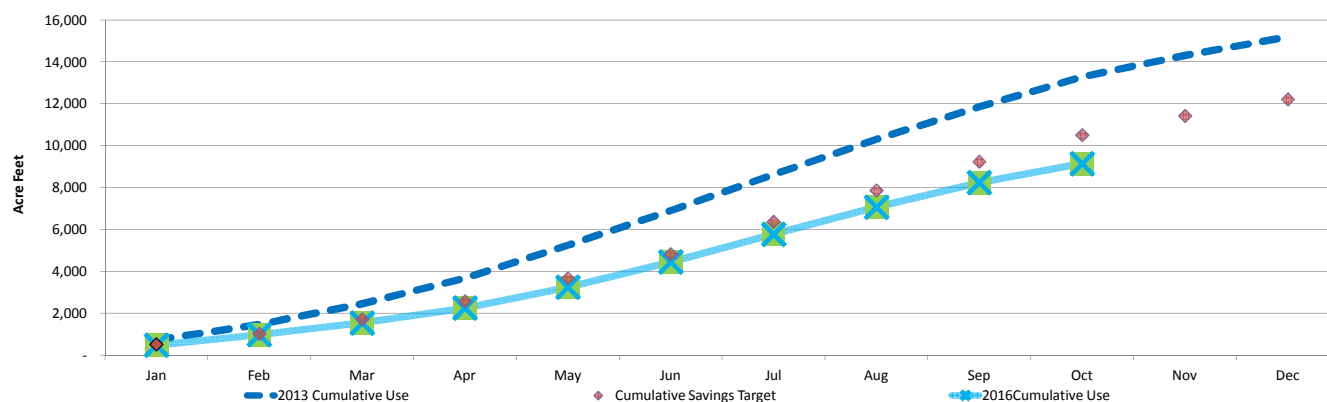
Cumulative % Savings Jan to December

(+) = savings

35%
33%
37%
39%
38%
35%
33%
31%
30%
31%
-
-

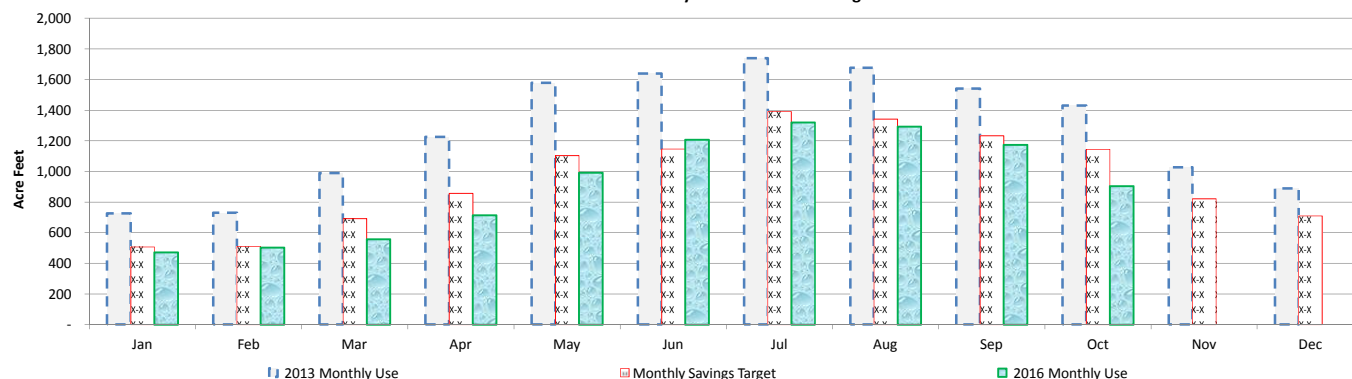
Cal Water

2013 & 2016 Cumulative Water Use and Savings



Cal Water

2013 & 2016 Monthly Water Use and Savings



Notes

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N/A = Not Applicable

'-' Not Available



As of 11/16/2016

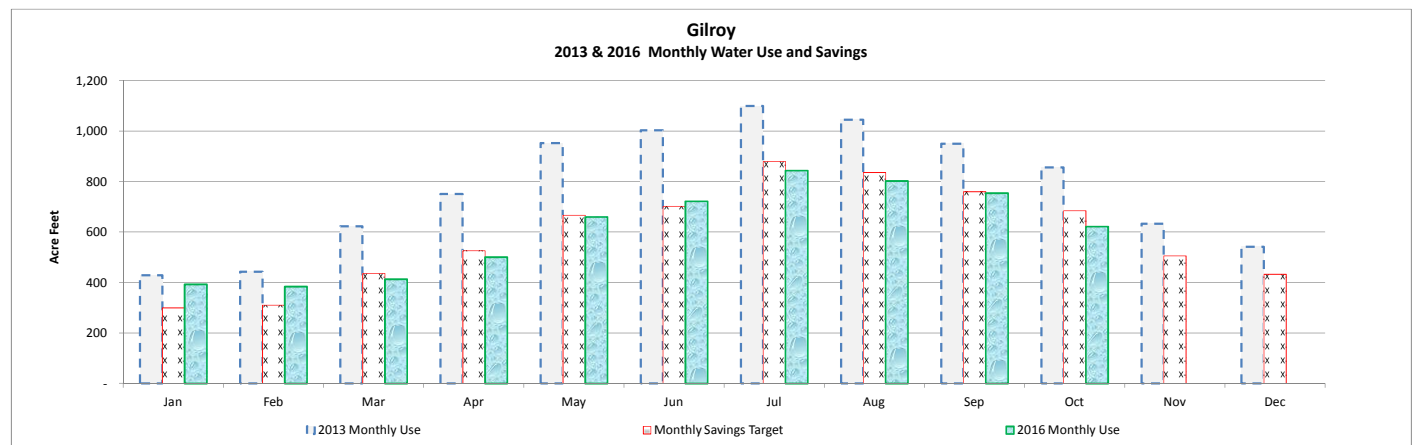
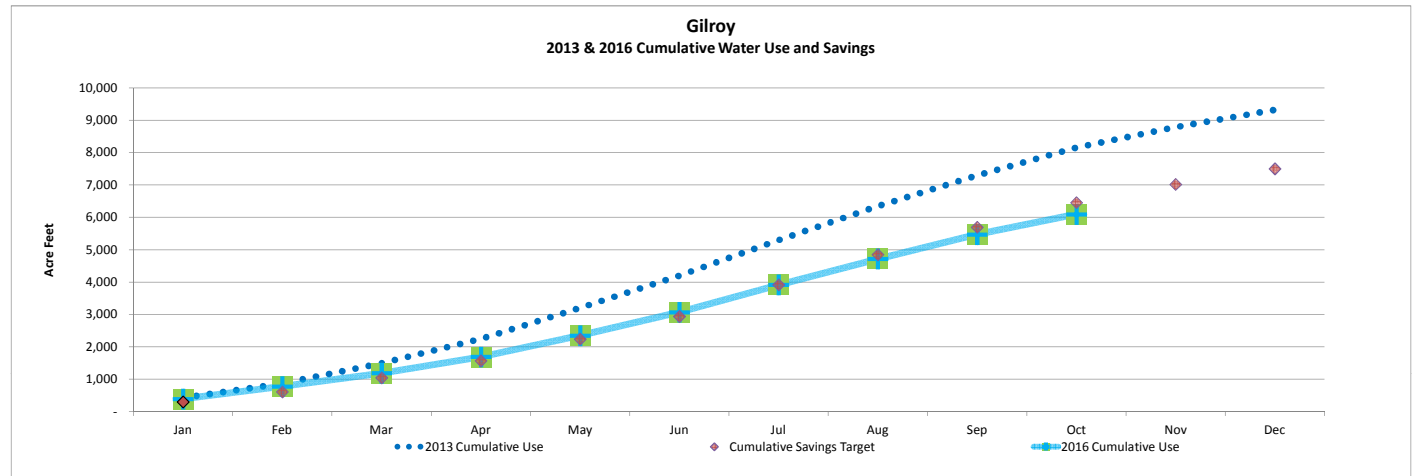
Gilroy

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Surface Water	2013 Monthly Use
Jan	428.0	-	-	-	428.0
Feb	443.0	-	-	-	443.0
Mar	623.0	-	-	-	623.0
Apr	751.0	-	-	-	751.0
May	952.0	-	-	-	952.0
Jun	1,002.6	-	-	-	1,002.6
Jul	1,099.5	-	-	-	1,099.5
Aug	1,045.0	-	-	-	1,045.0
Sep	950.0	-	-	-	950.0
Oct	856.0	-	-	-	856.0
Nov	632.0	-	-	-	632.0
Dec	541.0	-	-	-	541.0
Jan to Current Month Totals	8,150.1	-	-	-	8,150.1
January to December Total	9,323.1	-	-	-	9,323.1

2016	Groundwater	Treated Water	SFPUC	Surface Water	2016 Monthly Use
Jan	392.7	-	-	-	392.7
Feb	383.8	-	-	-	383.8
Mar	413.1	-	-	-	413.1
Apr	500.7	-	-	-	500.7
May	659.9	-	-	-	659.9
Jun	721.6	-	-	-	721.6
Jul	843.7	-	-	-	843.7
Aug	802.2	-	-	-	802.2
Sep	754.0	-	-	-	754.0
Oct	622.1	-	-	-	622.1
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	6,093.9	-	-	-	6,093.9
%Savings by Source of Supply	25%	-	-	-	25%

Cumulative % Savings Jan to December
(+) = savings
8%
11%
20%
25%
26%
27%
26%
26%
25%
25%
-
-



Notes

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N/A = Not Applicable

- Not Available



As of 11/16/2016

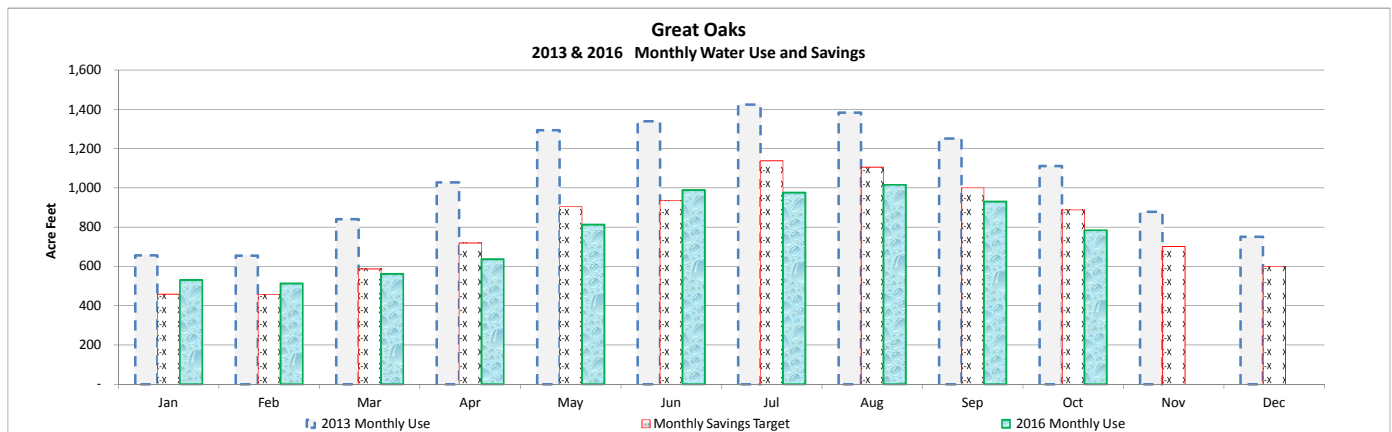
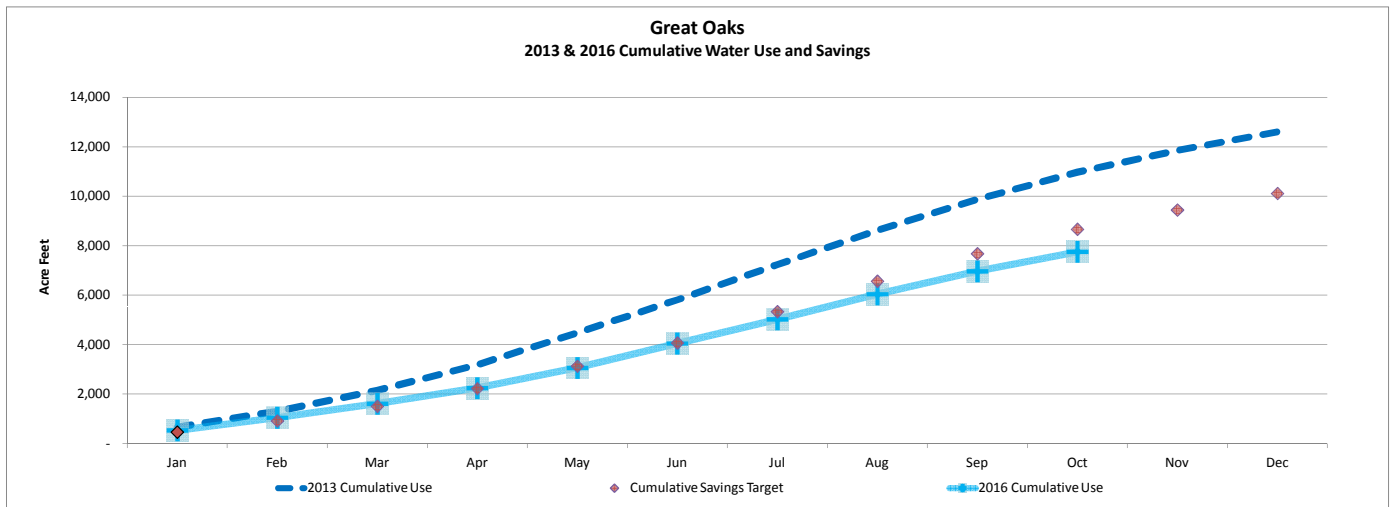
Great Oaks Water Company

2013 and 2016 Water Use Compared to Target

2013	Ground water - Zone 2	Ground water Zone 5	Treated Water	SFPUC	2013 Monthly Use
Jan	240.8	415.2	-	-	656.0
Feb	277.6	376.7	-	-	654.3
Mar	430.5	409.7	-	-	840.2
Apr	652.3	376.3	-	-	1,028.6
May	901.6	391.4	-	-	1,293.0
Jun	970.8	368.9	-	-	1,339.7
Jul	1,056.8	366.9	-	-	1,423.7
Aug	1,040.8	342.0	-	-	1,382.8
Sep	882.6	368.9	-	-	1,251.5
Oct	751.0	359.7	-	-	1,110.7
Nov	534.4	343.3	-	-	877.7
Dec	444.5	306.2	-	-	750.7
Jan to Current Month Totals	7,204.8	3,775.7	-	-	10,980.5
January to December Total	8,183.7	4,425.2	-	-	12,608.9

2016	Ground water Zone 2	Ground water Zone 5	Treated Water	SFPUC	2016 Monthly Use
Jan	170.6	360.7	-	-	531.3
Feb	176.6	337.6	-	-	514.2
Mar	176.8	386.1	-	-	562.9
Apr	268.5	369.1	-	-	637.6
May	421.8	391.7	-	-	813.5
Jun	600.9	388.5	-	-	989.4
Jul	588.9	387.6	-	-	976.5
Aug	472.2	544.2	-	-	1,016.4
Sep	390.1	541.4	-	-	931.5
Oct	224.0	561.2	-	-	785.2
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	3,490.4	4,268.2	-	-	7,758.6
%Savings by Source of Supply	52%	-13%	-	-	29%

Cumulative % Savings Jan to December
(+) = savings
19%
20%
25%
29%
32%
30%
31%
30%
29%
29%



Notes

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Cumulative % Savings shows the target savings for all months combined at that period in time.

Recycled water not included in monthly analysis and will be analyzed separately. It is not included in the water savings target.

N/A = Not Applicable

- Not Available



As of 11/16/2016

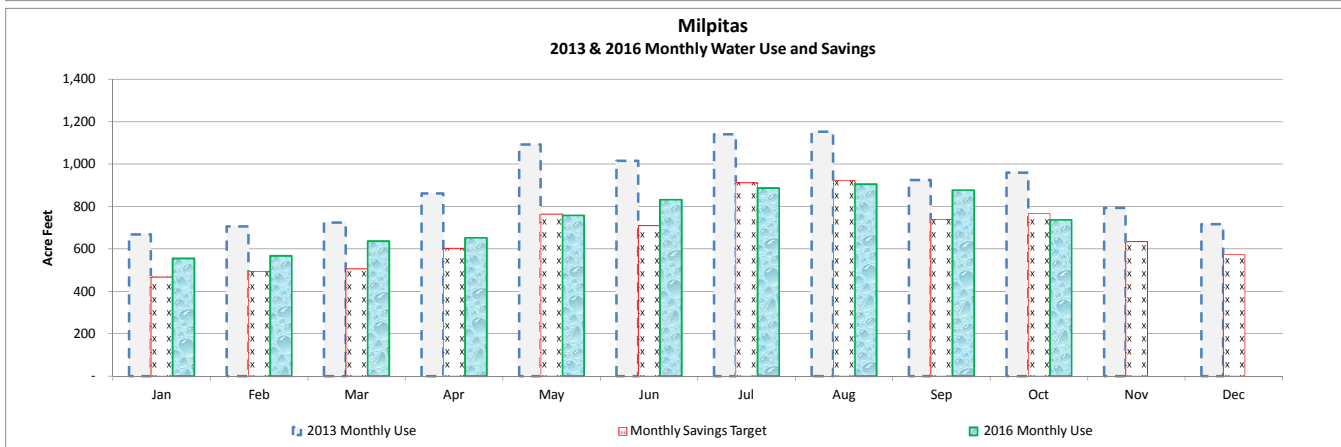
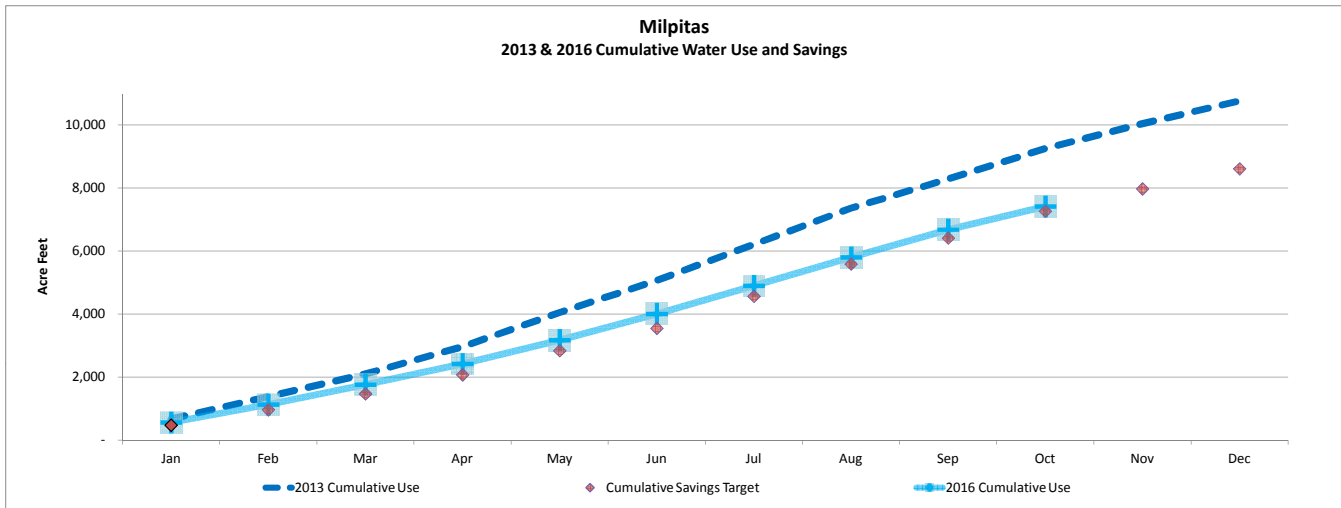
Milpitas, City

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Surface Water	2013 Monthly Use
Jan	-	235.0	433.0	-	668.0
Feb	-	228.0	478.0	-	706.0
Mar	-	263.0	461.0	-	724.0
Apr	-	288.0	574.0	-	862.0
May	-	323.0	770.0	-	1,093.0
Jun	-	310.0	705.0	-	1,015.0
Jul	-	377.0	764.0	-	1,141.0
Aug	-	298.0	855.0	-	1,153.0
Sep	-	182.0	743.0	-	925.0
Oct	-	228.0	731.0	-	959.0
Nov	-	253.0	541.0	-	794.0
Dec	-	265.0	452.0	-	717.0
Jan to Current Month Totals		2,732.0	6,514.0		9,246.0
January to December Total	-	3,250.0	7,507.0	-	10,757.0

2016	Groundwater	Treated Water	SFPUC	Surface Water	2016 Monthly Use
Jan	-	233.5	322.6	-	556.2
Feb	-	238.0	330.2	-	568.2
Mar	-	271.4	365.5	-	636.9
Apr	-	267.6	385.4	-	652.9
May	-	293.5	465.5	-	759.0
Jun	-	309.0	524.0	-	833.0
Jul	-	322.0	565.9	-	888.0
Aug	-	330.2	576.0	-	906.2
Sep	-	320.8	557.1	-	877.9
Oct	-	311.5	426.4	-	737.9
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	-	2,897.6	4,518.6	-	7,416.2
%Savings by Source of Supply	-	-6%	31%	-	20%

Cumulative % Savings Jan to December
(+) = savings
17%
18%
16%
18%
22%
21%
21%
19%
20%
-
-



Notes

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Cumulative % Savings shows the target savings for all months combined at that period in time.

Recycled water not included in monthly analysis and will be analyzed separately. It is not included in the water savings target.

January to March 2015 savings targets at 20% reductions compared to the same period in 2013, and the remaining months are at the March 24, 2015 call for 30% savings.

N/A = Not Applicable

- Not Available

SFPUC - San Francisco Public Utilities Commission Water Sales. SFPUC Drought response is a call for voluntary 10% savings



As of 11/16/2016

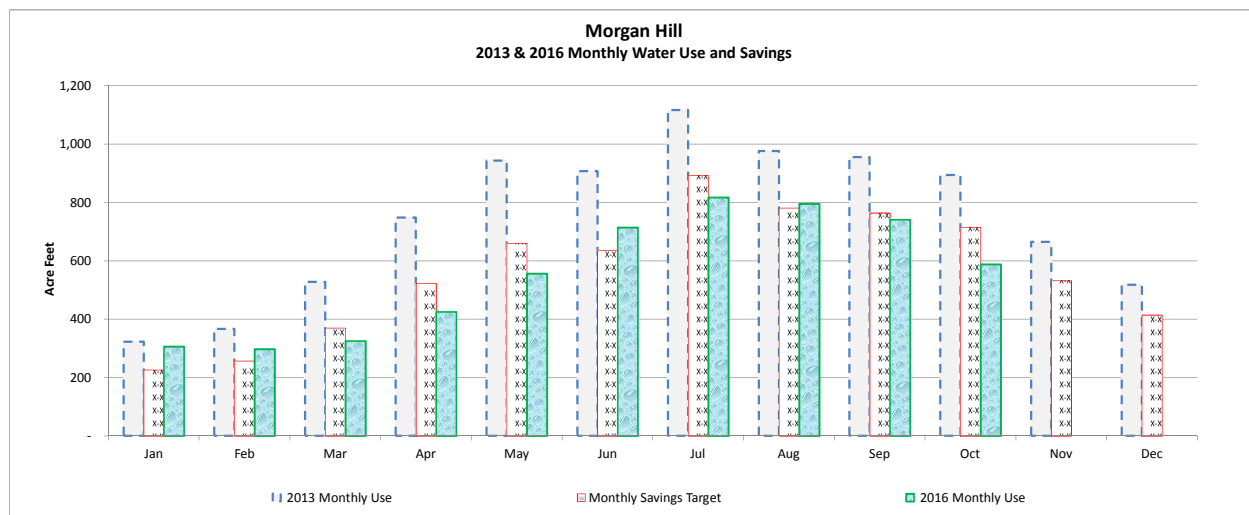
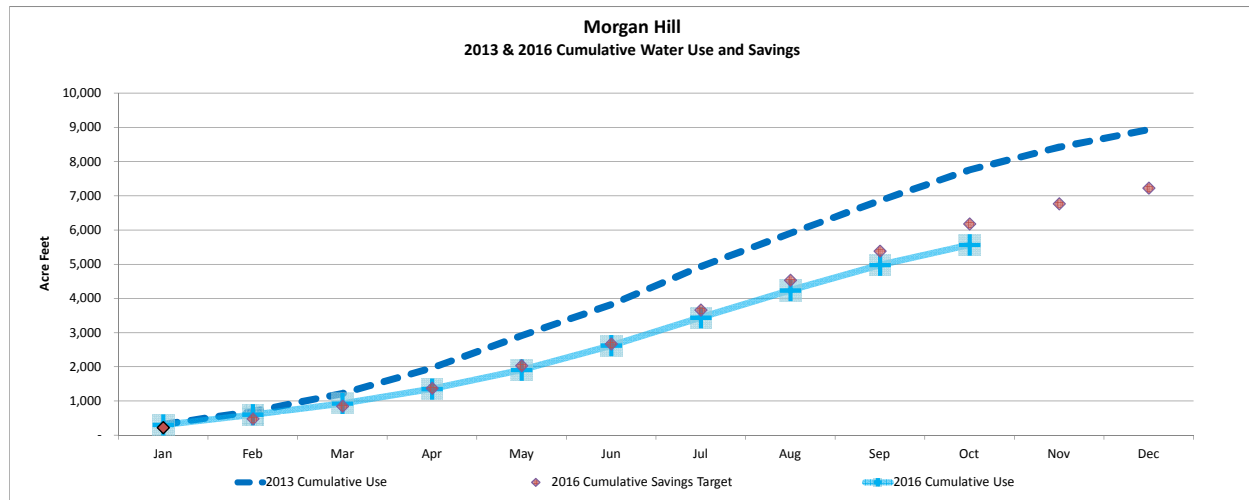
Morgan Hill, City

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Other	2013 Monthly Use
Jan	323.0	-	-	-	323.0
Feb	367.0	-	-	-	367.0
Mar	528.0	-	-	-	528.0
Apr	748.0	-	-	-	748.0
May	943.0	-	-	-	943.0
Jun	907.0	-	-	-	907.0
Jul	1,116.0	-	-	-	1,116.0
Aug	976.0	-	-	-	976.0
Sep	955.0	-	-	-	955.0
Oct	894.0	-	-	-	894.0
Nov	665.0	-	-	-	665.0
Dec	518.0	-	-	-	518.0
Jan to Current Month Totals	7,757.0	-	-	-	7,757.0
January to December Total	8,940.0	-	-	-	8,940.0

2016	Groundwater	Treated Water	SFPUC	Other	2016 Monthly Use
Jan	306.0	-	-	-	306.0
Feb	297.5	-	-	-	297.5
Mar	325.4	-	-	-	325.4
Apr	425.3	-	-	-	425.3
May	556.0	-	-	-	556.0
Jun	714.3	-	-	-	714.3
Jul	817.0	-	-	-	817.0
Aug	795.4	-	-	-	795.4
Sep	741.0	-	-	-	741.0
Oct	588.3	-	-	-	588.3
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	5,566.2	-	-	-	5,566.2
%Savings by Source of Supply	28%	-	-	-	28%

Cumulative % Savings Jan to December
(+) = savings
5%
13%
24%
31%
34%
31%
30%
28%
27%
28%
-
-



Notes

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Cumulative % Savings shows the target savings for all months combined at that period in time.

Recycled water not included in monthly analysis and will be analyzed separately. It is not included in the water savings target.

N/A = Not Applicable

- Not Available

Mt. View

2013 and 2016 Water Use Compared to Target

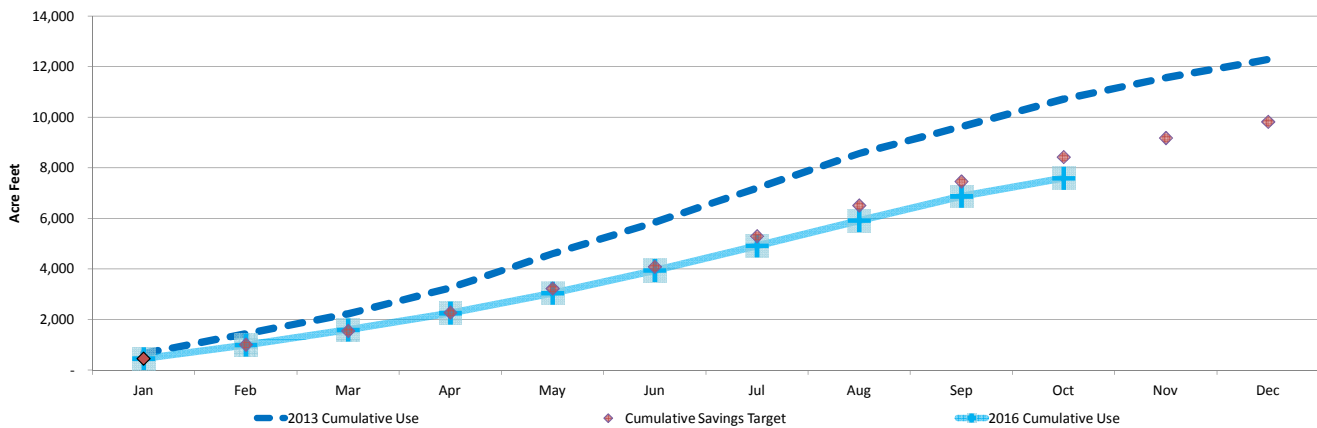
2013	Groundwater	Treated Water	SFPUC	Surface Water	2013 Monthly Use
Jan	28.0	54.0	564.0	-	646.0
Feb	28.0	63.0	700.0	-	791.0
Mar	38.0	85.0	655.0	-	778.0
Apr	35.0	110.0	886.0	-	1,031.0
May	40.0	142.0	1,176.0	-	1,358.0
Jun	41.0	142.0	1,049.0	-	1,232.0
Jul	29.0	155.0	1,177.0	-	1,361.0
Aug	30.0	152.0	1,183.0	-	1,365.0
Sep	24.0	134.0	906.0	-	1,064.0
Oct	35.0	121.0	928.0	-	1,084.0
Nov	31.0	92.0	724.0	-	847.0
Dec	30.0	79.0	611.0	-	720.0
Jan to Current Month Totals	328.0	1,158.0	9,224.0	-	10,710.0
January to December Total	389.0	1,329.0	10,559.0	-	12,277.0

2016	Groundwater	Treated Water	SFPUC	Surface Water	2016 Monthly Use
Jan	5.6	32.7	415.7	-	454.0
Feb	5.6	47.4	482.3	-	535.4
Mar	7.0	50.7	540.4	-	598.1
Apr	8.5	64.1	593.6	-	666.1
May	12.5	89.0	684.3	-	785.8
Jun	12.1	104.0	782.5	-	898.6
Jul	12.7	112.8	850.3	-	975.8
Aug	12.9	108.8	876.2	-	997.9
Sep	12.6	100.1	846.6	-	959.3
Oct	9.3	78.6	628.7	-	716.6
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	98.8	788.1	6,700.7	-	7,587.6
%Savings by Source of Supply	70%	32%	27%		29%

Cumulative % Savings Jan to December
(+) = savings
30%
31%
28%
31%
34%
33%
32%
31%
29%
29%
-
-

Mountain View

2013 & 2016 Cumulative Water Use and Savings



Mountain View

2013 & 2016 Monthly Water Use and Savings



Notes

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N/A = Not Applicable

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As of 11/16/2016

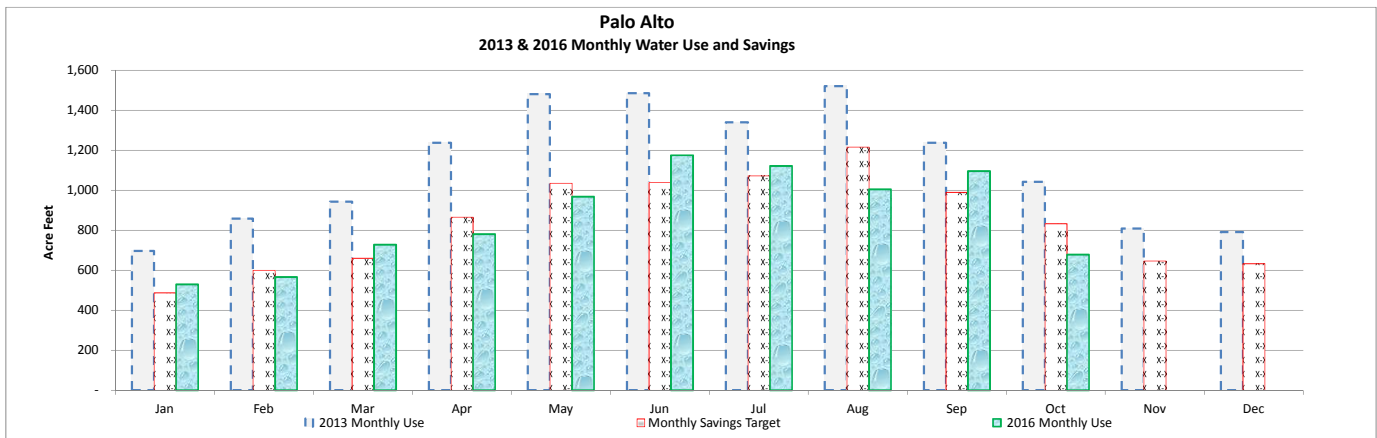
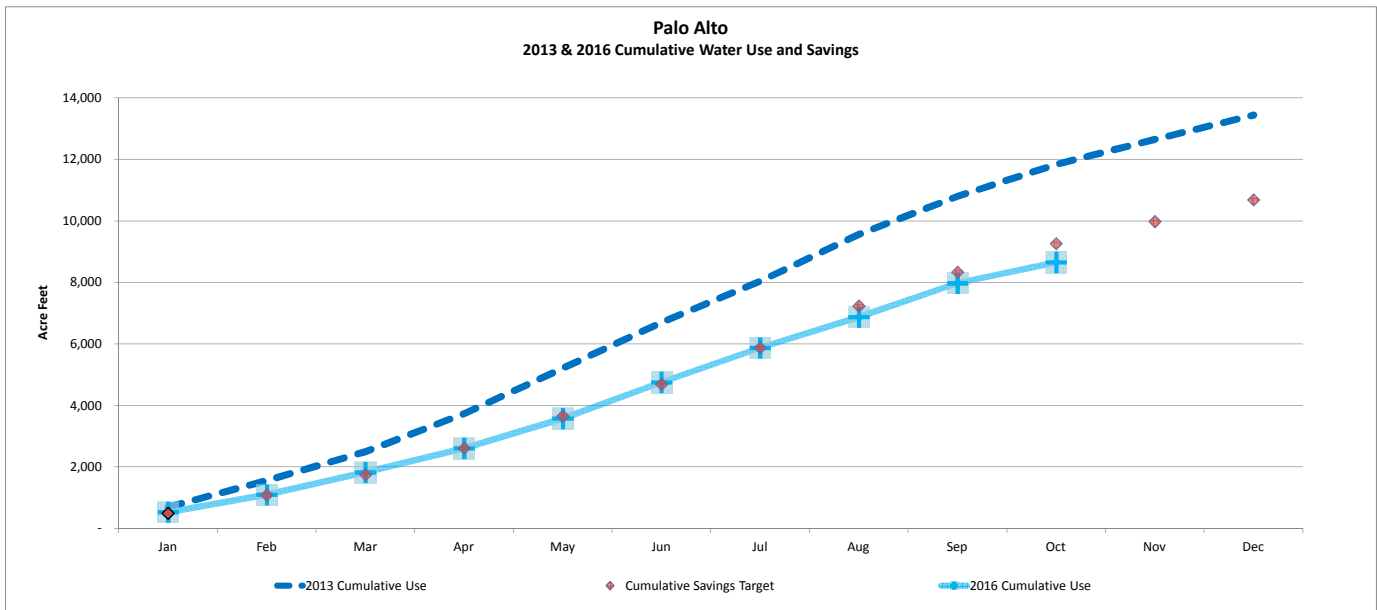
Palo Alto

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Other	2013 Monthly Use
Jan	-	-	696.0	-	696.0
Feb	-	-	857.5	-	857.5
Mar	-	-	943.0	-	943.0
Apr	-	-	1,237.3	-	1,237.3
May	-	-	1,479.7	-	1,479.7
Jun	-	-	1,484.3	-	1,484.3
Jul	-	-	1,340.2	-	1,340.2
Aug	-	-	1,520.7	-	1,520.7
Sep	-	-	1,237.3	-	1,237.3
Oct	-	-	1,041.1	-	1,041.1
Nov	-	-	807.9	-	807.9
Dec	-	-	791.2	-	791.2
Jan to Current Month Totals	-	-	11,836.8	-	11,836.8
January to December Total	-	-	13,435.9	-	13,435.9

2016	Groundwater	Treated Water	SFPUC	Other	2016 Monthly Use
Jan	-	-	529.6	-	529.6
Feb	-	-	566.3	-	566.3
Mar	-	-	728.2	-	728.2
Apr	-	-	781.4	-	781.4
May	-	-	968.3	-	968.3
Jun	-	-	1,175.6	-	1,175.6
Jul	-	-	1,121.9	-	1,121.9
Aug	-	-	1,004.7	-	1,004.7
Sep	-	-	1,096.0	-	1,096.0
Oct	-	-	678.3	-	678.3
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	-	-	8,650.3	-	8,650.3
% Savings by Source of Supply			27%		27%

Cumulative % Savings Jan to December
(+) = savings
24%
29%
27%
30%
31%
29%
27%
28%
26%
27%
-
-



Notes

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As of 11/16/2016

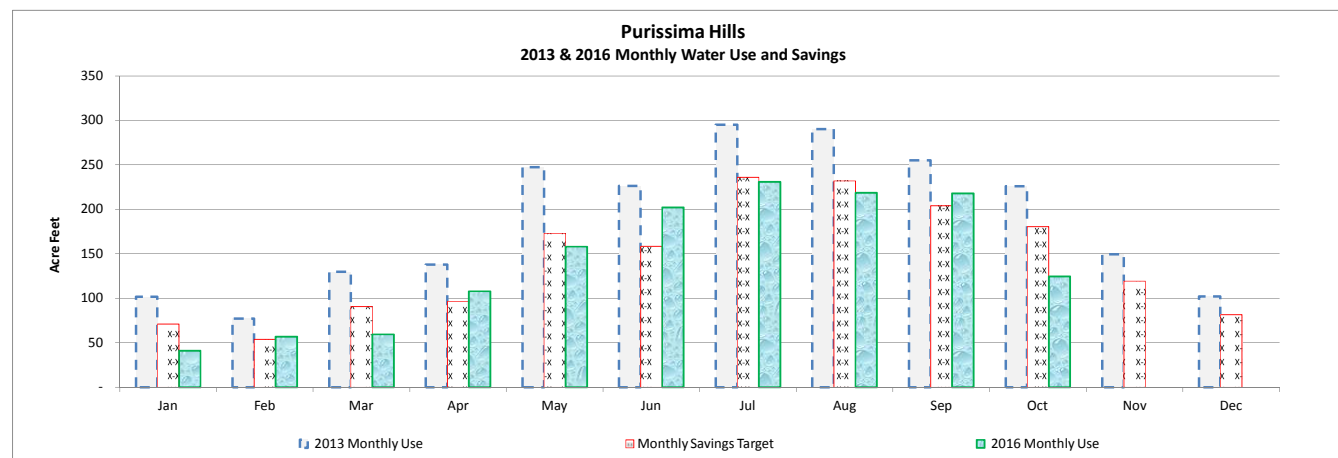
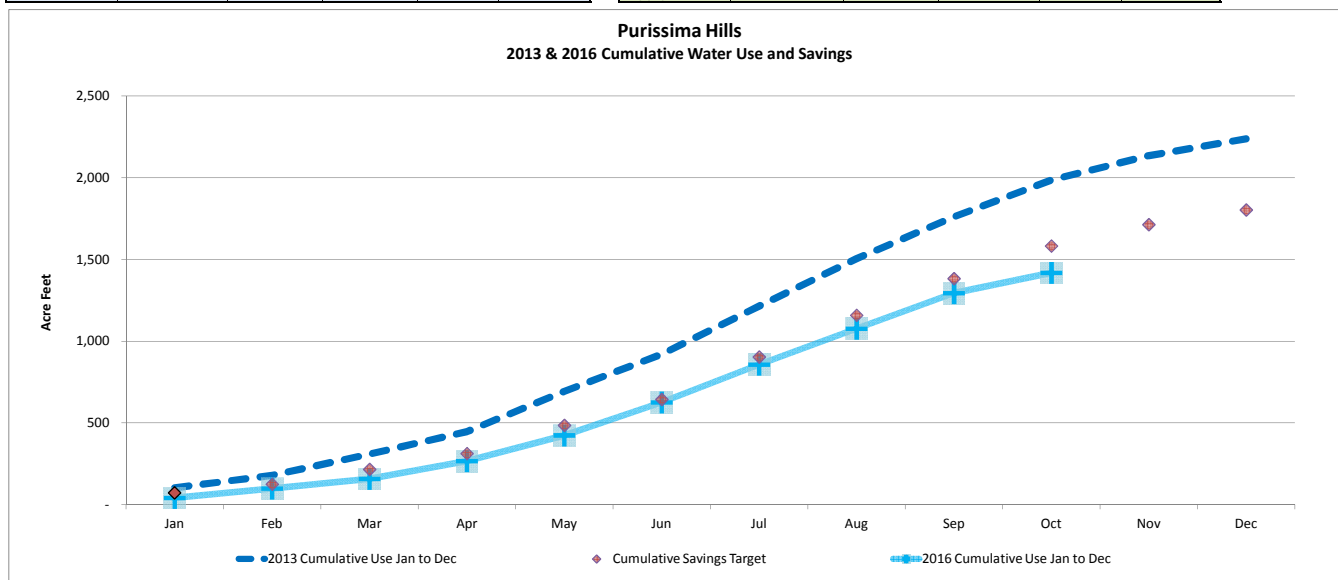
Purissima Hills

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Other	2013 Monthly Use
Jan	-	-	101.5	-	101.5
Feb	-	-	77.0	-	77.0
Mar	-	-	129.6	-	129.6
Apr	-	-	138.0	-	138.0
May	-	-	247.3	-	247.3
Jun	-	-	226.4	-	226.4
Jul	-	-	295.0	-	295.0
Aug	-	-	290.0	-	290.0
Sep	-	-	255.2	-	255.2
Oct	-	-	225.9	-	225.9
Nov	-	-	149.3	-	149.3
Dec	-	-	102.2	-	102.2
Jan to Current Month Totals	-	-	1,986.0		1,986.0
January to December Total	-	-	2,237.5	-	2,237.5

2016	Groundwater	Treated Water	SFPUC	Other	2016 Monthly Use
Jan	-	-	41.2	-	41.2
Feb	-	-	57.1	-	57.1
Mar	-	-	59.6	-	59.6
Apr	-	-	108.0	-	108.0
May	-	-	158.2	-	158.2
Jun	-	-	202.3	-	202.3
Jul	-	-	231.0	-	231.0
Aug	-	-	218.7	-	218.7
Sep	-	-	218.1	-	218.1
Oct	-	-	124.8	-	124.8
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	-	-	1,418.8	-	1,418.8
%Savings by Source of Supply			29%		29%

Cumulative % Savings Jan to December
(+) = savings
59%
45%
49%
40%
39%
32%
29%
29%
26%
29%
-
-



Notes

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2013 Data was changed after change in meter reading schedule (updated March 2016)



As of 11/16/2016

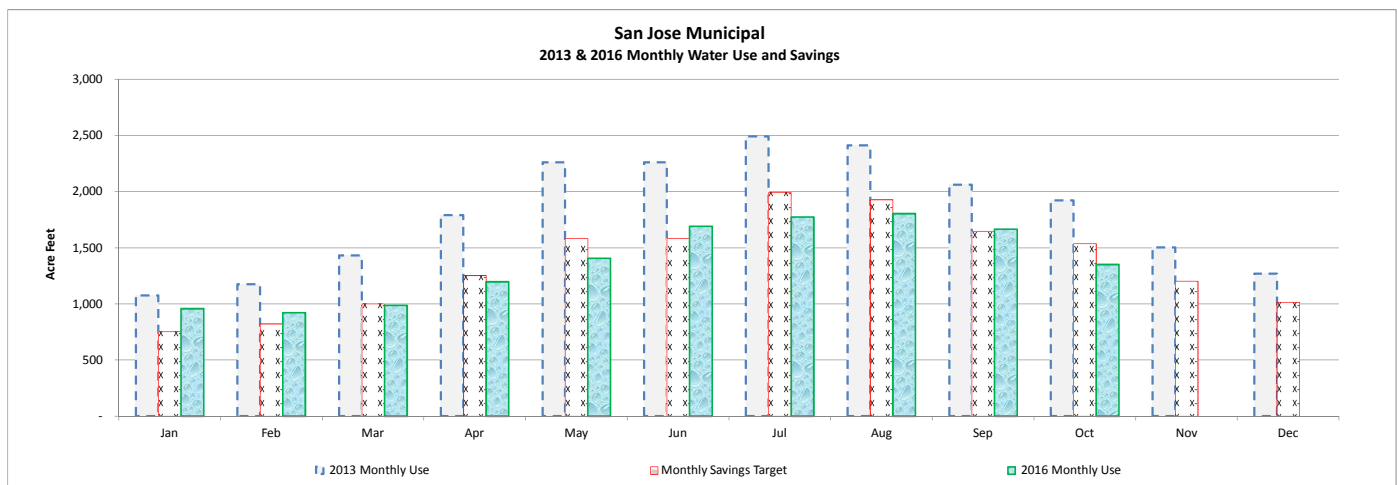
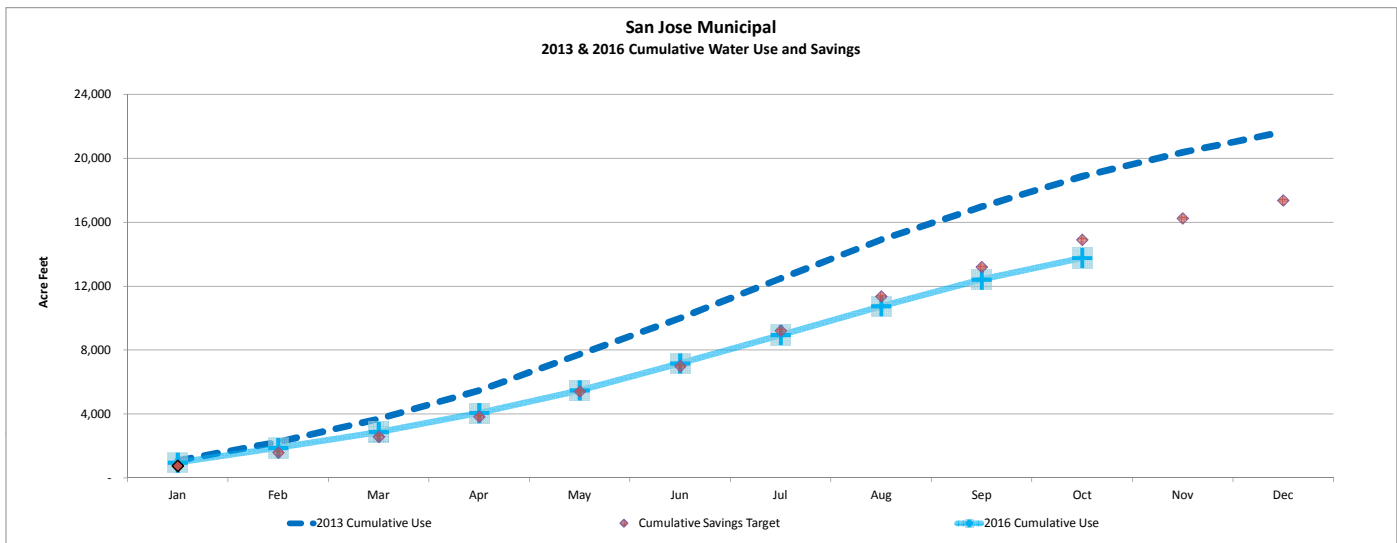
San Jose Municipal

2013 and 2016 Water Use Compared to Target

2013	Ground Water Zone 2	Ground Water Zone 5	Treated Water	SFPUC	2013 Monthly Use
Jan	35.1	25.5	728.0	286.0	1,074.6
Feb	37.2	21.8	762.0	354.0	1,175.0
Mar	46.7	25.0	1,020.0	339.0	1,430.7
Apr	67.8	30.9	1,278.0	414.0	1,790.7
May	39.9	27.9	1,653.0	540.0	2,260.8
Jun	45.2	33.2	1,691.0	493.0	2,262.4
Jul	47.3	31.4	1,854.0	560.0	2,492.7
Aug	50.8	36.5	1,750.0	574.0	2,411.3
Sep	33.6	31.3	1,530.0	466.0	2,060.9
Oct	36.3	44.0	1,380.0	461.0	1,921.3
Nov	33.4	52.0	1,039.0	379.0	1,503.4
Dec	26.4	32.5	885.0	326.0	1,269.9
Jan to Current Month Totals	439.9	307.5	13,646.0	4,487.0	18,880.4
January to December Total	499.7	392.0	15,570.0	5,192.0	21,653.7

2016	Ground Water Zone 2	Ground Water Zone 5	Treated Water	SFPUC	2016 Monthly Use
Jan	35.6	25.0	598.0	299.8	958.4
Feb	17.0	22.4	574.6	307.9	921.9
Mar	18.2	24.2	605.0	340.5	987.9
Apr	37.1	19.7	736.6	404.2	1,197.6
May	17.6	14.0	412.2	964.4	1,408.2
Jun	75.3	25.0	1,149.6	442.6	1,692.5
Jul	45.8	11.2	1,236.2	481.0	1,774.2
Aug	52.6	36.3	1,211.1	504.9	1,804.8
Sep	49.6	25.9	1,094.5	496.6	1,666.6
Oct	39.2	16.3	915.2	381.1	1,351.7
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	388.0	220.0	8,532.9	4,623.0	13,763.8
%Savings by Source of Supply	12%	28%	37%	-3%	27%

Cumulative % Savings Jan to December
(+) = savings
11%
16%
22%
26%
29%
28%
28%
27%
27%
-
-



Notes

Current monthly water use data is preliminary and subject to change.

The initial water use reduction target for 2016 was 30%, but was changed on June 14, 2016, to 20% for 2016

Percent savings are shown in positive values where savings have been made and negative percent values where water use is higher than the base year period (2013)

Cumulative % Savings shows the target savings for all months combined at that period in time.

Recycled water not included in monthly analysis and will be analyzed separately. It is not included in the water savings target.

N/A = Not Applicable

- Not Available

SFPUC - San Francisco Public Utilities Commission Water Sales. SFPUC 2014 Drought response is a call for voluntary 10% savings

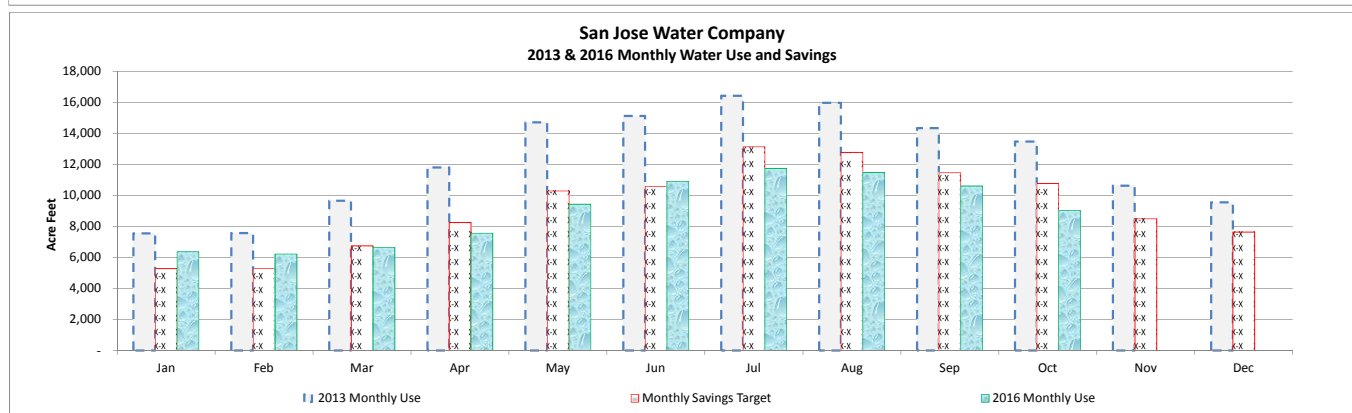
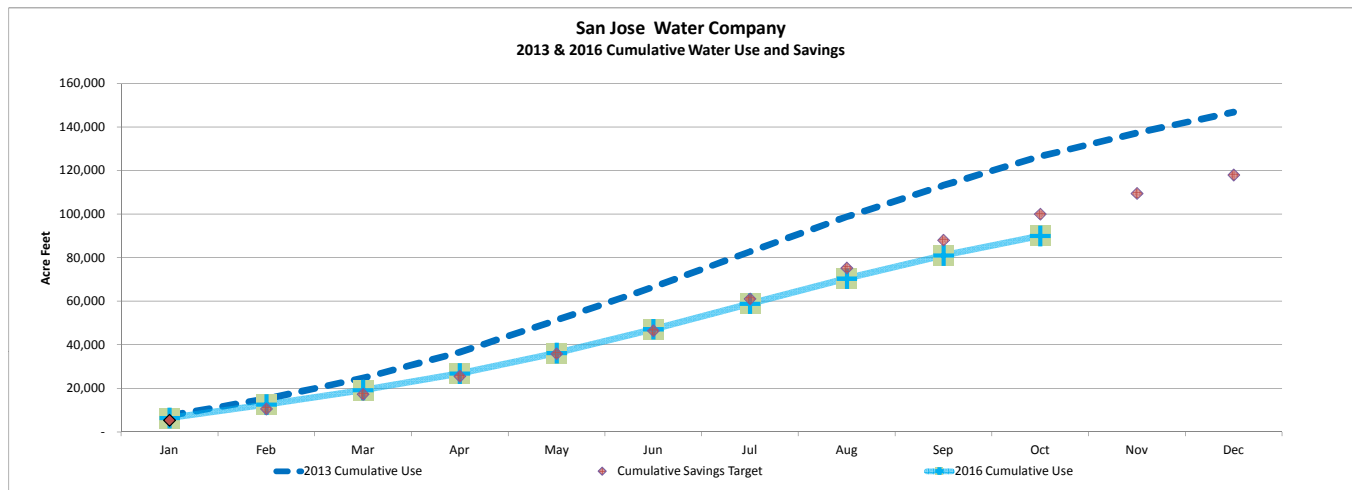
San Jose Water Company

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Surface Water	2013 Monthly Use
Jan	1,731.0	4,016.1	-	1,807.1	7,554.2
Feb	1,865.6	4,328.1	-	1,384.8	7,578.6
Mar	3,807.7	5,241.9	-	594.9	9,644.4
Apr	4,293.0	7,082.4	-	422.2	11,797.6
May	5,375.9	9,033.4	-	298.6	14,708.0
Jun	5,643.2	8,959.1	-	516.2	15,118.5
Jul	7,198.0	8,610.9	-	616.3	16,425.2
Aug	6,693.0	8,694.2	-	584.1	15,971.2
Sep	5,451.9	8,352.7	-	530.6	14,335.2
Oct	5,575.0	7,394.2	-	501.5	13,470.6
Nov	4,971.4	5,323.4	-	326.0	10,620.8
Dec	5,145.5	4,205.5	-	202.8	9,553.7
Jan to Current Month Totals	47,634.2	71,713.1	-	7,256.2	126,603.5
January to December Total	57,751.1	81,242.0	-	7,785.0	146,778.1

2016	Groundwater	Treated Water	SFPUC	Surface Water	2016 Monthly Use
Jan	2,785.4	3,099.5	-	489.1	6,373.9
Feb	2,081.5	3,193.1	-	951.1	6,225.7
Mar	2,348.6	3,035.0	-	1,282.3	6,665.9
Apr	3,220.7	2,491.9	-	1,857.4	7,570.0
May	2,498.7	5,019.8	-	1,918.8	9,437.2
Jun	3,560.3	6,351.5	-	1,005.1	10,916.9
Jul	4,414.0	7,330.9	-	0.3	11,745.2
Aug	3,684.0	7,793.2	-	0.3	11,477.5
Sep	2,042.8	8,568.4	-	0.3	10,611.5
Oct	1,545.7	7,491.7	-	0.3	9,037.8
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	28,181.7	54,374.9	-	7,504.9	90,061.5
%Savings by Source of Supply	41%	24%	-	-3%	29%

Cumulative % Savings Jan to December
(+) = savings
16%
17%
22%
27%
29%
29%
29%
29%
28%
29%
-
-



Notes

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Percent savings are shown in positive values where savings have been made and negative percent values where water use is higher than the base year period (2013)

Cumulative % Savings shows the target savings for all months combined at that period in time.

N/A = Not Applicable

- Not Available



As of 11/16/2016

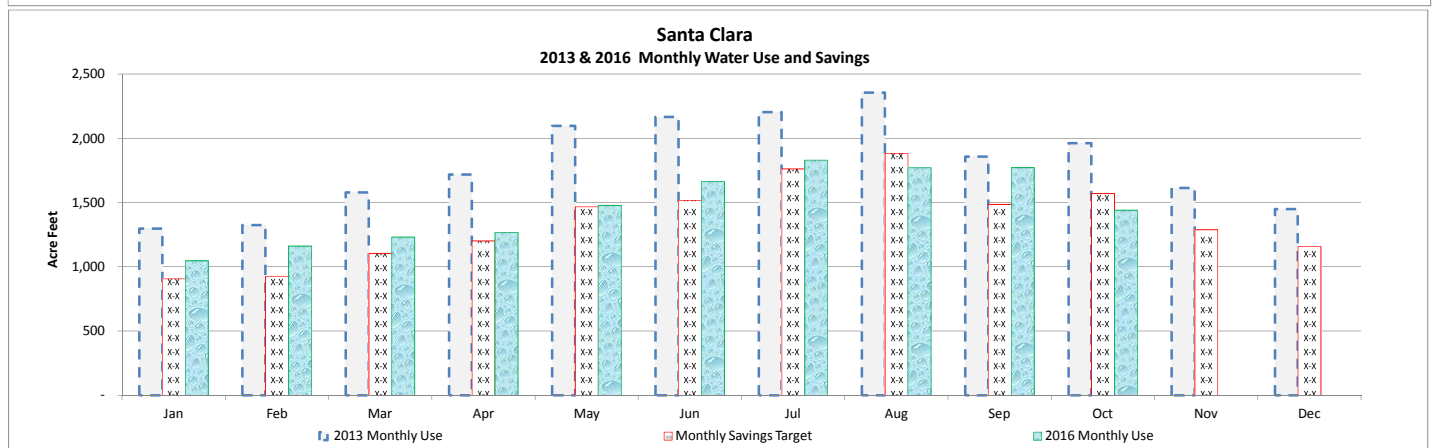
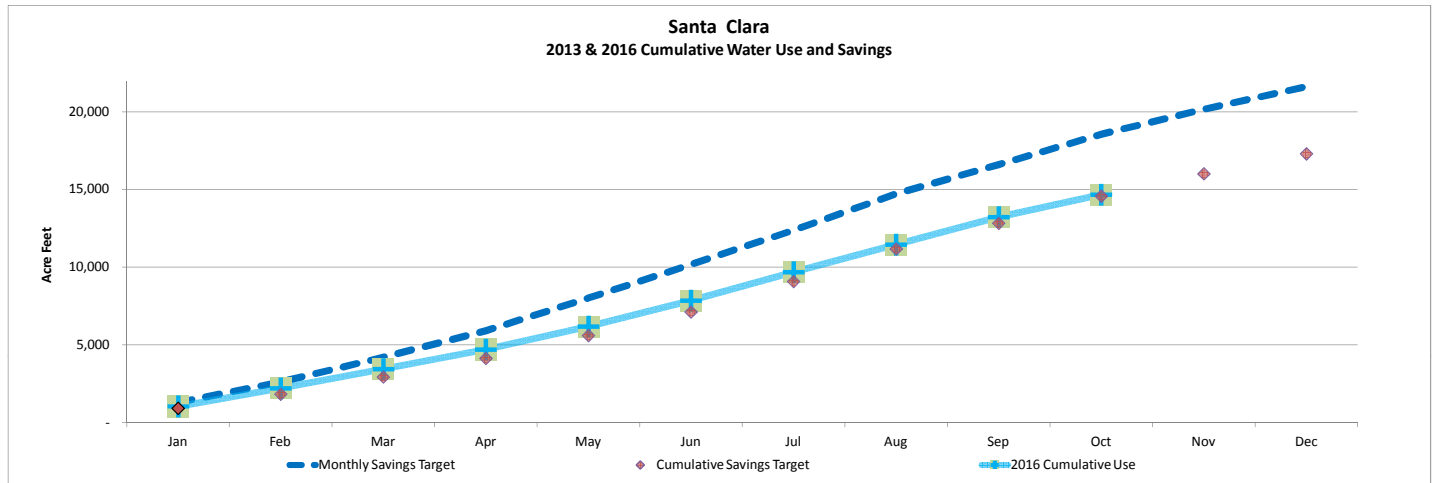
Santa Clara (City)

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Other	2013 Monthly Use
Jan	802.0	287.0	207.0	-	1,296.0
Feb	735.0	370.0	219.0	-	1,324.0
Mar	951.0	428.0	199.0	-	1,578.0
Apr	1,059.0	434.0	224.0	-	1,717.0
May	1,378.0	492.0	226.0	-	2,096.0
Jun	1,520.0	467.0	180.0	-	2,167.0
Jul	1,545.0	454.0	204.0	-	2,203.0
Aug	1,688.0	450.0	217.0	-	2,355.0
Sep	1,233.0	442.0	183.0	-	1,858.0
Oct	1,301.0	428.0	234.0	-	1,963.0
Nov	1,062.0	356.0	194.0	-	1,612.0
Dec	933.0	342.0	173.0	-	1,448.0
January to Current Month Totals	12,212.0	4,252.0	2,093.0	-	18,557.0
January to December Total	14,207.0	4,950.0	2,460.0	-	21,617.0

2016	Groundwater	Treated Water	SFPUC	Other	2016 Monthly Use
Jan	623.2	232.2	192.1	-	1,047.5
Feb	660.9	295.5	205.7	-	1,162.1
Mar	737.1	270.8	223.8	-	1,231.7
Apr	619.6	424.9	223.6	-	1,268.1
May	775.3	487.1	216.3	-	1,478.7
Jun	919.8	517.5	227.5	-	1,664.8
Jul	1,204.1	402.0	225.2	-	1,831.3
Aug	1,085.1	460.7	224.8	-	1,770.6
Sep	1,113.4	450.7	208.5	-	1,772.6
Oct	828.6	469.7	143.3	-	1,441.6
Nov	-	-	-	-	-
Dec	-	-	-	-	-
January to Current Month Totals	8,567.1	4,011.1	2,090.8	-	14,669.0
%Savings by Source of Supply	30%	6%	0%	-	21%

Cumulative % Savings Jan to December
(+) = savings
19%
16%
18%
20%
23%
23%
22%
22%
20%
21%
-
-



Notes

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Percent savings are shown in positive values where savings have been made and negative percent values where water use is higher than the base year period (2013)

Cumulative % Savings shows the target savings for all months combined at that period in time.

Recycled water not included in monthly analysis and will be analyzed separately. It is not included in the water savings target.

January to March 2015 savings targets at 20% reductions compared to the same period in 2013, and the remaining months are at the March 24, 2015 call for 30% savings.

N/A = Not Applicable

- Not Available

SFPUC - San Francisco Public Utilities Commission Water Sales. SFPUC Drought response is a call for voluntary 10% savings



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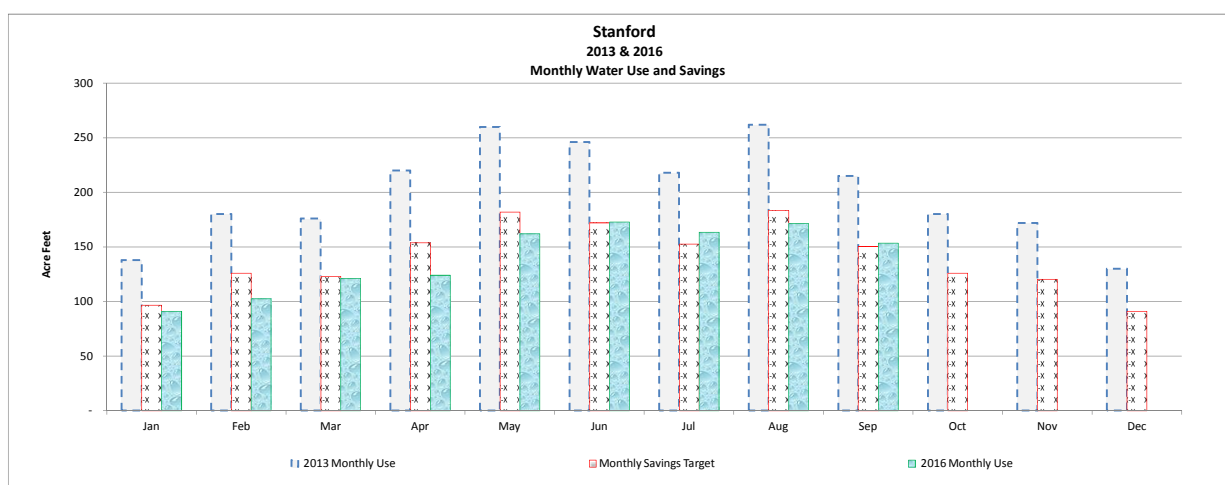
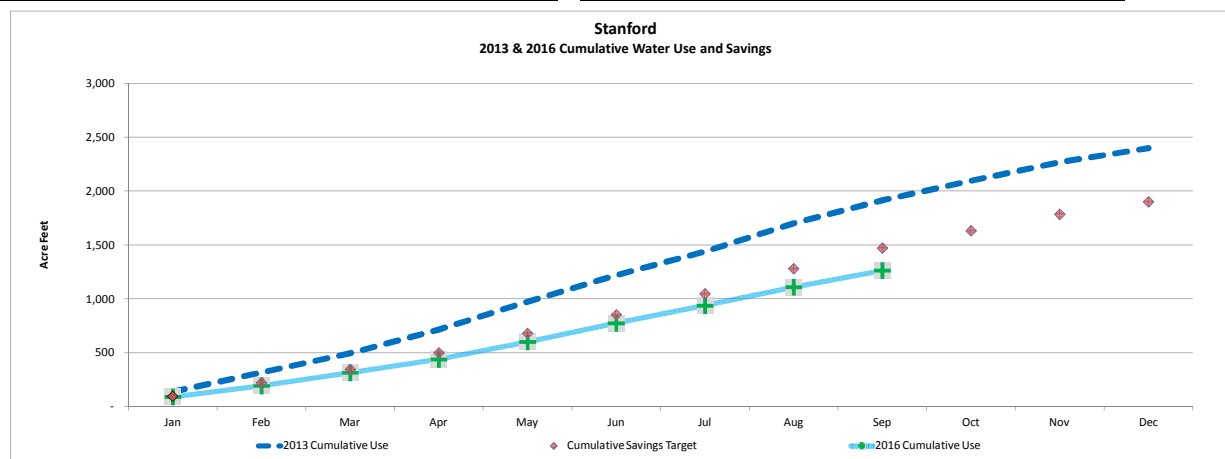
Stanford University

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Other	2013 Monthly Use
Jan	-	-	138.0		138.0
Feb	-	-	180.0		180.0
Mar	-	-	176.0		176.0
Apr	-	-	220.0		220.0
May	-	-	260.0		260.0
Jun	-	-	246.0		246.0
Jul	-	-	218.0		218.0
Aug	-	-	262.0		262.0
Sep	-	-	215.0		215.0
Oct	-	-	180.0		180.0
Nov	-	-	172.0		172.0
Dec	-	-	130.0		130.0
Jan to Current Month	-	-	1,915.0	-	1,915.0
January to December Total	-	-	2,397.0	-	2,397.0

2016	Groundwater	Treated Water	SFPUC	Other	2016 Monthly Use
Jan	-	-	91.0	-	91.0
Feb	-	-	102.4	-	102.4
Mar	-	-	121.3	-	121.3
Apr	-	-	124.1	-	124.1
May	-	-	162.2	-	162.2
Jun	-	-	172.9	-	172.9
Jul	-	-	163.6	-	163.6
Aug	-	-	171.5	-	171.5
Sep	-	-	153.6	-	153.6
Oct*	-	-	-	-	-
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month	-	-	1,262.7	-	1,262.7
%Savings by Source of Supply			34%		34%

Cumulative % Savings Jan to December (+) = savings
34%
39%
36%
39%
38%
37%
35%
35%
34%
-
-
-



Notes

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Cumulative % Savings shows the target savings for all months combined at that period in time.

Recycled water not included in monthly analysis and will be analyzed separately. It is not included in the water savings target.

Potable Use only reported. SFPUC data does not match SFPUC billing records due to wheeling water to Stanford Hospital, which is in the Palo Alto service area

Variations in month to month savings: Stanford's billing cycles vary on a monthly and yearly basis, and are not consistent with the amount of calendar days in each month.

When normalized for number of days in billing cycles, decreased, Stanford reports Domestic Water Savings of above the percent saved in this report

* water use values are not available as of time of report printing

N/A = Not Applicable

- Not Available



As of 11/16/2016

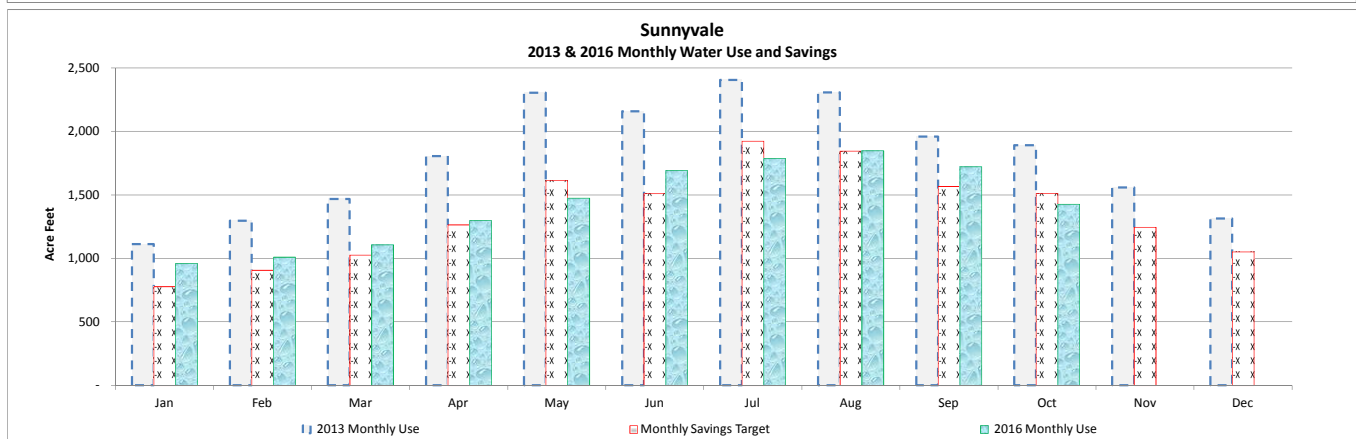
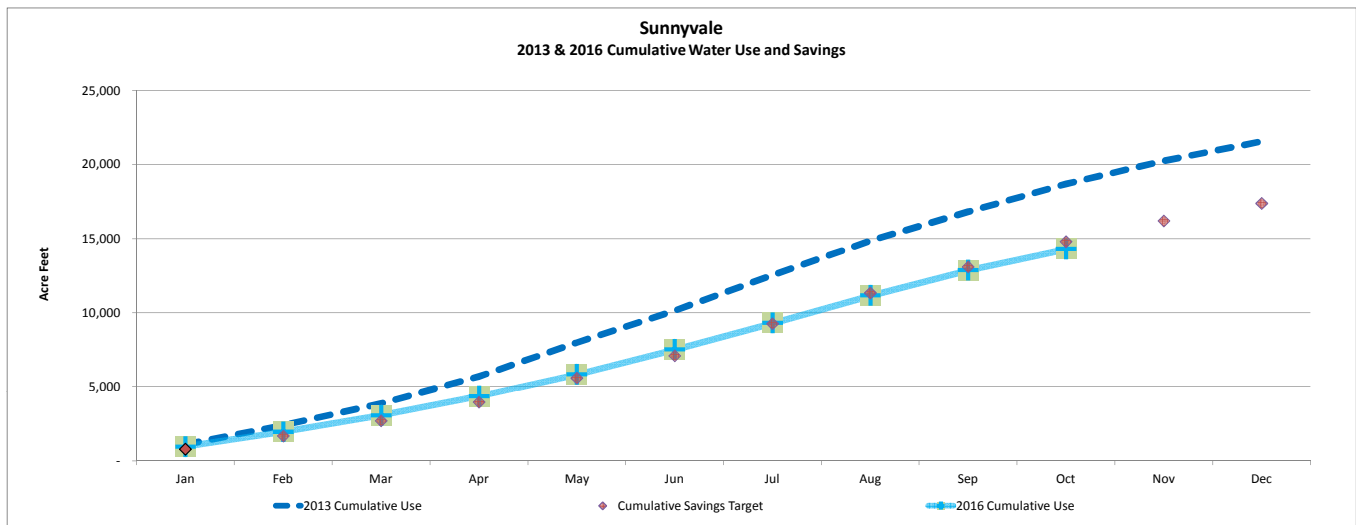
Sunnyvale , City

2013 and 2016 Water Use Compared to Target

2013	Groundwater	Treated Water	SFPUC	Surface Water	2013 Monthly Use
Jan	11.0	49.0	1,052.0	-	1,112.0
Feb	10.0	531.0	754.0	-	1,295.0
Mar	8.0	770.0	689.0	-	1,467.0
Apr	10.0	898.0	898.0	-	1,806.0
May	8.0	1,101.0	1,195.0	-	2,304.0
Jun	8.0	1,270.0	879.0	-	2,157.0
Jul	13.0	1,146.0	1,245.0	-	2,404.0
Aug	9.0	1,055.0	1,242.0	-	2,306.0
Sep	11.0	983.0	965.0	-	1,959.0
Oct	13.0	993.0	884.0	-	1,890.0
Nov	11.0	842.0	704.0	-	1,557.0
Dec	11.0	780.0	523.0	-	1,314.0
Jan to Current Month Totals	101.0	8,796.0	9,803.0	-	18,700.0
January to December Total	123.0	10,418.0	11,030.0	-	21,571.0

2016	Groundwater	Treated Water	SFPUC	Surface Water	2016 Monthly Use
Jan	9.3	385.2	566.3	-	960.9
Feb	8.6	472.3	529.0	-	1,009.9
Mar	14.1	419.4	673.5	-	1,106.9
Apr	12.3	550.5	735.0	-	1,297.8
May	14.0	685.0	776.5	-	1,475.5
Jun	16.2	731.6	944.5	-	1,692.2
Jul	13.1	766.2	1,008.6	-	1,787.9
Aug	17.0	759.0	1,071.0	-	1,847.0
Sep	13.7	693.3	1,014.6	-	1,721.6
Oct	14.6	633.0	779.0	-	1,426.5
Nov	-	-	-	-	-
Dec	-	-	-	-	-
Jan to Current Month Totals	132.9	6,095.4	8,098.0	-	14,326.2
%Savings by Source of Supply	-32%	31%	17%		23%

Cumulative % Savings Jan to Dec based on 2013
(+) = savings
14%
18%
21%
23%
27%
26%
25%
23%
-
-



Notes

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Recycled water not included in monthly analysis and will be analyzed separately. It is not included in the water savings target.

N/A = Not Applicable

- Not Available

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As of 11/16/2016

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Section 3. Water Conservation Measures

This section provides an overview of the water conservation measures taken by the district, municipalities and water retailers.

A. Santa Clara Valley Water District Measures

Since the district's call for water use reductions, the district has increased its water conservation outreach and education, and increased rebates for many of its programs, including:

- Landscape conversion rebate program: rebates were temporarily increased to \$2 per square foot (back to \$1 per square foot as of July 1, 2016).
- Irrigation hardware upgrades rebate program: several irrigation hardware rebates were increased.
- Graywater laundry to landscape rebate program: up to \$200 per residential site for properly connecting a clothes washer to a graywater irrigation system.
- Commercial rebate programs: several rebates were temporarily increased for commercial facilities, including the rebate for connectionless food steamers, commercial high-efficiency clothes washers and the custom/measured rebate (As of July 1, 2016, some rebates are back to the original amounts).

In addition, the district recently initiated a Safe, Clean Water and Natural Flood Protection Program to provide research grants to study and pilot-test new and innovative water conservation programs and efficient technologies. The program will provide \$1 million over a 10 year period.

To date, costs of \$18.7 million have been incurred for drought response activities. In addition, the board and the CEO have authorized an additional \$27.3 million in budget adjustments. The breakdown is as follows:

- Conservation Programs - \$16.4 million
- Outreach - \$2.4 million
- Imported Water - \$8.5 million for purchased water and reverse flow consultant.

B. Water Retailer Measures

Local water retailers responded to the district's call for savings in various ways. Several retailers called for 20 percent reductions and activated or adopted water use restrictions. Most water retailers took additional action since August 2014 to respond to the State Board's Emergency Regulations that were adopted in July 2014. Nearly every water retailer increased their outreach and education efforts. In addition, water retailers implemented additional actions in response to the governor's April 1, 2015, Executive Order and the State Board's expanded drought-related emergency regulations adopted March 17, 2015. Two summits, one with the retailers, one with elected officials, have been held to facilitate increased water conservation and water use saving efforts and increase coordination to meet the 30 percent reduction target. A common theme between the two summits was that messaging and policy development needs to be consistent and coordinated. See Table 9 on next page for a summary of actions taken to date.

TABLE 9: WATER RETAILER WATER USE REDUCTION MEASURES THROUGH JULY 2016

Water Retailer	Retailer Call for Water Use Reduction	Retailer Water Use Restrictions
California Water Service	20 percent	Enacted Schedule 14.1 restrictions and allocations
Gilroy	20 percent	Permanent restrictions plus Stage 1
Great Oaks	20 percent	Enacted Schedule 14.1 restrictions and allocations
Milpitas	20 percent	Permanent restrictions plus additional measure, including allocations. Urgency Drought Ordinance adopted and in force.
Morgan Hill	20 percent	Permanent restrictions plus Level 1 Water Supply Shortage Condition.
Mountain View	10 percent	Permanent restrictions plus Stage 1.
Palo Alto	10 percent	Palo Alto has implemented all measures included in Stage I of its Water Shortage Contingency Plan
Purissima Hills Water	10 percent	Permanent restrictions
San Jose Municipal Water	20 percent	20 percent water conservation target plus 3-days a week landscape irrigation schedule
San Jose Water Company	20 percent	Enacted Schedule 14.1 restrictions and allocations. 3 days per week landscape irrigation schedule
Santa Clara	20 percent	Permanent restrictions
Stanford	10 percent	N/A
Sunnyvale	15 percent	Permanent restrictions plus Stage 1

C. Other Municipality Measures (non retailer cities and the County)

Some of the cities or towns in Santa Clara County do not have a municipal water system. They are served by investor owned water retail agencies. However, many of them are moving forward with their own actions to influence water use reductions in their communities.

TABLE 10: MUNICIPALITY NON-RETAILER ACTIONS

<u>City (non municipal water retailer)</u>	<u>Action</u>	<u>Outreach</u>
Campbell, City of	Drought Ordinance updated to include enforcement provisions and drought stages. Calling for 20 percent.	Water saving tips on website and in city newsletter.
Saratoga, City of	Drought Resolution calls for 20 percent. Updated Water Efficient Landscape Ordinance.	Water saving tips on website, with links to SJWC and SCVWD water conservation and rebate programs.
Los Altos, City of	Drought Resolution calls for 32 percent.	Resolution includes voluntary measures consistent with model ordinance
Los Altos Hills, Town of	Water efficient landscaping regulations in place. Environmental Initiatives Committee reviewing potential additional water saving measures.	Support SCVWD and retailer efforts. Water conservation information on Town website.
Los Gatos, Town of	Drought Ordinance adopted and in force, calls for 20 percent.	Water saving tips and information on SCVWD water conservation rebate programs on website.
Cupertino	Drought Ordinance adopted and in force. Resolution calls for 30 percent.	Drought Resources page on city website, banners with watering schedule and drought messages in City parks, drought signs on City lawns. Matching turf removal rebate.
Monte Sereno, City of	Water conservation and landscaping regulations in place.	City Council received information detailing SJW's Schedule 14.1 restrictions.

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Section 4. Drought Response Strategies

The district's comprehensive drought response is being implemented through fifteen strategies grouped into four general categories: (A) water supply and operations; (B) water use reduction; (C) drought response opportunities; and (D) administrative and financial management.

A. Water Supply and Operations

1. Secure imported water supplies.

This strategy includes working with state and federal project operators: California Department of Water Resources (DWR) and U.S. Bureau of Reclamation (Reclamation), and contractors of the State Water Project (SWP) and Central Valley Project (CVP), to secure the district's 2015 contract carryover supplies and 2016 contract allocations. It also includes supporting initiatives to control Delta salinity; providing for return of water from the Semitropic Water Bank; determining the availability of supplemental water transfers and imported water carryover for 2016; and coordinating with San Francisco Public Utilities Commission (SFPUC) on drought impacts to the Hetch-Hetchy Project.

2. Manage surface water and groundwater supplies.

To maximize water supply reliability and protect groundwater, this strategy optimizes distribution of limited local and imported supplies, including deliveries to the three water treatment plants, operation of district reservoirs and the groundwater recharge system, and deliveries to untreated surface water users. Given current water supply conditions, ongoing communication is required with regulatory agencies and other stakeholders regarding changing conditions in reservoirs, creeks and recharge ponds, as well as working with untreated surface water customers to establish alternate sources of supply.

3. Optimize treated water quality and availability.

This strategy focuses on optimizing treatment plant operations and source water supplies to meet drinking water quality and reliability objectives, in coordination with the district's retail treated water contractors. It includes continuing to meet treated water quality objectives despite drought-induced water quality conditions in the Delta this year. This strategy also includes working with SFPUC to use the Hetch-Hetchy Intertie when necessary to meet treated water schedules.

B. Water Use Reduction

4. Reduce 2016 water use by 20 percent compared to 2013 water use

This strategy includes promoting short-term and long-term actions to meet the 20 percent water use reduction target called for by the Board on June 14, 2016, as well as tracking progress towards meeting that target. Activities include promoting the district's water conservation programs; coordinating with retail water agencies,

municipalities and the County of Santa Clara on drought response ordinances and programs; and implementing a public outreach and education campaign.

5. Ensure that district facilities set a model for water conservation.

Many water conservation measures have been implemented at district facilities in past years, including low flow toilets, dual flush valves in high use areas, low flow aerators on faucets in restrooms and break areas, low flow devices in showers, drought tolerant landscaping and/or native vegetation, and Calsense intelligent irrigation controllers for landscaping. In 2013, the district reduced water use by 11 percent (10.8 million gallons) compared to 2012 (12.1 million gallons). In 2015, district facilities used 43 percent less water than in 2013.

6. Support customers and key stakeholders to minimize adverse drought impacts.

This strategy includes providing assistance to retail water agencies for their outreach, operations, and conservation programs. The district meets regularly with the Water Retailers and subcommittees (Water Supply, Treated Water, Water Quality, Groundwater, Conservation, Communication and Ad Hoc Drought Response Subcommittees). Assistance is also being provided to surface water customers, agricultural water users, municipalities, and others as they implement drought response. The Landscape Committee is convened to discuss drought response as it affects landscape businesses. This strategy includes tracking and reporting customer and stakeholder requests.

C. Drought Response Opportunities

7. Leverage community awareness to advance long-term conservation measures.

This strategy includes measures to increase participation in the district's long-term water conservation programs. It also identifies, evaluates and supports new innovative conservation measures, including Safe Clean Water (SCW) Water Conservation Research Grant efforts, which are expected to be implemented in calendar year 2016. Staff is also investigating opportunities for advancing sustainable, long-term savings through land use initiatives, where feasible.

8. Accelerate recycled water program development and implementation.

The current drought has raised interest in expediting implementation of both non-potable and potable reuse components of the district's long-term water supply plans by existing and potential recycled water partners, legislators, water users and others. Staff is identifying and preparing plans for high-priority recycled/purified water projects (up to 45,000 acre-feet per year) to help alleviate water supply shortages if the current drought continues; pursuing regulatory proposals to provide for safe implementation of indirect and direct potable reuse projects; and completing master planning of all recycled water efforts. Other aspects of this strategy include support and pursuit of legislative proposals to streamline the implementation of recycled water projects and provide potential funding.

9. Leverage opportunity to maintain uniquely accessible district facilities.

During the more severe times within the drought, many District facilities were more accessible than normal for inspections and maintenance, given the limited surface water in District reservoirs and limited raw water operations. For example, some groundwater recharge ponds that have been in continuous service for decades were drained, providing opportunity for cleaning and refurbishment. This strategy took advantage of unique conditions in 2014 and 2015 to expedite work and advance district asset management.

10. Leverage opportunity to further development of the district's workforce.

Effective drought response requires reassignment of staff resources to meet current needs, and this reassignment also creates opportunity for staff to gain new knowledge, skills and abilities. This strategy includes establishing processes for fair and expedited reassignment of staff resources to assist with implementation of drought response so that the district is better able to serve the public this year and in future years through workforce development.

11. Advance community knowledge, awareness, and understanding of the water supply system and services provided by the district.

This strategy includes efforts to expand outreach communication and engagement with the general public and working even more closely with media to convey drought and water conservation messages. This also provides an opportunity to expand outreach to key stakeholders (e.g., city councils) and regional groups.

D. Administrative and Financial Management

12. Secure Federal and State legislative support to offset drought impacts and accelerate conservation and recycling programs.

Staff is tracking a number of State and federal legislative initiatives aimed at providing drought relief and funding to offset costs of drought response and accelerate water supply and water use efficiency projects. This strategy focuses on providing input to legislators and implementing agencies on drought impacts and needs, as well as grant application requirements to maximize funding opportunities for district and customer projects and programs. The strategy also includes pursuing funding and reimbursements for district projects and programs and for collaborative opportunities that assist customers with offsetting financial impacts of the drought.

13. Leverage Emergency Operations Center (EOC) to assist in supporting drought efforts.

Soon after the Governor's January 17, 2014, Declaration of Drought Emergency, the district activated its EOC at Level 1 to facilitate response to drought-status inquiries from the State Operations Center (SOC), Coastal Regional Operations Center (REOC) and the local Santa Clara County Operational Area (OA). Emergency resource requests may be requested through the EOC, as determined by the district's EOC Director, and the EOC also helps track drought-related costs for potential reimbursement. The EOC communication structure

provides opportunity for additional outreach to policy and staff representatives of local municipalities, the county and emergency response providers about the need to achieve the 30 percent water use reduction target and to promote water conservation.

14. Adjust district resource allocations necessary to respond to drought.

This strategy includes identifying, tracking and processing budget adjustments and other adjustments of resources as needed to support overall implementation of drought response. In addition to staff resource adjustments discussed in Strategy #10, drought response is expected to include increased/adjusted budgets for an effective water use reduction campaign, additional pumping and water treatment costs, extraordinary maintenance projects, and supplemental imported water. The strategy includes clearly identifying the schedule impacts and other impacts of these resource adjustments as non-drought-related work is delayed or removed from project work plans.

15. Support the Board of Directors.

This strategy includes ensuring that the Board is provided timely and accurate information on current water supply conditions and drought response to support their efforts and linkages to the community. This strategy includes support for the Board's Ad Hoc Water Conservation Committee and Ad Hoc Recycled Water Committee to discuss drought-related opportunities to advance these important programs. It also includes ensuring that Board advisory committees are informed of current water supply, drought response measures, and implementation of the 2016 water use reduction campaign. Board updates are provided monthly on current water supply and drought response, including progress toward achieving the 20 percent water use reduction target.

Section 5. Data Collection Methodology

This section describes how water use data is collected by the district for the monthly drought response status report.

A. Water Use Data Disclaimer

Due to the need to communicate retailer water use data and savings progress in a timely manner, water use data in this report is currently being self reported by the retailer and is subject to further QA/QC and verification, may not match district billing records and is therefore subject to change. The intent of this report is to illustrate a general month by month and cumulative trend in water use and savings efforts toward the goal of a 20 percent reduction in water use compared to the same period in 2013. Below is how the district typically would collect and store water use data.

B. Treated Water Data

The district measures the volume of treated water delivered to its treated water customers (major water retailers). Monthly treated water deliveries are measured by meters (scheduled, contract, non-contract, and total delivered) for each and all water retailers (contractors). Meters are recalibrated/maintained regularly and may error up to 2 percent. Otherwise, the water use values represent actual billed amounts. For this report, treated water data is being reported by retailers.

C. Groundwater Data

The groundwater data collection and reporting process includes sending a water production statement to the customer for them to complete and report their water use. Once the completed production statement data is reviewed and accepted by the district, the district considers the data to be validated. This process which was developed in consideration of the requirements of the District Act, results in at least a 6 week delay in groundwater production reporting. For this report, groundwater data is being reported by retailers.

D. SFPUC Water Data

The San Francisco Public Utilities Commission (SFPUC) has eight common retail water customers with the district. SFPUC reports monthly water use directly to the district (historically that data was provided to BAWSCA, who in turn provided it to the district). Five of the common customers have their metered deliveries measures by SFPUC at the beginning of the month. Two of the customers (Stanford and Palo Alto) have their meters read on the 18th or 19th, and therefore their monthly data is split between two months. For the purposes of this report, water use for the month, will be that water used as measured by the following month (i.e. March water use is water use measured in April). It should be noted that the SFPUC provides monthly billing reports labeled as Monthly Water Sales. That data contains water sold and used in the previous month (i.e. March Water Sales report contains February use data for the

many of the customers, including the five common customers whose meters are read on the first of March, for instance).

For this report, groundwater data is being reported by retailers.

E. Surface Water Data

For the purpose of this report, water use data represents use by large water retailers and does not include surface water deliveries by the district to its non-potable surface water customers. The only surface water use included in this report is from San Jose Water Company, which has surface water rights. San Jose Water Company has its own water treatment plant for their surface water.

F. Recycled Water Use

Historically, recycled water use has been tracked in-county by sales at the treatment plants. However, for the purposes of this report, an effort is being made to collect this data at the water retailer level. This requires even more coordination and participation with the recycled water retailers. Many of the water retailers do not read their meters monthly and therefore their recycled water use is not reported in this monthly report. It is important to know how county water savings may be accommodated by increases in water use. If the data can be collected monthly it will be reported as such, otherwise it will be reported in the semiannual and annual reports, as available.



A monthly assessment of trends in water supply and use for Santa Clara County, California

Outlook as of December 1, 2016

Santa Clara County residents and businesses reduced water use by 31% in October 2016 compared to October 2013. This brings the cumulative 2016 water savings through October to 27% compared to the same period of 2013. Realizing parts of the state were better off than others in terms of water supply, the State Water Resources Control Board adopted an updated Emergency Regulation in May that allowed water retailers throughout the state to determine their individual conservation standards based on local conditions.

At its June 14 meeting, the District's Board of Directors (Board) lowered its water use reduction target to 20% for the period extending through January 2017, but emphasized that residents should continue their efforts to conserve in this ongoing drought. The Board also called for local water providers to continue to institute mandatory measures, as needed, to reach the 20% target, and called for restrictions on watering schedules to a maximum of three times a week, up from the two day a week schedule most areas of the county have had in place since the spring of 2015.

Groundwater recharge operations are expected to meet or exceed the 2016 recharge plan, which entails more recharge than in normal years.

Weather



Rainfall in San Jose

- Month of November = 1.18 inches
- Rainfall year total = 2.64 inches or 94% of average to date (Rainfall year is July 1 to June 30)
- December 2 Northern Sierra snowpack was 82% of normal for this date

Local Reservoirs



- Total December 1 storage = 67,872 acre-feet
 - » 93% of 20-year average for that date
 - » 40% of total capacity
 - » 55% of restricted capacity (169,009 acre-feet total storage capacity limited by seismic restrictions to 122,924 acre-feet)
- Approximately 2,770 acre-feet of imported water delivered into local reservoirs during November 2016
- Total estimated releases to streams (local and imported water) during November was 6,990 acre-feet

Groundwater



- Groundwater (GW) Storage: End of 2016 storage is predicted to fall near the boundary of Stage 2 (Alert) and Stage 1 (Normal) of the Water Shortage Contingency Plan

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
November managed recharge estimate (AF)	7,700	900	2,200
January to November managed recharge estimate (AF)	97,800	10,400	25,400
January to November managed recharge, % of 5-year avg.	250%	108%	135%
October pumping estimate (AF)	3,500	1,000	4,100
January to October pumping estimate (AF)	48,200	9,300	34,600
January to October pumping, % of 5-year average	66%	100%	93%
GW index well level compared to last November	Increase	Increase	Increase

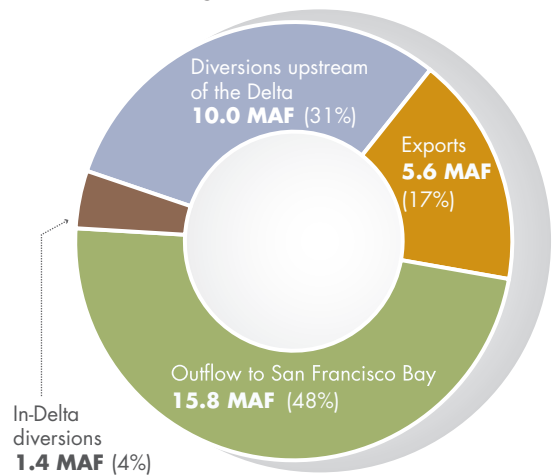
AF = acre-feet

Imported Water



- 2016 State Water Project (SWP) and Central Valley Project (CVP) allocations:
 - » 2016 SWP allocation: 60% = 60,000 acre-feet
 - » 2016 CVP allocations South-of-Delta: Municipal and Industrial water service contractors: 55% of historic use = 71,500 acre-feet, Agriculture water service contractors: 5% = 1,655 acre-feet
- Initial 2017 SWP allocation: 20% = 20,000 acre-feet announced on November 28, 2016
- Reservoir storage information, as of November 30, 2016:
 - » Shasta Reservoir at 64% of capacity (107% of average for this date)
 - » Oroville Reservoir at 42% of capacity (70% of average for this date)
 - » San Luis Reservoir at 42% of capacity (70% of average for this date)
- District's Semitropic groundwater bank reserves: An estimated 190,339 acre-feet as of November 30, 2016.
- Estimated SFPUC deliveries to Santa Clara County:
 - » Month of November = 4,017 acre-feet
 - » Year-to-date = 40,722 acre-feet
 - » Five-year average is 48,700 acre-feet

**Delta Watershed Diversions and Outflow
Typical Annual Balance
Average Years (32.8 MAF)**



Treated Water



- Below average demands of 7,102 acre-feet delivered in November
- This total is 91% of the five-year average for the month of November
- Year-to-date = 91,663 acre-feet or 85% of the five-year average

Conserved Water

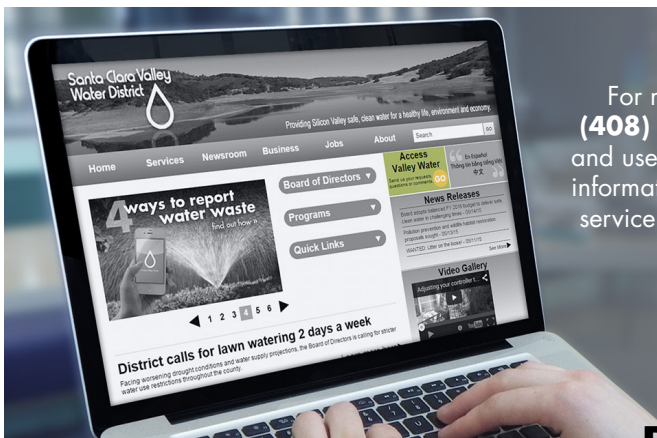


- Saved 69,000 acre-feet in FY16 from long-term program (baseline year is 1992)
- Long-term program goal is to save nearly 72,000 acre-feet in FY17
- The Board has called for a 20% reduction and a limit of three days per week for irrigation of ornamental landscape with potable water
- Achieved a 27% reduction in water use through the first ten months of 2016, compared to 2013

Recycled Water



- Estimated November 2016 production = 1,000 acre-feet
- Estimated year-to-date through November = 18,124 acre-feet or 101% of the five-year average
- Silicon Valley Advanced Water Purification Center produced an estimated 4.3 billion gallons (13,100 acre-feet) of purified recycled water since March 25, 2014. The purified water is blended with existing tertiary recycled water for South Bay Water Recycling Program's customers



CONTACT US

For more information, contact **Customer relations** at **(408) 630-2880**, or visit our website at valleywater.org and use our **Access Valley Water** customer request and information system. With three easy steps, you can use this service to find out the latest information on district projects or to submit questions, complaints or compliments directly to a district staff person.



Follow us on:



- Groundwater Storage: Total storage at the end of 2016 is predicted to fall near the boundary of Stage 2 (Alert) and Stage 1 (Normal) of the District's Water Shortage Contingency Plan.
- Santa Clara Plain:
 - The November managed recharge estimate is 7,700 acre-feet. The year-to-date managed recharge estimate is 97,800 acre-feet, or 250% of the five-year average.
 - The October groundwater pumping estimate is 3,500 acre-feet. Estimated groundwater pumping between January and October is 48,200 acre-feet, or 66% of the five-year average.
 - The groundwater level in the Santa Clara Plain (San Jose) index well is about 22 feet higher than last November and 22 feet higher than the five-year average.
- Coyote Valley:
 - The November managed recharge estimate is 900 acre-feet. The year-to-date managed recharge estimate is 10,400 acre-feet, or 108% of the five-year average.
 - The October groundwater pumping estimate is 1,000 acre-feet. Estimated groundwater pumping between January and September is 9,300 acre-feet, or 100% of the five-year average.
 - The groundwater level in the Coyote Valley index well is about 20 feet higher than last November and 14 feet higher than the five-year average.
- Llagas Subbasin:
 - The November managed recharge estimate is 2,200 acre-feet. The year-to-date managed recharge estimate is 25,400 acre-feet, or 135% of the five-year average.
 - The October groundwater pumping estimate is 4,100 acre-feet. Estimated groundwater pumping between January and October is 34,600 acre-feet, or 93% of the five-year average.
 - The groundwater level in the Llagas Subbasin (San Martin) index well is about 40 feet higher than last November and 20 feet higher than the five-year average.

Groundwater Recharge

The estimated managed recharge for November 2016 is higher than the average of the last five years (2011-2015) for the Santa Clara Plain and Llagas Subbasin and about the same for Coyote Valley. Managed recharge is dependent on a number of factors, including water availability, regulatory requirements, and facility maintenance schedules. Figures 1, 2, and 3 compare monthly managed recharge through November 2016 to the five-year average.

Figure 1 - Estimated Managed Recharge in the Santa Clara Plain

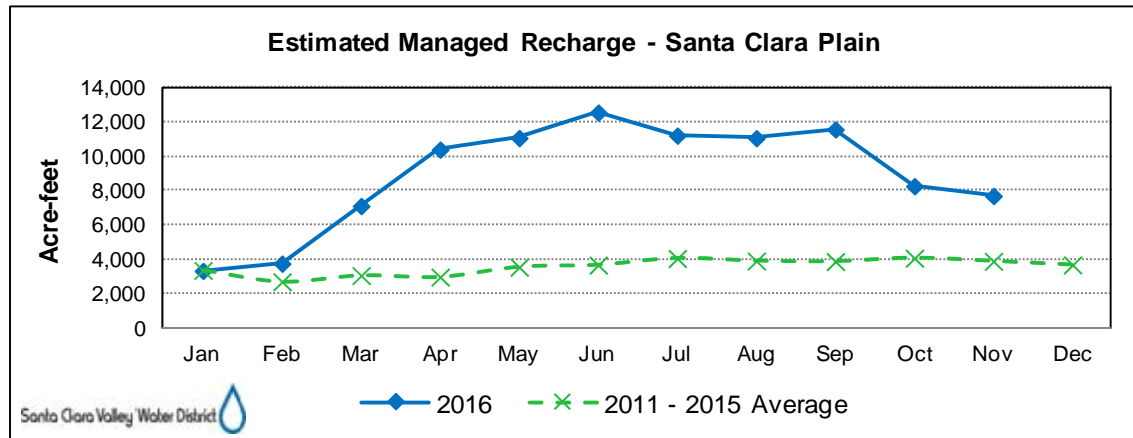


Figure 2 - Estimated Managed Recharge in the Coyote Valley

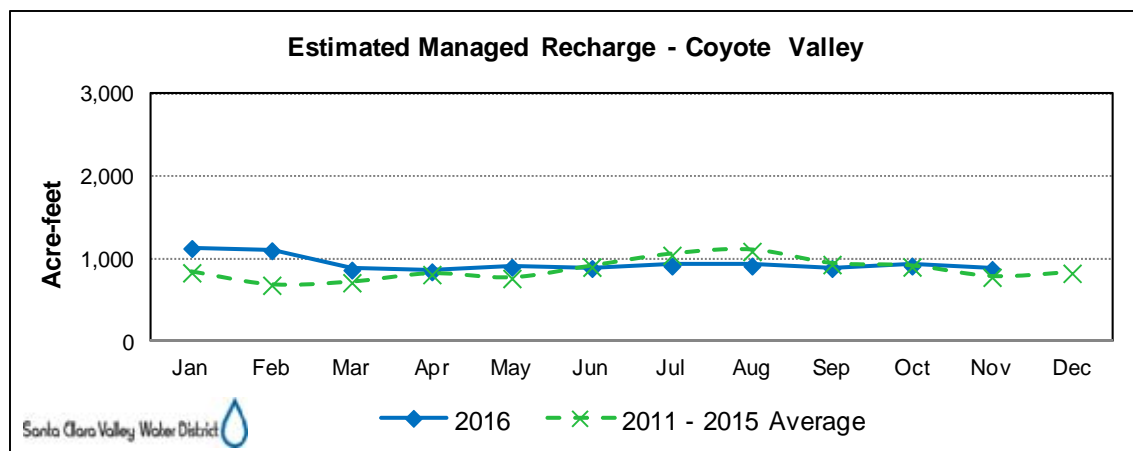
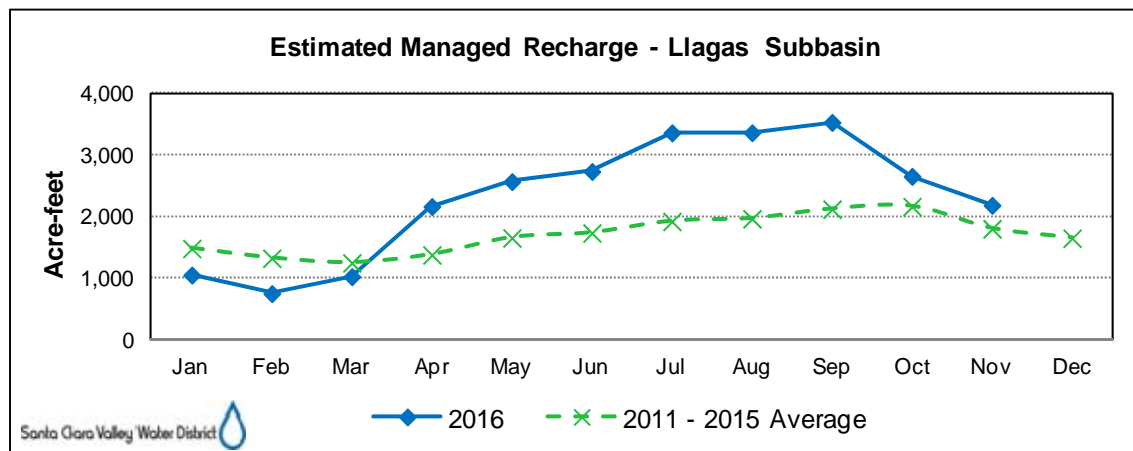


Figure 3 - Estimated Managed Recharge in the Llagas Subbasin



Groundwater Pumping

The estimated pumping for October 2016 (the most recent month with pumping data available from retailers) is lower than the average of the last five years (2011-2015) for the Santa Clara Plain and Llagas Subbasin and about the same for Coyote Valley. Figures 4, 5, and 6 compare monthly estimated groundwater pumping through October 2016 to the five-year average.

Figure 4 – Estimated Santa Clara Plain Pumping

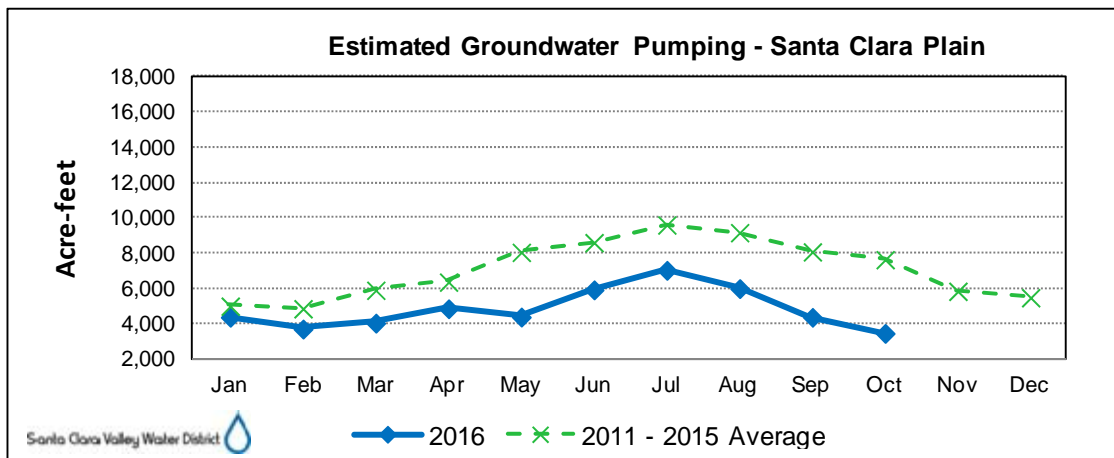


Figure 5 – Estimated Coyote Valley Pumping

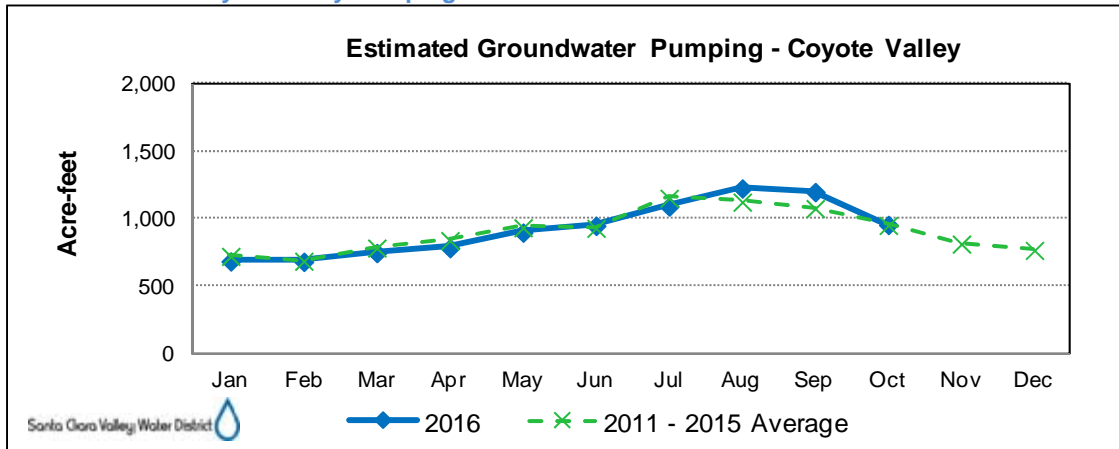
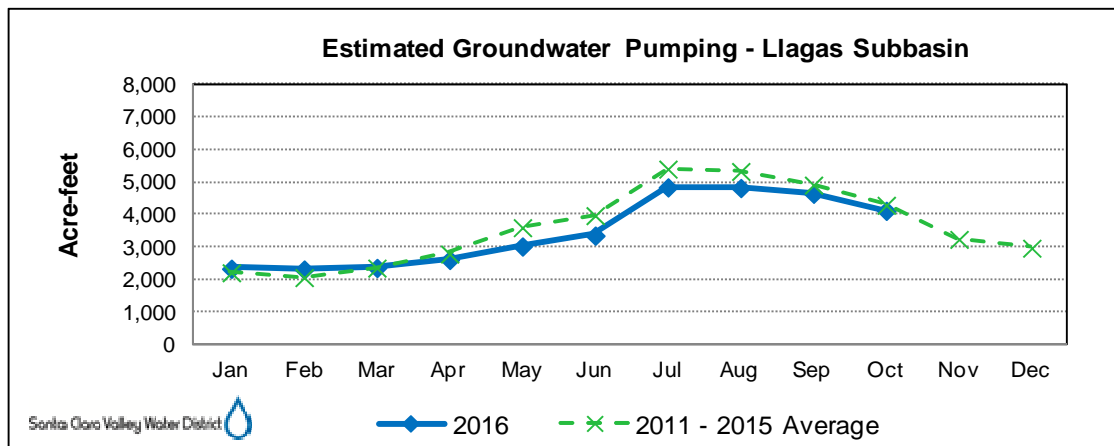


Figure 6 – Estimated Llagas Subbasin Pumping



Groundwater Levels

Groundwater levels at selected monitoring wells (Figure 7) are compared to the groundwater levels of November 1987 (a dry year), November 2004 (a normal year), and the five-year average of November measurements for 2011-2015. This information is presented in individual well groundwater hydrographs in Figures 8 through 18.

November 2016 groundwater levels were higher than October levels in six index wells and lower in five wells. From November 2015 to November 2016, all 11 wells showed water level increases ranging from 4 to 40 feet. The November 2016 levels were higher than November 2004 levels by 3 to 27 feet in 10 wells and one well lacks 2004 data. November 2016 levels were higher than the five-year average of November measurements in all 11 wells by 3 to 36 feet. November 2016 groundwater levels were higher than November 1987 levels in 10 index wells and slightly lower in one well.

Figure 7 - Location of Selected Monitoring Wells

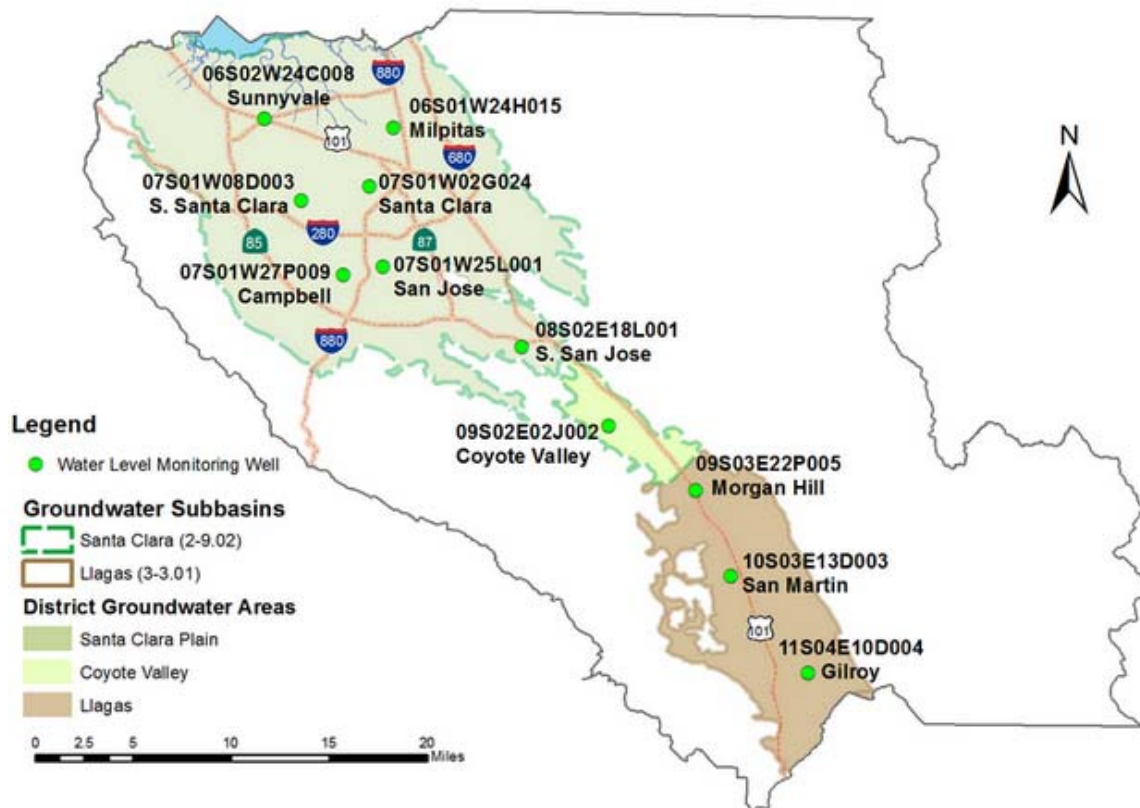


Figure 8 - Milpitas Well Hydrograph

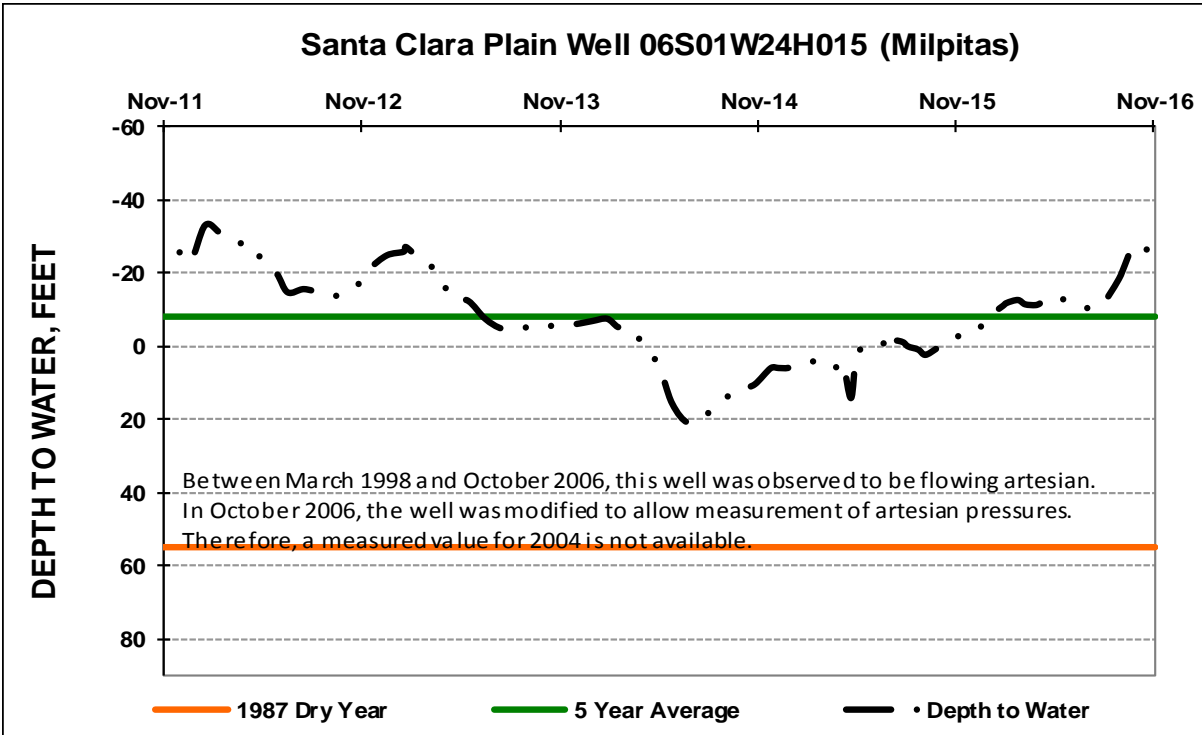


Figure 9 – Sunnyvale Well Hydrograph

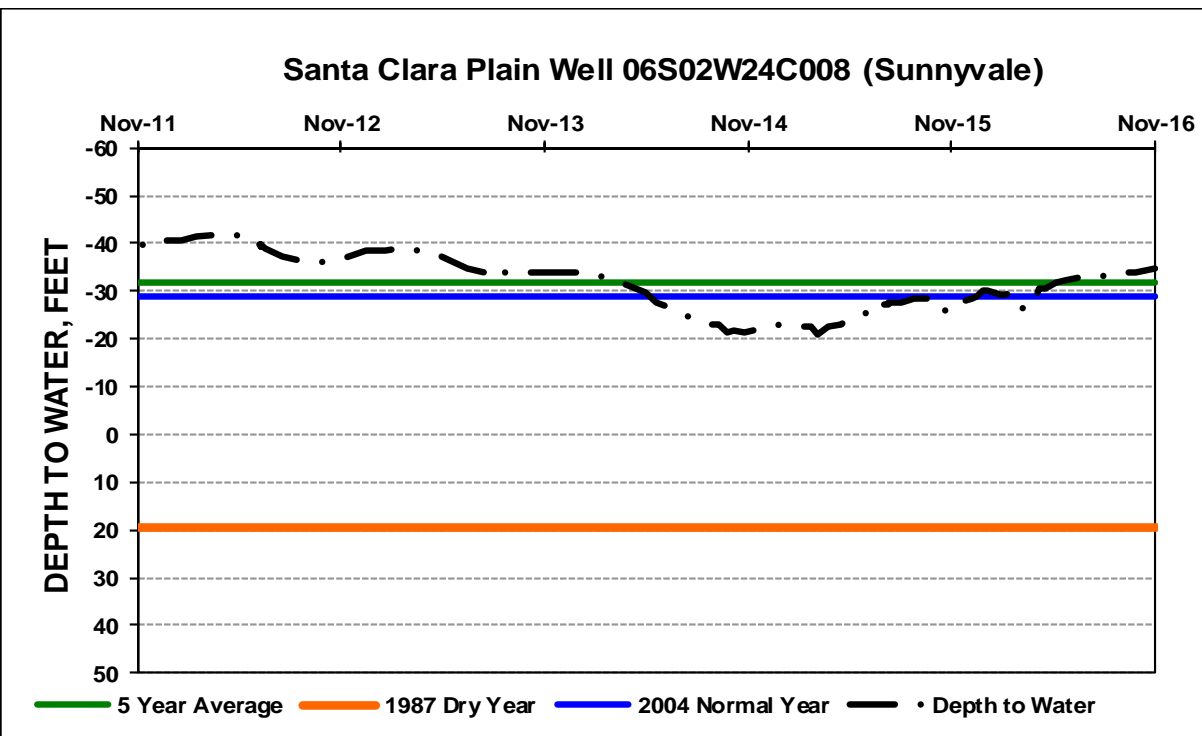


Figure 10 - San Jose Well Hydrograph

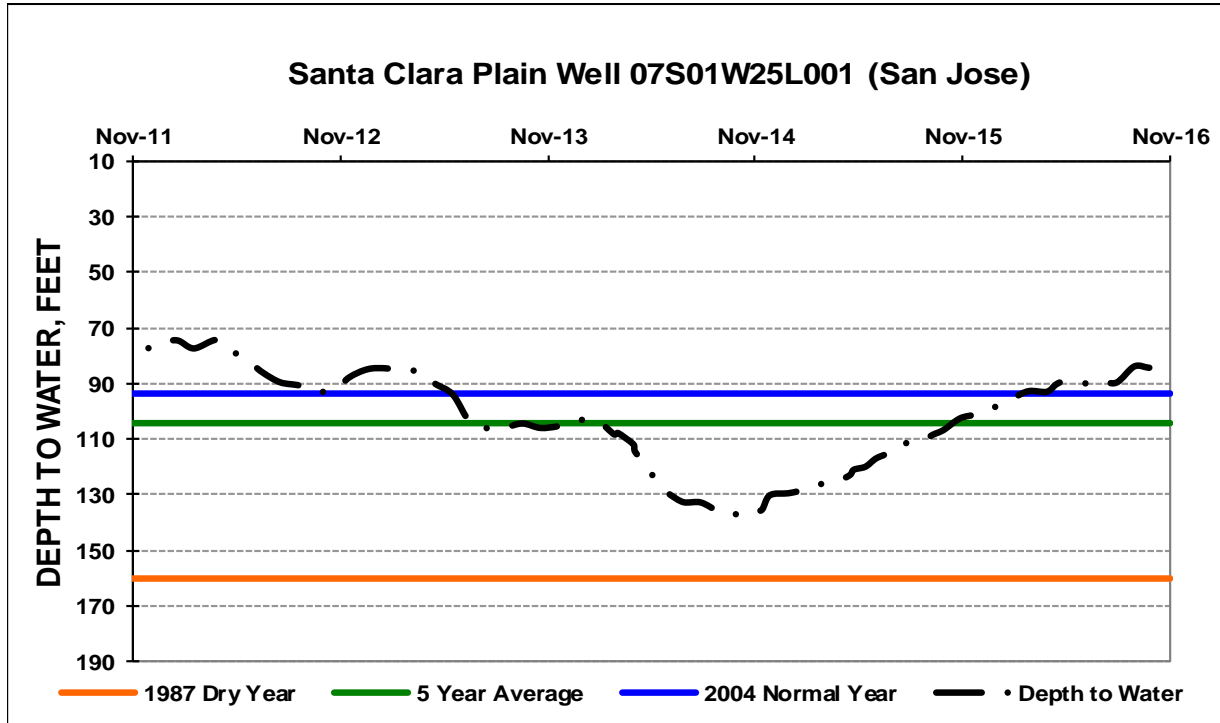


Figure 11 - Santa Clara Well Hydrograph

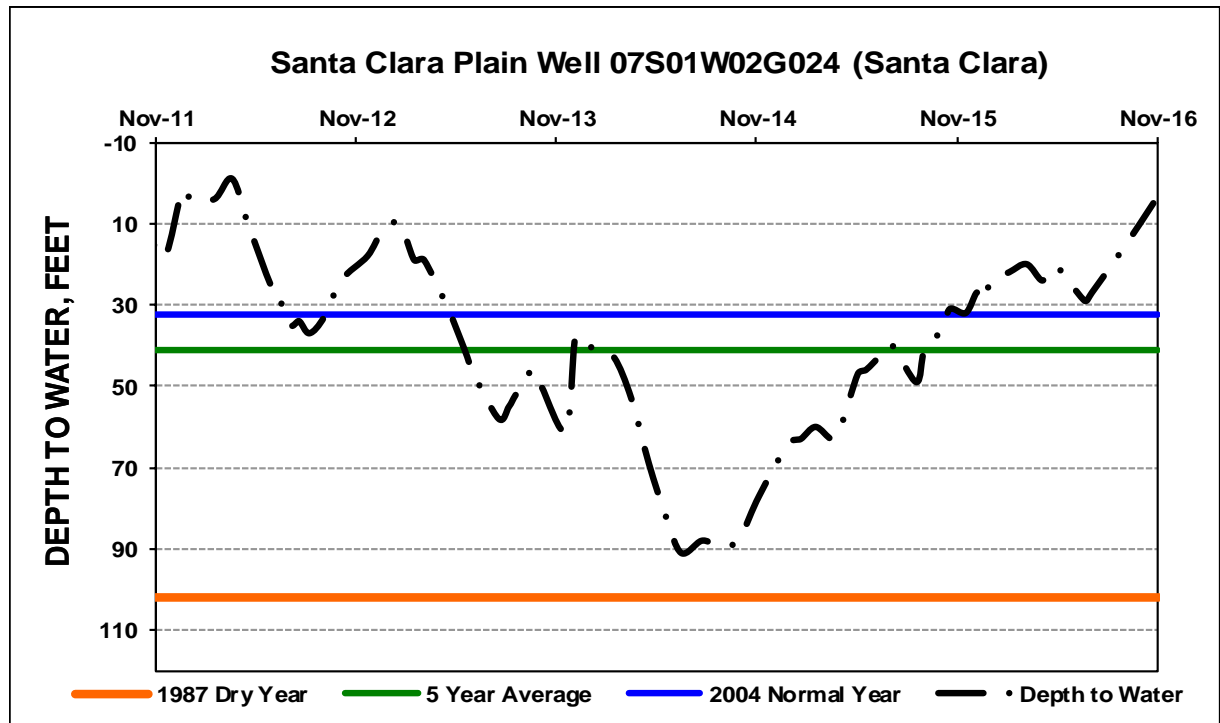


Figure 12 - South Santa Clara Well Hydrograph

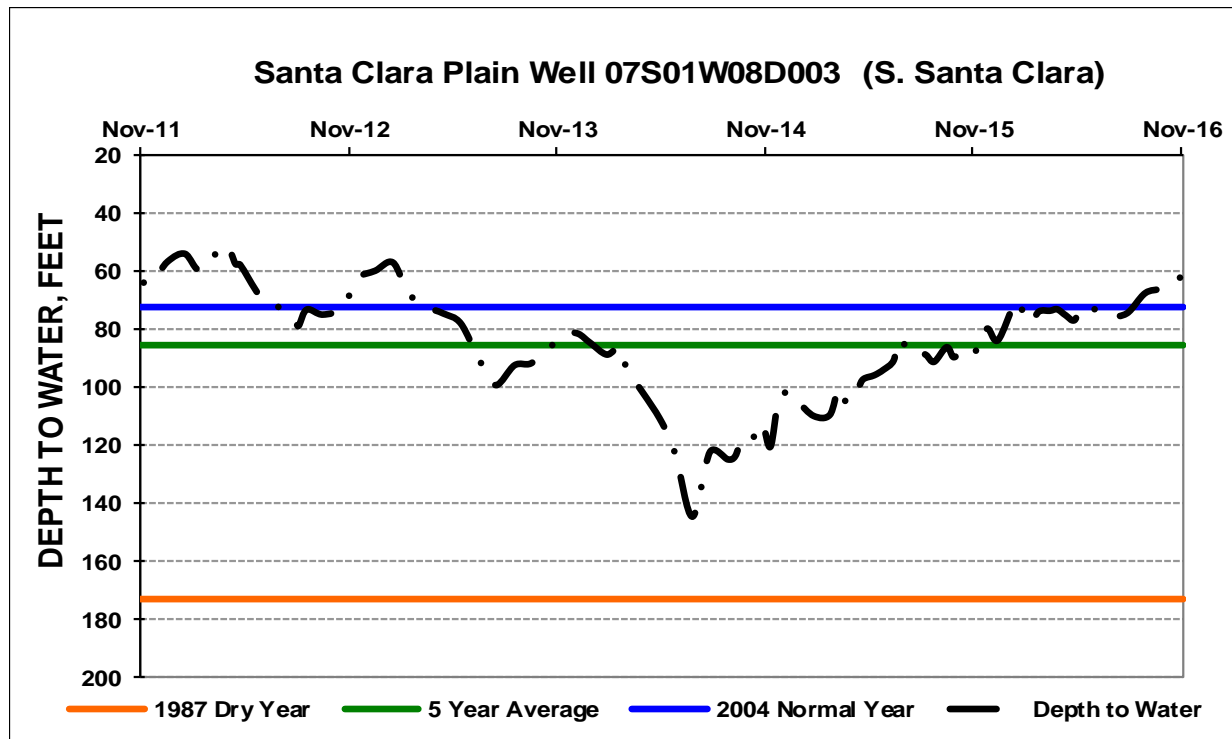


Figure 13 - Campbell Well Hydrograph

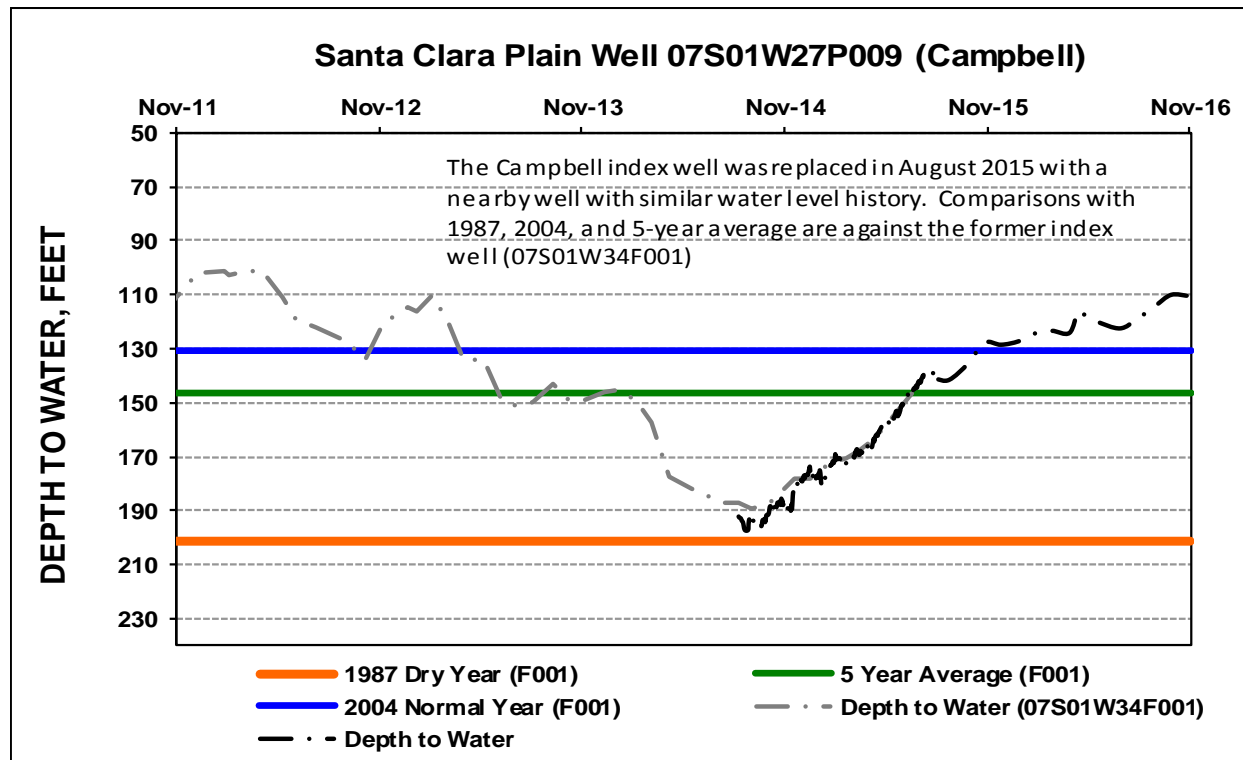


Figure 14 - South San Jose Well Hydrograph

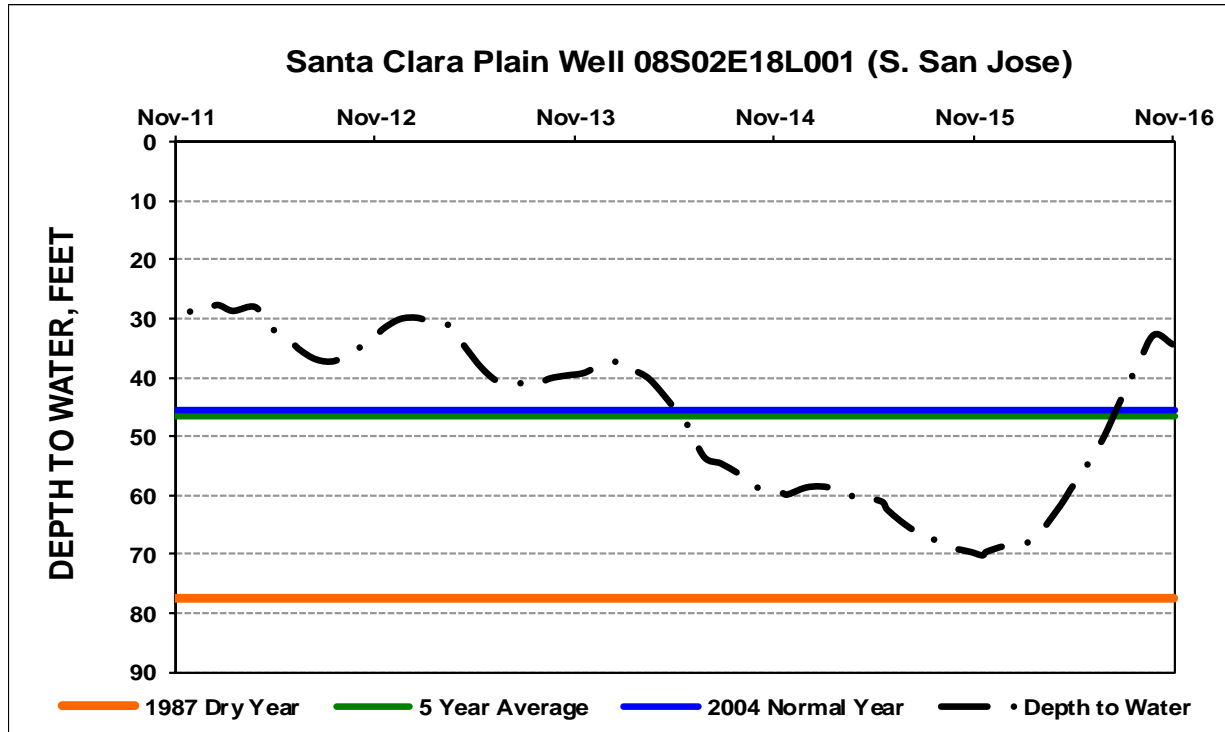


Figure 15 - Coyote Valley Well Hydrograph

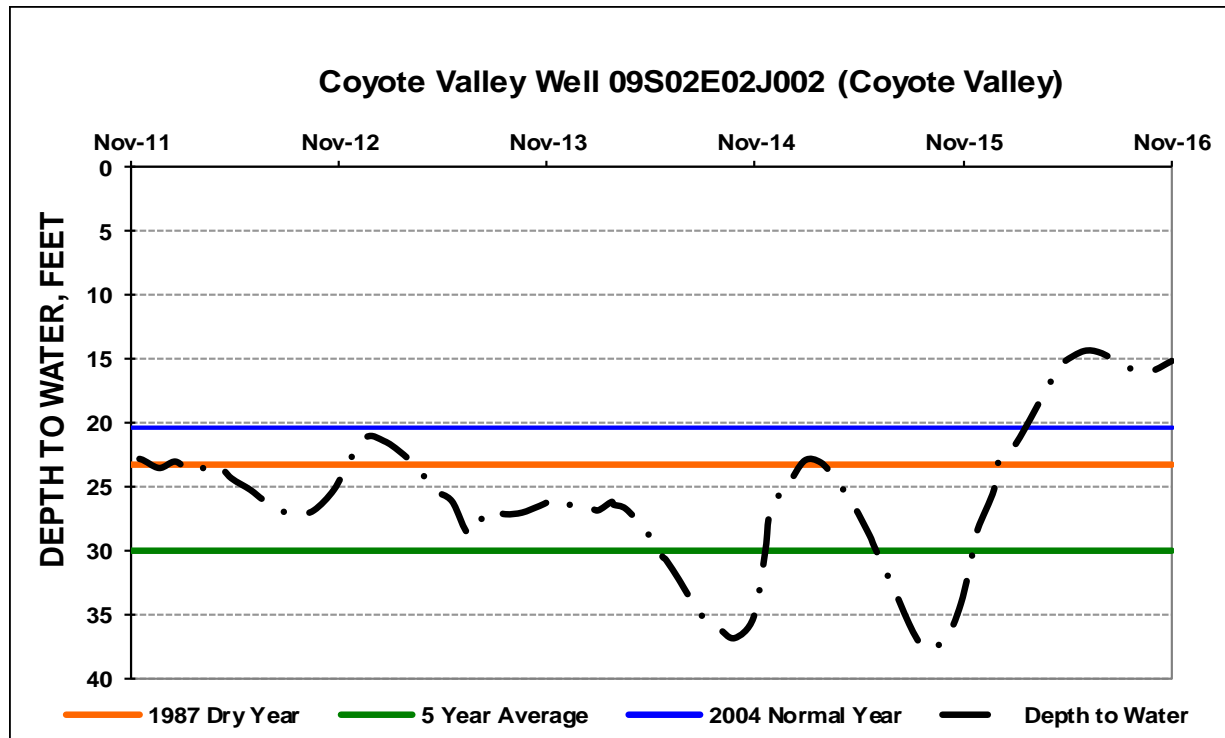


Figure 16 - Morgan Hill Well Hydrograph

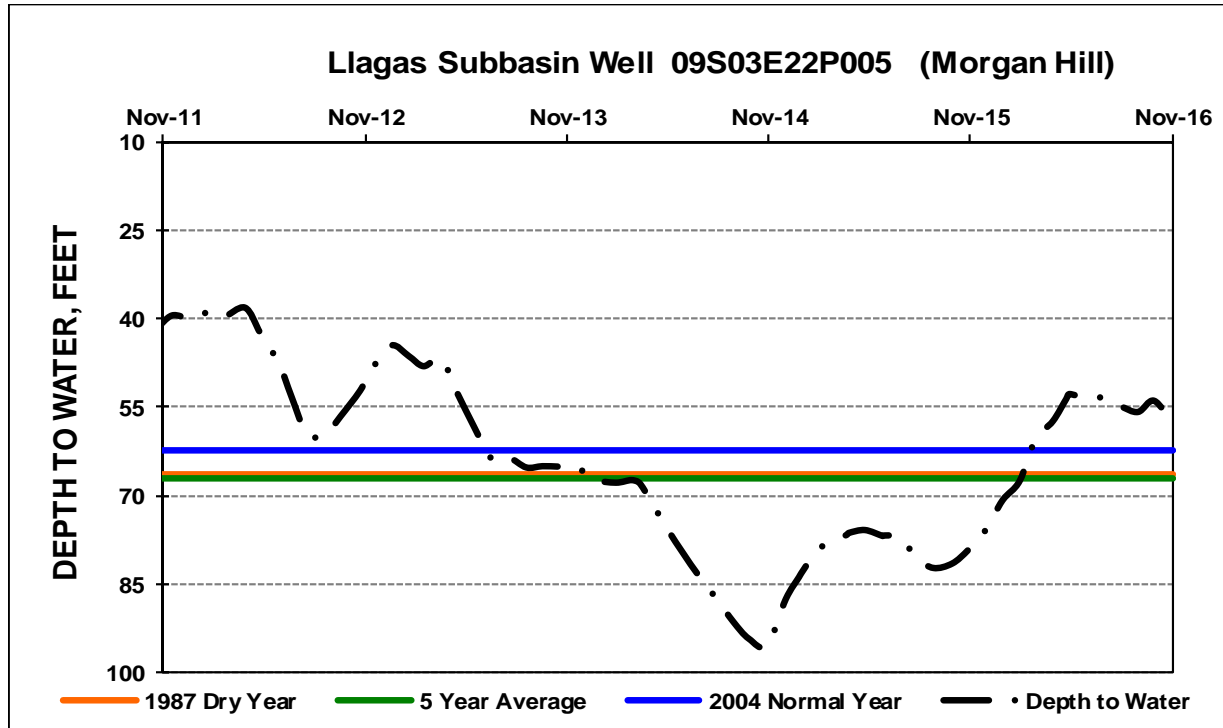


Figure 17 - San Martin Well Hydrograph

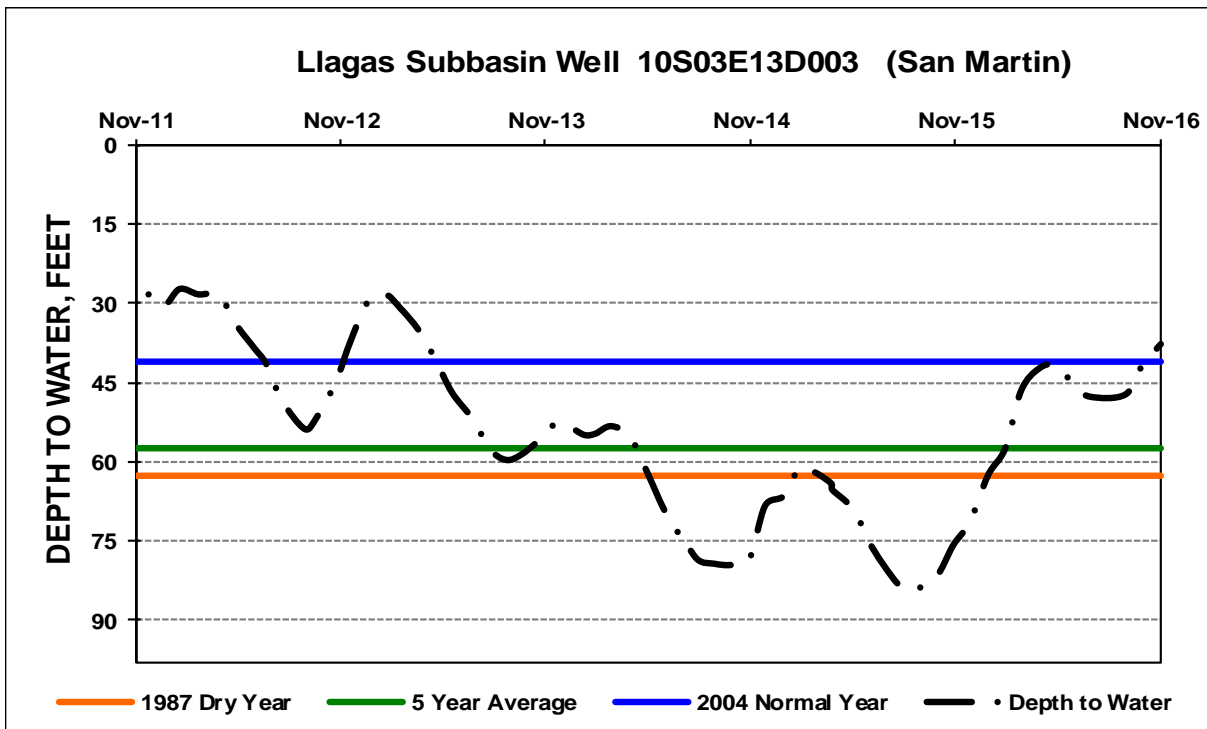
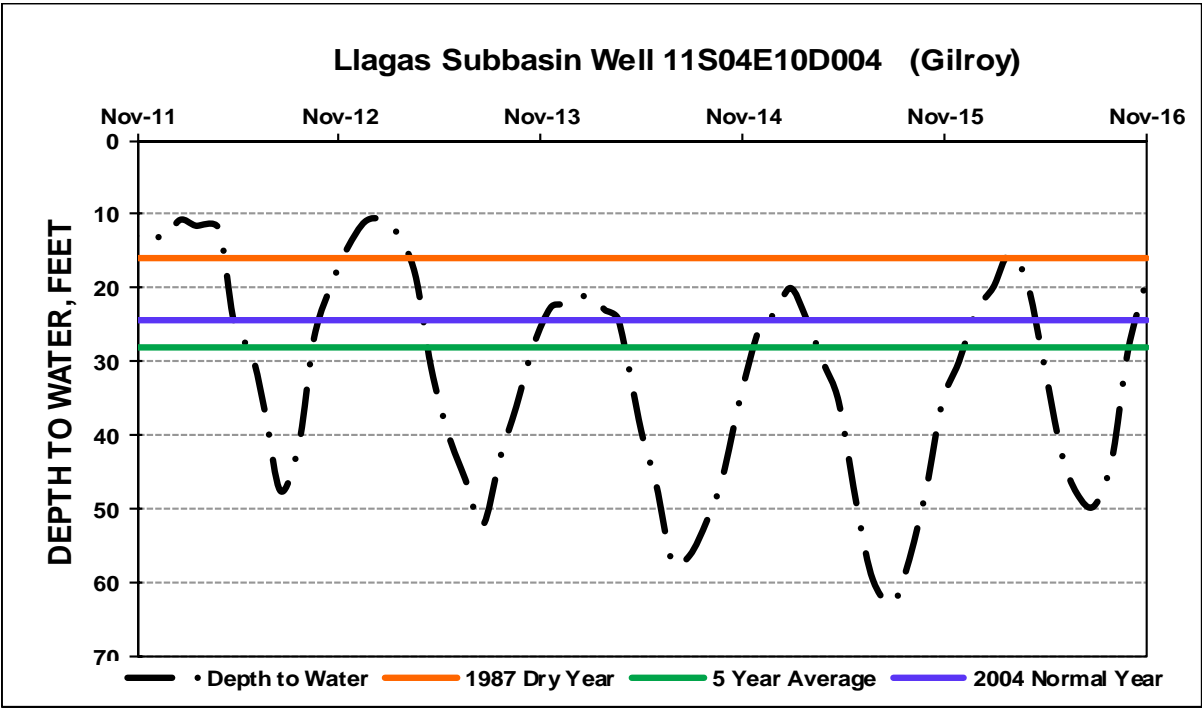


Figure 18 - Gilroy Well Hydrograph



ORDINANCE NO. XXXX

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF _____
ADDING A NEW CHAPTER _____ (WATER EFFICIENT NEW DEVELOPMENT) TO
TITLE ____ OF THE _____ MUNICIPAL CODE RELATED TO REQUIREMENTS
FOR NEW DEVELOPMENT THAT PROMOTES WATER USE EFFICIENCY AND THE
DEVELOPMENT OF ALTERNATE SOURCES OF WATER SUPPLY

WHEREAS, all California water users are responsible for making effective use of the
available water resources.

WHEREAS, water is a public resource that the California Constitution protects against
waste and unreasonable use.

WHEREAS, growing population, climate change, and the need to protect and grow the
City's economy make it essential that the City manage its water resources as efficiently as
possible.

WHEREAS, reduced water use through conservation provides significant energy
reduction and associated environmental benefits, and can help protect water quality, preserve and
improve streamflows, and reduce greenhouse gas emissions.

WHEREAS, improvements in technology and management practices offer the potential
for increasing water efficiency in California over time, providing an essential water management
tool to meet the need for water for urban, agricultural, and environmental uses.

WHEREAS, the development of alternate water source systems will assist in meeting
future water requirements of the City and lessen the impacts of new development on the City's
sanitary sewer system.

WHEREAS, adoption of this ordinance and adoption of rules and regulations by the City
will help achieve the City's goals for water supply use and preservation by:

- (1) Promoting the values and benefits of nonpotable water use while recognizing the need
to invest water and other resources as efficiently as possible;
- (2) Encouraging the use of nonpotable water for nonpotable applications; and

- (3) Replacing potable water use for toilet and urinal flushing and irrigation to the maximum extent possible with alternate water sources.

WHEREAS, it is the intent of the City Council of the City of _____ to require new development constructed in the City of _____ to meet and exceed the water efficiency and alternate water supply requirements of the State of California.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF _____ DOES ORDAIN AS FOLLOWS:

SECTION 1. CEQA REVIEW.

The City Council has evaluated this ordinance and has determined that it is _____ from the California Environmental Quality Act per _____

SECTION 2. DEFINITIONS.

The terms used in this Chapter have the meaning set forth below:

Alternate Water Source: a source of nonpotable water that includes recycled water, graywater, stormwater, condensate, on-site treated nonpotable water, Rainwater, Blackwater, and any other source approved by the Director.

Blackwater: Wastewater containing bodily or other biological wastes. This is discharge from toilets, dishwashers, kitchen sinks, and utility sinks.

Director: the Director of _____ or any individual designated by the Director to act on his or her behalf.

First Certificate of Occupancy: either a temporary certificate of occupancy or a Certificate of Final Completion and Occupancy

Graywater: untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes.

"Graywater" includes, but is not limited to, wastewater from bathtubs, showers, bathroom sinks, lavatories, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

Graywater Ready: A design criteria for a structure's plumbing system that provides a noninvasive pathway to install a graywater treatment and reuse system at a later date. In a Graywater Ready home, for example, it will be possible to install an NSF 350 System without altering the in-wall or in-ground plumbing and electrical infrastructure.

Hot Water Recirculation System: A hot water system that uses the hot water return line and/or supply line connected to a water heater to enable continuous delivery of hot water to fixtures.

Hot Water System: A system that distributes hot water, consisting of a water heater, piping, and related equipment and devices.

Multifamily Residential - a residential building that contains three or more dwelling units

New Development: buildings and structures that have not received initial design approval from the Planning Department or a building permit from the Building Department prior to January 1, 2017.

Nonpotable Water: Water collected from alternate water sources, treated, and intended to be used on the Project site for direct beneficial use.

Nonpotable Water Engineering Report: Report submitted by project applicant to the Director describing the alternate water source system in accordance with the rules and regulations adopted by the City.

Nonresidential: A building that contains occupancies other than dwelling units. For the purposes of this section, hotels, motels, institutional housing (such as hostels and dormitories), hospitals, and night shelters are considered nonresidential.

NSF 350 System: Any treatment system certified to meet NSF/ANSI Standard 350 for Onsite Residential and Commercial Reuse Treatment Systems, as amended from time to time.

On-site Treated Non-Potable Water: Nonpotable water that has been collected, treated, and intended to be used on-site and is suitable for direct beneficial use. Permittee: owner or operator of an On-site Treated Nonpotable Water system.

Rainwater: precipitation collected from roof surfaces or other manmade, aboveground collection surfaces.

Recycled Water: Water that has been reclaimed from wastewater for beneficial use as defined by Title 22 of the California Code of Regulations.

Residential: A building that contains residential dwelling units including single-family or multifamily, housing units and mobile homes.

Single-family Residential - A residential building that contains one or two dwelling units

Smart Hot Water Recirculation System: A hot water recirculation system that is capable of monitoring and recording hot water usage patterns for optimal pump activation.

Stormwater runoff: Precipitation collected from at-grade or below grade surfaces.

SECTION 3. APPLICABILITY.

This chapter shall apply to all New Development in the City/County.

SECTION 4. REQUIREMENTS.

- A. **Hot Water Waste Reduction.** The hot water system shall not allow more than 0.5 gallons of water to be delivered to any fixture before hot water arrives. Where a hot water recirculation or electric resistance heat trace wire system is installed, the branch from the recirculating loop or electric resistance heat trace wire to the fixture shall contain a maximum of 0.5 gallons. Hot water recirculation systems may include, but are not limited to, the following:
- (1) Timer-initiated systems.
 - (2) Temperature sensor-initiated systems.
 - (3) Occupancy sensor-initiated systems.
 - (4) Smart hot water recirculation systems.
 - (5) User-activated systems.
 - (6) Other systems acceptable to the Director.
- B. **Single-Family Graywater Collection, Filtration and Distribution System.** All new single-family residential units shall be built Graywater Ready and must include the following:
1. Dedicated graywater collection plumbing, which must:
 - a. Capture water from all fixtures producing graywater, specifically including all showers, baths, lavatory sinks and laundry washing machines;
 - b. Exit the envelope of the structure and converge in a single location; and
 - c. Reconverge with the home's blackwater collection system prior to flowing to the municipal sewer system.
 2. The graywater collection system must include:
 - a. An in-ground surge tank with at least 60 gallons capacity;
 - b. A physical bypass function to allow graywater to be diverted away from the surge tank, to the municipal sewer system during construction;
 - c. A treated water tank with at least 175 gallons capacity.
 - d. A hose bib with potable water within 15 feet of the point where the graywater collection system exits the envelope of the home; and
 - e. A 20 amp, 120 volt dedicated electrical circuit with GFCI breaker within 15 feet of the point where the graywater collection system exits the envelope of the home.
 3. Dedicated distribution plumbing for treated graywater, so that potable water can be disconnected in the future when appropriately treated graywater is available, which must include:
 - a. A single, dedicated supply feed for providing water to irrigation valves; and
 - b. A single, dedicated supply feed for providing water to all toilets in the home

Additions and alterations of existing buildings that use the existing building drain(s) are exempted from this provision.

- C. **Multifamily and Nonresidential Development's Use of Alternate Water Sources.** All new multifamily residential and all nonresidential structures shall include dual plumbing systems that facilitate and maximize the use of alternate water sources for use in irrigation, toilet flushing, cooling towers, and other uses suitable for nonpotable water as allowed by the appropriate agencies.
1. If recycled water is available within 200 feet of the property line or if The Director has determined that it is reasonably available,, 100 percent of water for water closets, urinals, floor drains, and process cooling and heating in that building shall come from recycled water.
 2. If recycled water is planned to be made available to the development within ten years from the date of building permit issuance or the development is within the adopted recycled water project area, the development may meet the requirements of this section solely by building out the dual plumbing system to the anticipated point of connection to the future recycled water system.
 3. If recycled water is not available to the development and is not anticipated to be made available to the development within ten years, the development shall install water collection and treatment systems that comply with the applicable sections of the California Plumbing Code to capture, collect, treat, and distribute graywater, rainwater, and stormwater runoff.
 4. A commercial building(s) or campus may be permitted by the appropriate agency for treatment and use of blackwater for nonpotable purposes so long as systems complies with current standards (now Title 22) for installation, reporting and monitoring.

EXCEPTIONS:

- a) Additions that use any part of the existing plumbing piping system.
 - b) Alterations that do not include replacing all of the potable water piping.
 - c) Where recycled water quality has been deemed unsuitable by the Director for a particular fixture or equipment, the fixture and/or equipment shall be dual- plumbed for future connection.
- D. **Recycled Water use in Single-Family Common Landscaping.** All new single-family residential units with landscaping provided by a water meter serving three or more homes that is managed by a homeowner's association or other association or entity shall be irrigated with recycled water if recycled water is available within 200 feet of the property line. If recycled water is planned to be made available to the development within ten years from the date of building permit issuance or is within the adopted recycled water project area, a system shall be constructed that will enable recycled water to be easily connected to the irrigation system once the recycled water supply is available within 200 feet of the property line.

- E. **Cooling Towers.** All newly constructed cooling towers shall connect to and use alternate water sources. All newly constructed cooling towers shall include the following:
1. Connectivity controllers
 2. Automated chemical feed systems
 3. Plumbing to facilitate the use of nonpotable water supplies
 4. Recirculation systems that recirculate the water as much as possible prior to discharge
 5. Devices to capture and reuse the blow down water discharged from the cooling tower.
- F. **Retail Establishments.** All stores, outlets and other retail establishments shall only sell plumbing fixtures and other devices which are in compliance with California State and Federal water efficiency standards, e.g., EPA WaterSense certified.
- G. **Automatic Sensor Operated Fixtures.** Faucets in commercial facilities, shall not have automatic sensors installed, and instead have manually operated handles. Toilets and urinals in commercial facilities shall not have sensor or automatic flush valves and instead have manually operated flush mechanisms.
- H. **Plumbers, Contractors, and Service Providers.** All plumbers, contractors and other service providers shall not install any plumbing fixtures or other devices which are not in compliance with California State and Federal water efficiency standards, e.g., EPA WaterSense certified.
- I. **Commercial Kitchens.** All new and replacement food related and utensil-related equipment shall be certified or classified for sanitation by an American National Standards Institute (ANSI) accredited certification program and are in compliance with any California State and Federal water efficiency standards, where applicable, and may develop a Water Efficiency Management Plan to help establish an effective facility water management program using appropriate guidelines such as the EPA WaterSense at Work-Best Management Practice for Commercial and Institutional Facilities document.
- J. **Landscape Meters.** A landscape water meter shall be installed for landscape irrigation for the following:
1. When required by the California Department of Water Resources Model Water Efficient Landscape Ordinance or local water efficient landscape ordinance.
 2. Additions and alterations, with a valuation of \$200,000 or more, where the entire potable water system is replaced, including all underground piping to the existing meter.
 3. Landscaped areas shall have flow sensors or hydrometers, regardless of being metered separately.

K. Additional Meters Required. New Buildings or Additions in Excess of 50,000 Square Feet. Separate submeters or meters shall be installed as follows:

1. For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gallons per day (380 L/day).
2. Where potable water is used for industrial/process uses, for water supplied to the following subsystems:
 - a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
 - b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
 - c. Steam and hot-water boilers with energy input more than 500,000 Btu/h (147 kW).
3. For each building that uses more than 100 gallons per day on a parcel containing multiple buildings.

L. Irrigation Controllers. In new construction or building addition or alteration over 500 square feet of cumulative landscaped area, install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

EXCEPTION: For new residential construction, manual irrigation is also permitted.

M. Irrigation System: In landscaped areas, irrigation nozzles shall have a maximum precipitation rate of one inch per hour.

N. Irrigation Audits: For newly constructed landscaped areas, the local agency shall administer an irrigation audit to verify that the irrigation system complies with regulations, as well as to identify potential deficiencies and assure that corrections have been made. If corrections are needed, these must be addressed prior to approval of the new construction.

O. Exterior Faucets. Locks shall be installed on all publicly accessible exterior faucets and hose bibs except those installed on single family dwellings.

P. Swimming Pool Covers. For one- and two-family dwellings, any permanently installed outdoor in-ground swimming pool or spa shall be equipped with a cover having a manual or

power-operated reel system. For irregular-shaped pools where it is infeasible to cover 100 percent of the pool due to its irregular shape, a minimum of 80 percent of the pool shall be covered.

EXCEPTION: Additions or alterations to existing swimming pools and spas with a building valuation not exceeding \$25,000.
SECTION 5. SEVERABILITY

If any provision of this Title, or its application to any person, or circumstances, is held to be invalid, the remainder of this Ordinance, or the application of the provision to other persons or circumstances, shall not be affected.

SECTION 6. EFFECTIVE DATE. This Ordinance shall take effect thirty (30) days after the date of its adoption.

SECTION 7. POSTING AND PUBLICATION. The City Clerk is hereby directed to publish this ordinance pursuant to §36933 of the Government Code.

THE FOREGOING ORDINANCE WAS INTRODUCED AT A MEETING OF THE CITY COUNCIL HELD ON THE XX DAY OF _____, AND WAS FINALLY ADOPTED AT A MEETING OF THE CITY COUNCIL HELD ON THE XX DAY OF _____, AND SAID ORDINANCE WAS DULY PASSED AND ADOPTED IN ACCORDANCE WITH LAW BY THE FOLLOWING VOTE:

AYES:	COUNCIL MEMBERS:
NOES:	COUNCIL MEMBERS:
ABSTAIN:	COUNCIL MEMBERS:
ABSENT:	COUNCIL MEMBERS:

ATTEST:	APPROVED:
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Committee:	Agricultural Water
Meeting Date:	1/09/17
Agenda Item No.:	5.3
Unclassified Manger:	Vincent Gin
Email:	vgin@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: Riparian Ordinance Report

RECOMMENDED ACTION:

Receive the information, discuss and provide comments to the Board as applicable

SUMMARY:

This agenda item summarizes the current management framework for riparian corridors in the Santa Clara County, in terms of policies, ordinances and guidelines. It identifies several factors that may cause the riparian condition to deteriorate. It also describes the activities that the Santa Clara Valley Water District (District) is conducting to preserve the riparian corridor.

BACKGROUND:

Riparian Corridor is a term used in watershed management to address the land next to a stream that is vegetated, usually with trees and shrubs, that serves as a protective filter for streams. The riparian corridor is also an area that provides food, cover and protection to fish and other wildlife.

The District does not have land use authority. Hence, it cannot require riparian setback. However, the District may work through its integrated water resources management approach, the One Water Plan, to coordinate with other public agencies to manage the riparian area.

Current Practices in Riparian Corridor Protection

Protection of the riparian corridor is currently being achieved through three primary measures in Santa Clara County: 1) Guidelines and Standards for Land Use near Streams; 2) specific policies on riparian protection per general plans; and 3) the Santa Clara Valley Habitat Conservation Plan (VHP).

The cities in Santa Clara County (County), County, the District, and several other agencies and nonprofit organizations formed the Water Resources Protection Collaborative in the early 2000's to discuss riparian buffer protection. As a result the Guidelines & Standards for Land Use Near Streams were produced in 2006, aiding municipalities in their creation of riparian protection policies within their general plans. To date, most cities and the County have adopted ordinances or resolution to protect the riparian corridor. Some of these policies are presented in the PowerPoint presentation. These policies provide a general guideline, not law or regulation, for the agencies to follow. In 2012, the Santa Clara Valley Habitat Conservation Plan developed riparian setback requirements by which the participating agencies, including San Jose, Morgan Hill, Gilroy, County and the District have to abide.

In order to provide additional protection of the riparian corridor, it will be necessary to identify what shortcomings existing policies have, and to identify which components of riparian corridors are under stress so that new policies, programs, and studies may be considered to aid in improvements of these areas. Improved

protection may also be achieved through the adoption of ordinances, expanding existing riparian protection policies, and considering adding riparian buffers and enhancements to policies.

Riparian Corridors At Risk

It is no secret that riparian corridors and the streams within are at risk in Santa Clara County. Population growth, increased development, homelessness, and climate change are all factors negatively affecting these areas. Fortunately there is positive work being carried out by municipalities, stakeholder groups, the District, and the community at large to improve upon water supply, flood protection, and stewardship aspects related to riparian corridors.

The District Hydrology and Hydraulics unit is in the process of updating hydrologic and hydraulic models for each of the County's five major watersheds. This process will aid in the District's understanding of how flows affect each stream within those watersheds and to some extent the riparian area around those water ways.

The riparian habitat may be adversely affected if development encroaches into the area needed for wildlife or vegetation. The riparian corridor may also suffer when the creek channel is incised through increased discharges as a result of accelerated surface runoff and concentrated stormwater flows to the creek. The District is currently conducting analysis of stream health using the California Rapid Assessment Method.

Efforts to Identify and Improve Upon Riparian Corridor Needs (Afshin)

Through the District's One Water Plan, several tools/processes are being reviewed and utilized to better identify riparian needs and then evaluate and prioritize opportunities for protection and improvement. Methods currently being considered include Historical ecology, ecosystem services valuation, conducting additional studies to help understand stream and riparian corridor conditions, watershed visioning with San Francisco Estuary Institute (SFEI), and geographic information system (GIS) analysis using designated riparian buffers including those defined by the VHP.

GIS analysis on a watershed scale enables the District to better comprehend the environment on a systemic level rather than a project-based level. Part of this is looking at what is happening within buffers of the stream, such as land use, flood risk, habitat types, and water supply operations. Once we have a more complete picture of conditions, stakeholders, and opportunities, the One Water Plan can move from planning to implementation.

With passage of the Safe, Clean Water and Natural Flood Protection program in November 2012, the District introduced the idea of Stream Corridor Priority Plans (SCPPs) under Project D3. These SCPPs are intended to help prioritize important work to preserve, protect and improve habitat within riparian corridors. While development of SCPPs is just beginning, components deemed necessary include invasive plant removal, native vegetation planting, gravel augmentation, large woody debris installation, fish barrier removal and water quality improvements. Water supply and flood protection considerations may also be pertinent as they can impact the successful functioning of processes within the riparian corridor. Because all of these components are also considered in the One Water Plan, the two will follow a similar schedule over the next several years.

ATTACHMENT(S):

Attachment 1: Discussion of Riparian Corridors PowerPoint Presentation

Discussion on the Riparian Corridor: Setbacks and More

January 2017

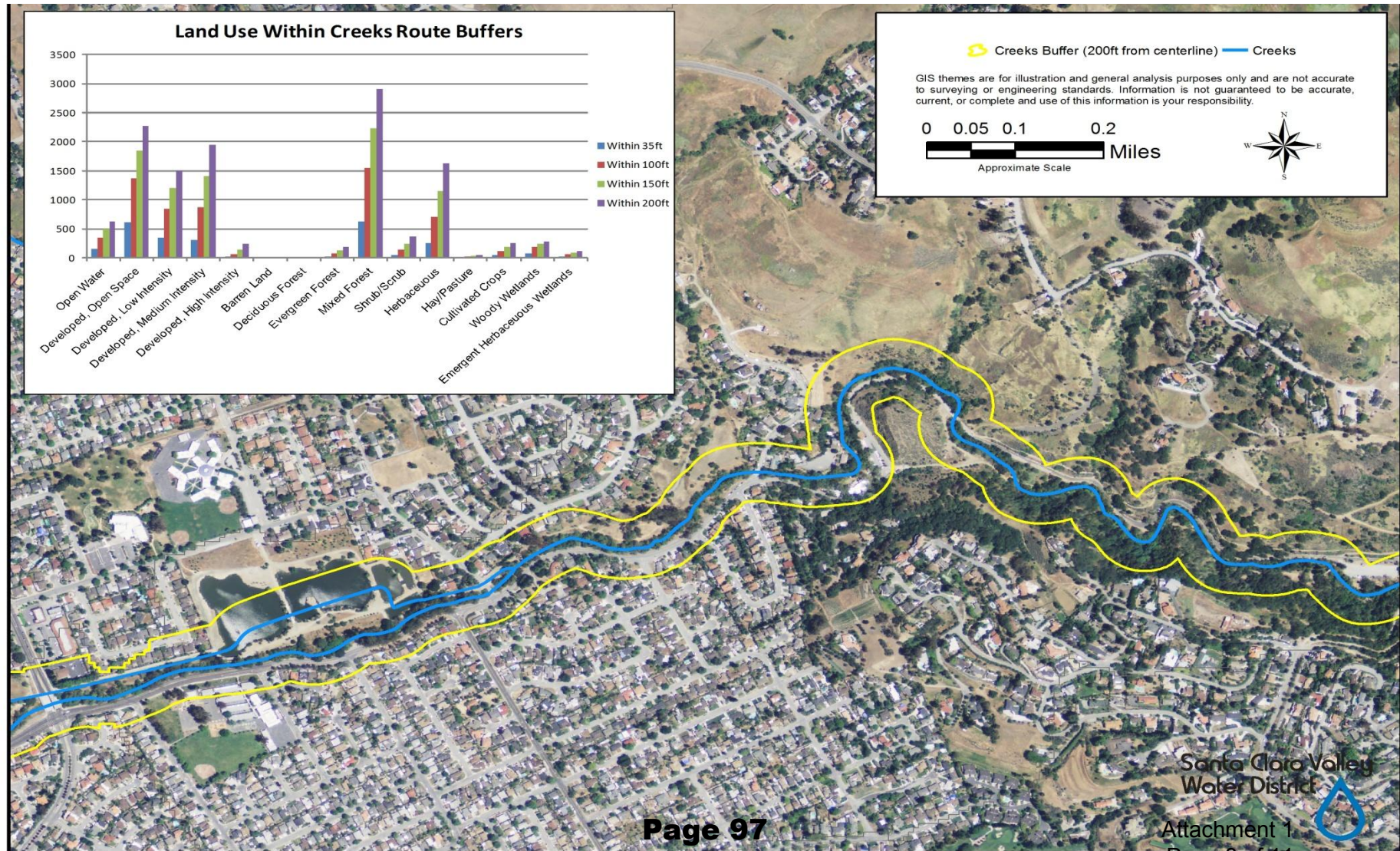


- ▶ **Riparian:** On, or pertaining to, the banks of a stream.
- ▶ **Riparian Buffer/Area:** Land next to a stream that is vegetated, usually with trees and shrubs, that serves as a protective filter for streams.

Aerial Map of Riparian Corridor

Upper Penitencia Creek Corridor

(Land Use Acres Within Upper Penitencia and Mid Coyote Watershed Riparian Buffers)

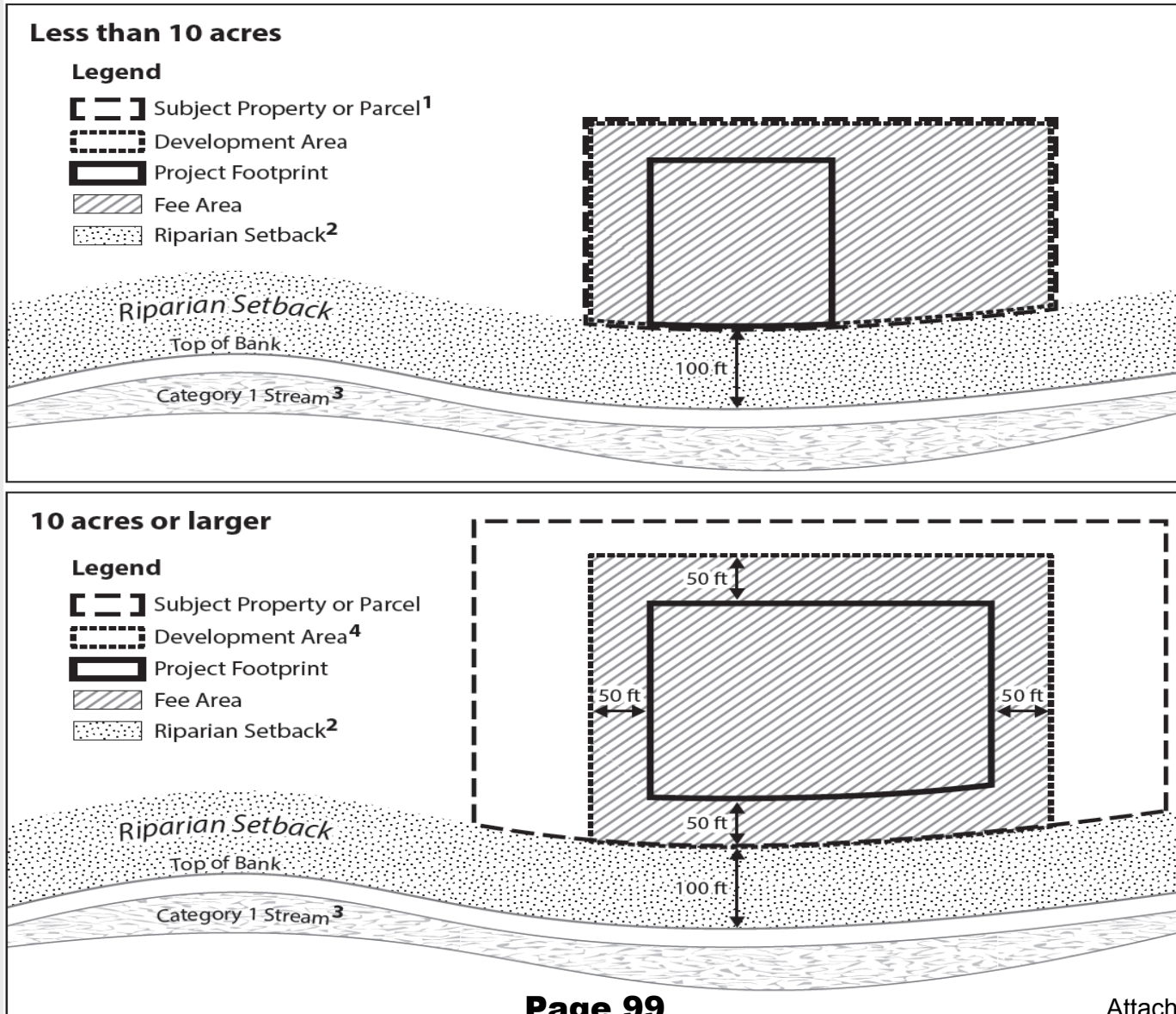


Current Practices in Riparian Corridor Protection

- ▶ **Santa Clara Valley Habitat Conservation Plan** – riparian setback requirements applicable to San Jose, Morgan Hill, Gilroy, County, SCVWD
- ▶ **Water Resources Protection Collaborative** (2006-07) provided **Guidelines** for riparian buffer protection
- ▶ Most cities adopted **Guidelines and Standards for Land Use near Streams** by resolution, but allow City staff to modify or adjust criteria
- ▶ **Santa Clara Valley Water District** does not have land use authority to require setbacks or buffer areas.

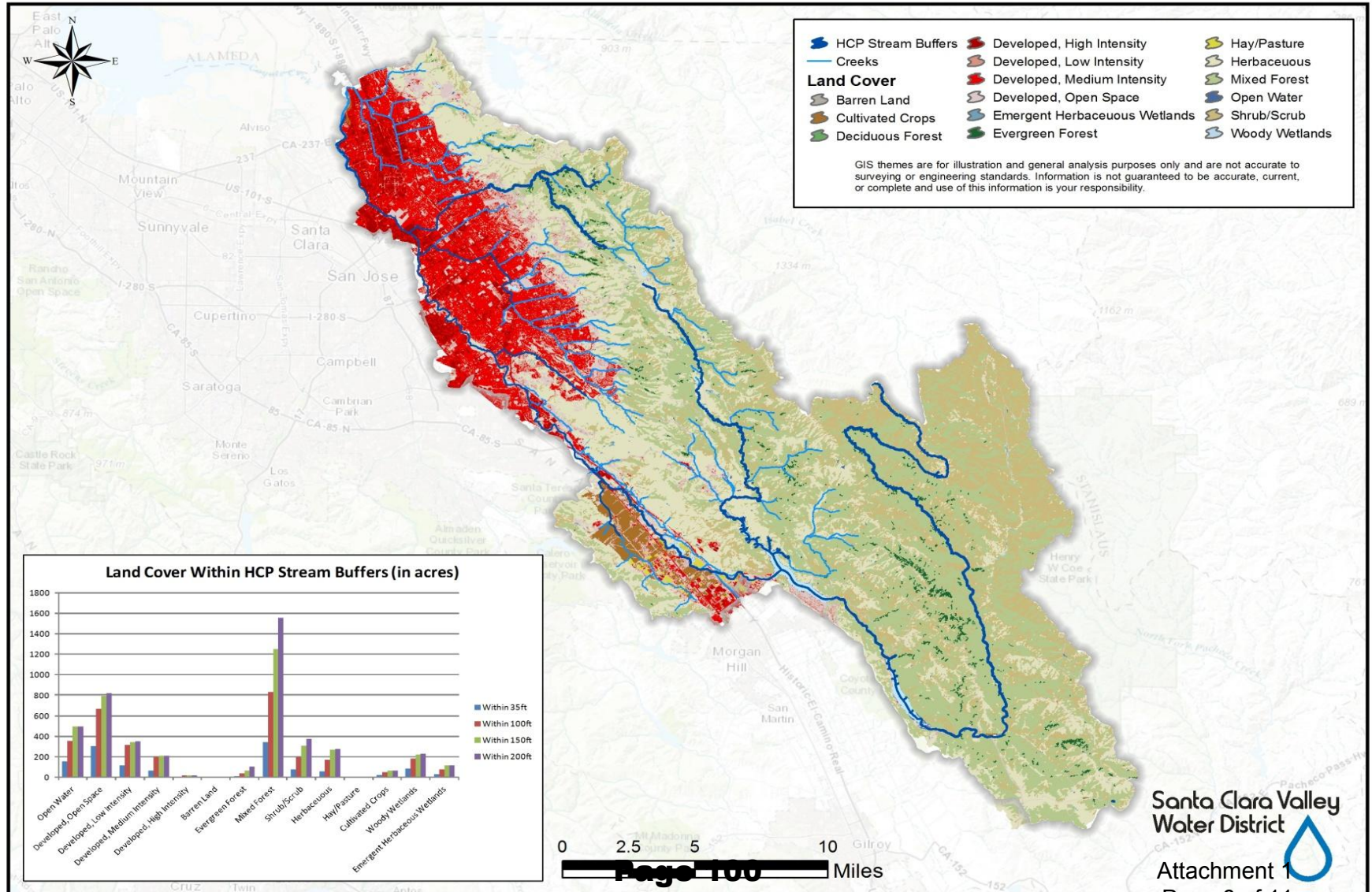
Valley Habitat Plan – Riparian Setback

Urban Service Area – Category 1 Streams supporting covered species



Land Use Near Stream – Riparian Buffer

Coyote Creek - Land Cover Within HCP Stream Buffers



Existing Policies for Riparian Corridor Protection

Excerpt from General Plans throughout Santa Clara County

City of San Jose

Goal ER-2 – Riparian Corridors
Preserve, protect, and restore the City's riparian resources in an environmentally responsible manner to protect them for habitat value and recreational purposes.

City of Milpitas

Policy 4 d-P-4:
Where consistent with other policies, preserve, create, or restore riparian corridors and wetlands. Where possible, set back development from these areas sufficiently to maximize habitat values.

City of Cupertino

Policy 5-27: Natural Water Courses
Retain and restore creek beds, riparian corridors, watercourses and associated vegetation in their natural state to protect wildlife habitat and recreation potential and assist groundwater percolation. Encourage land acquisition or dedication of such areas.

City of Campbell

**Policy CNR-3.1
Riparian Corridor Preservation:**
Preserve the aesthetic and habitat value of riparian corridors.

City of Morgan Hill

Policy 5a:
Encourage reclamation of degraded streams and riparian areas.

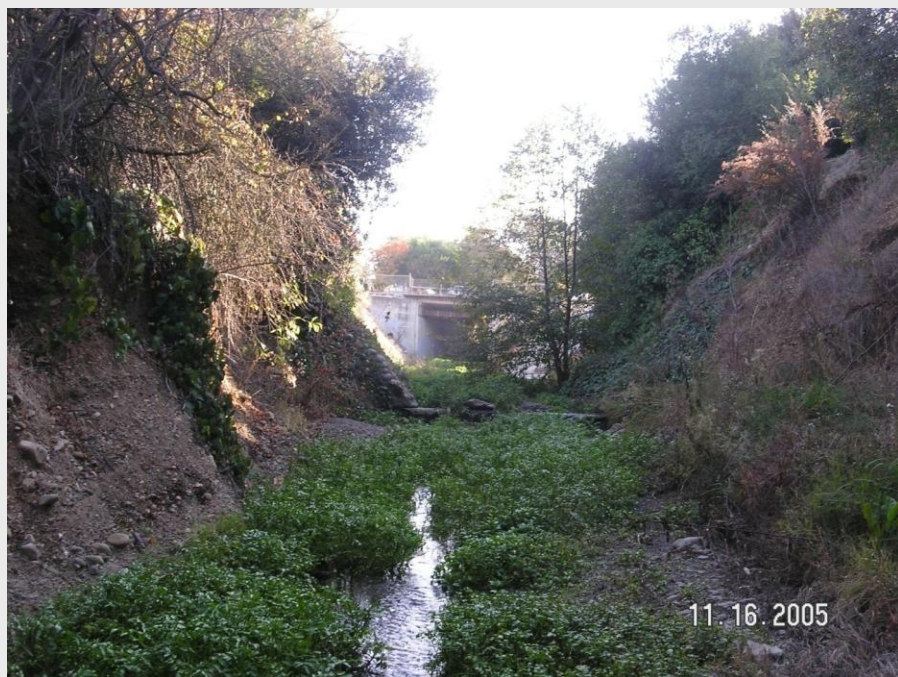
Town of Los Altos Hills

Policy 1.3
Preserve the integrity of riparian corridors as unique and environmentally sensitive resources.

City of Santa Clara

5.10.1-P5:
Encourage enhancement of land adjacent to creeks in order to foster the reinstatement of natural riparian corridors where possible.

Riparian Corridors at Risk



Calabazas Creek (11/16/2005)



Thompson Creek (2/10/2010)

Tools for Investigating Riparian Corridor Needs

GIS Analysis of
riparian corridors and
buffer conditions

Historical Ecology

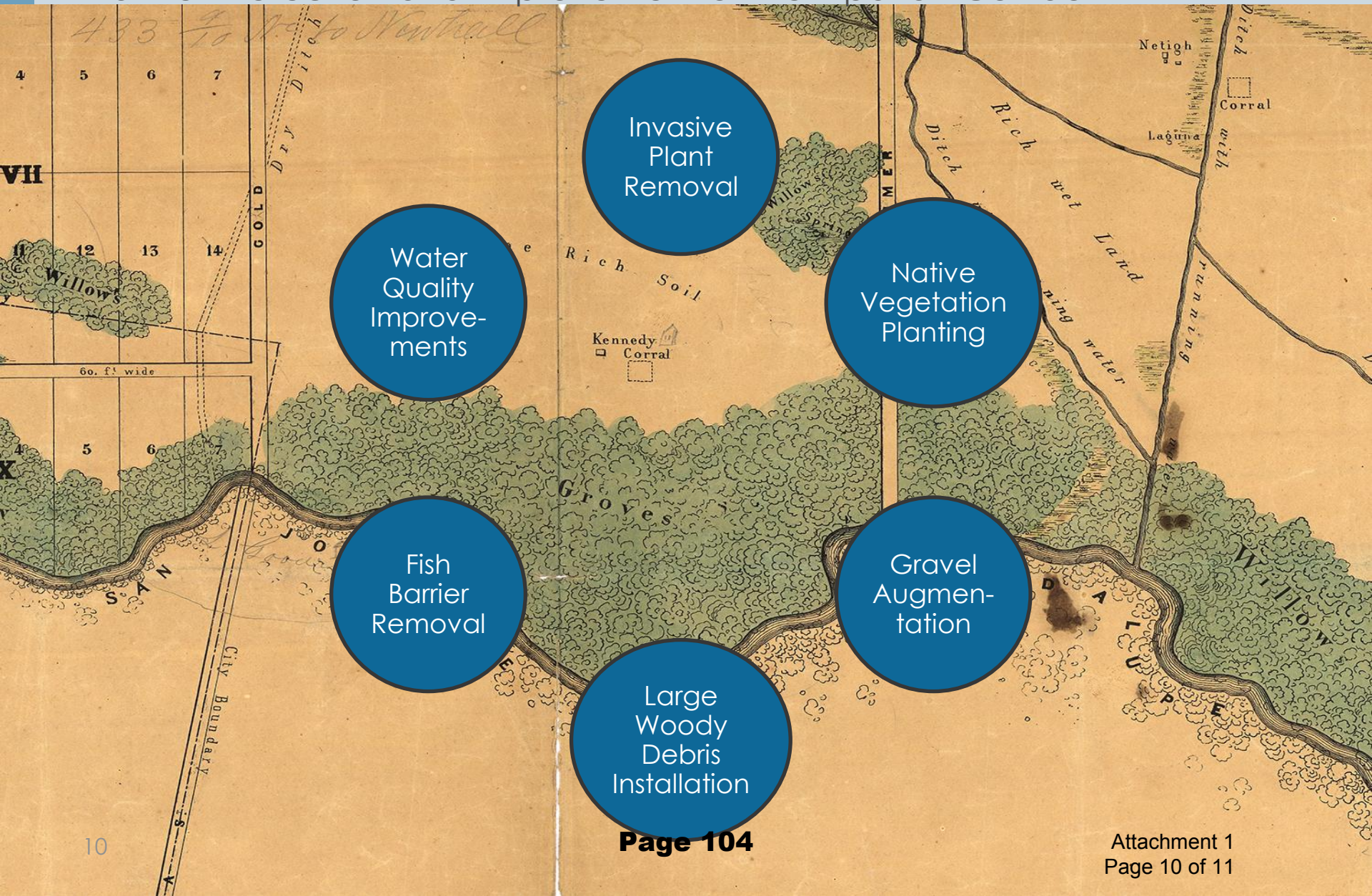


Ecosystem services
valuation

Watershed Visioning

Next Steps - Stream Corridor Priority Plans

A Plan for Protection and Improvement of the Riparian Corridor



► Q&A

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Committee:	Agricultural Water
Meeting Date:	01/09/17
Agenda Item No.:	5.4
Unclassified Manger:	Michele King
Email:	mking@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: Review of Agricultural Water Advisory Committee Work Plan, the Outcomes of Board Action of Committee Requests; and the Committee's Next Meeting Agenda.

RECOMMENDED ACTION:

Review the Board-approved Committee work plan to guide the committee's discussions regarding policy alternatives and implications for Board deliberation.

SUMMARY:

The attached Work Plan outlines the Board-approved topics for discussion to be able to prepare policy alternatives and implications for Board deliberation. The work plan is agendized at each meeting as accomplishments are updated and to review additional work plan assignments by the Board.

BACKGROUND:

Governance Process Policy-8:

The District Act provides for the creation of advisory boards, committees, or commissions by resolution to serve at the pleasure of the Board.

Accordingly, the Board has established Advisory Committees, which bring respective expertise and community interest, to advise the Board, when requested, in a capacity as defined: prepare Board policy alternatives and provide comment on activities in the implementation of the District's mission for Board consideration. In keeping with the Board's broader focus, Advisory Committees will not direct the implementation of District programs and projects, other than to receive information and provide comment.

Further, in accordance with Governance Process Policy-3, when requested by the Board, the Advisory Committees may help the Board produce the link between the District and the public through information sharing to the communities they represent.

ATTACHMENT(S):

Attachment 1: Agricultural Water Advisory Committee 2017 Work Plan
Attachment 2: Agricultural Water Advisory Committee April 2017 Draft Agenda

2017 Work Plan: Agricultural Water Advisory Committee

Update: December 2016

GP8. Accordingly, the Board has established Advisory Committees, which bring respective expertise and community interest, to advise the Board, when requested, in a capacity as defined: prepare Board policy alternatives and provide comment on activities in the implementation of the District's mission for Board consideration. In keeping with the Board's broader focus, Advisory Committees will not direct the implementation of District programs and projects, other than to receive information and provide comment.

The annual work plan establishes a framework for committee discussion and action during the annual meeting schedule. The committee work plan is a dynamic document, subject to change as external and internal issues impacting the District occur and are recommended for committee discussion. Subsequently, an annual committee accomplishments report is developed based on the work plan and presented to the District Board of Directors.

ITEM	WORK PLAN ITEM BOARD POLICY	MEETING	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
1	Annual Accomplishments Report	January 9	<ul style="list-style-type: none"> Review and approve 2016 Accomplishments Report for presentation to the Board. (Action) Submit requests to the Board, as appropriate. 	
2	Election of Chair and Vice Chair for 2017	January 9	<ul style="list-style-type: none"> Committee Elects Chair and Vice Chair for 2017. (Action) 	
3	Update on Water Supply and Drought Response	January 9	<ul style="list-style-type: none"> Receive update on water supply and drought response. (Information) Provide comments to the Board, as necessary. 	

Yellow = Update Since Last Meeting

Blue = Action taken by the Board of Directors

Attachment 1
Page 1 of 3

2017 Work Plan: Agricultural Water Advisory Committee

Update: December 2016

ITEM	WORK PLAN ITEM BOARD POLICY	MEETING	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
4	Review of Agricultural Water Advisory Committee Work Plan, the Outcomes of Board Action of Committee Requests and the Committee's Next Meeting Agenda	January 9	<ul style="list-style-type: none"> Receive and review the 2017 Board-approved Committee work plan. Submit requests to the Board, as appropriate. (Action) 	
5	Riparian Ordinance Report	January 9	<ul style="list-style-type: none"> Review the Board-approved Riparian Ordinance Report for Board consideration. (Action) Provide comments to the Board, as necessary. 	
6	Review and Comment to the Board on the Fiscal Year 2018 Proposed Groundwater Production Charges.	April 3	<ul style="list-style-type: none"> Review and comment to the Board on the Fiscal Year 2018 Proposed Groundwater Production Charges. (Action) Provide comments to the Board, as necessary. 	

Yellow = Update Since Last Meeting

Blue = Action taken by the Board of Directors

Attachment 1
Page 2 of 3

2017 Work Plan: Agricultural Water Advisory Committee

Update: December 2016

ITEM	WORK PLAN ITEM BOARD POLICY	MEETING	INTENDED OUTCOME(S) (Action or Information Only)	ACCOMPLISHMENT DATE AND OUTCOME
7	Update on CA WaterFix (Bay Delta Conservation Plan and Imported Water with Respect to Board Ends Policy 2.1: Reliable Water)	TBD	<ul style="list-style-type: none"> Receive an update on the CA Water Fix (Bay Delta Conservation Plan and Imported Water with Respect to Board Ends Policy 2.1:Reliable Water). (Action) Provide comments to the Board, as necessary. 	
8	Communication Program Update	TBD	<ul style="list-style-type: none"> Receive an update on the District's Communication Program 	
9	Civic Engagement	TBD	<ul style="list-style-type: none"> Receive Committee feedback on transparency audit 	
10.	Winter Preparedness Update	TBD	<ul style="list-style-type: none"> Receive an update on the District's Winter Preparedness Program 	

Yellow = Update Since Last Meeting

Blue = Action taken by the Board of Directors

Attachment 1
Page 3 of 3

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Committee Officers
 , Committee Chair
 , Committee Vice Chair

Board Representative
Nai Hsueh, Alternate
Richard P. Santos, Board Representative
John L. Varela, Board Representative

DRAFT AGENDA

AGRICULTURAL WATER ADVISORY COMMITTEE

MONDAY, APRIL 3, 2017

1:30 p.m. – 3:30 p.m.

**Santa Clara Valley Water District
Headquarters Building Boardroom
5700 Almaden Expressway
San Jose, CA 95118**

**Time Certain:
1:30 p.m.**

- 1. Call to Order/Roll Call**
- 2. Time Open for Public Comment on Any Item Not on Agenda**
Comments should be limited to two minutes. If the Committee wishes to discuss a subject raised by the speaker, it can request placement on a future agenda.
- 3. Approval of Minutes**
3.1 Approval of Minutes – January 9, 2017, meeting
- 4. Action Items**
4.1 Review and Comment to the Board on the Fiscal Year 2017-2018 Proposed Groundwater Production Charges. (Darin Taylor)
Recommendation: This is an action item to review and comment to the Board on the Fiscal Year 2017-2018 on the Proposed Groundwater Production Charges.

4.2 Review Agricultural Water Advisory Committee Work Plan, the Outcomes of Board Action of Committee Requests and the Committee's Next Meeting Agenda (Committee Chair)
Recommendation: Review the Board-approved Committee work plan to guide the committee's discussions regarding policy alternatives and implications for Board deliberation.
- 5. Clerk Review and Clarification of Committee Requests to the Board**
This is a review of the Committee's Requests, to the Board (from Item 5). The Committee may also request that the Board approve future agenda items for Committee discussion.
- 6. Reports**
Directors, Managers, and Committee members may make brief reports and/or announcements on their activities. Unless a subject is specifically listed on the agenda, the Report is for information only and not discussion or decision. Questions for clarification are permitted.
6.1 Director's Report
6.2 Manager's Report
6.3 Committee Member Reports

7. **Adjourn:** Adjourn to next regularly scheduled meeting at 1:30 p.m., **July 10 , 2017**, in the Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, CA 95118

All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at the Office of the Clerk of the Board at the Santa Clara Valley Water District Headquarter Building, 5700 Almaden Expressway, San Jose, CA., 95118, at the same time that the public records are distributed or made available to the legislative body.

The Santa Clara Valley Water District will make reasonable efforts to accommodate persons with disabilities wishing to attend committee meetings. Please advise the Clerk of the Board office of any special needs by calling 1-408-630-2277.

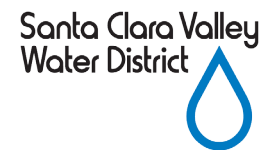
Agricultural Water Advisory Committee Purpose and Duties

The Agricultural Water Advisory Committee of the Santa Clara Valley Water District (District) is established per the District Act to assist the District Board of Directors (Board) with policies pertaining to agricultural water supply and use.

The specific duties are:

- Providing input on policy alternatives for Board deliberation, when requested by the Board.
- Providing comment on activities in the implementation of the District's mission that the Board will consider or refer to staff.
- Producing and presenting to the Board an Annual Accomplishments Report that provides a synopsis of the Committee's discussions regarding specific topics and subsequent policy recommendations, comments, and requests that resulted from those discussions.

In carrying out these duties, the Board's Committees bring to the District their respective expertise and the interests of the communities they represent. In addition, Board Committee members may bring information regarding District activities to the communities they represent.



For more information or to sign up for a tour, visit
purewaterSV.org
or call 408.630.3533

The Santa Clara Valley Water District manages an integrated water resources system that includes the supply of clean, safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 1.9 million residents. The district effectively manages 10 dams and surface water reservoirs, three water treatment plants, one advanced water purification center, a state-of-the-art water quality laboratory, nearly 400 acres of groundwater recharge ponds and more than 275 miles of streams. We provide wholesale water and groundwater management services to local municipalities and private water retailers who deliver drinking water directly to homes and businesses throughout Santa Clara County.

Let's Take a Tour!



Agenda Item 9

Innovation

Innovation for a reliable water supply

The Silicon Valley Advanced Water Purification Center, the largest advanced water purification plant in northern California, is the focal point of the Santa Clara Valley Water District's recycled and purified water expansion. The water district has partnered with cities and recycled water producers in the county to develop additional recycled and purified water supplies to help ensure an adequate and reliable supply of high quality water.

The purification center uses state-of-the-art processes—microfiltration, reverse osmosis and ultraviolet light—to purify treated wastewater. The result, 8 million gallons a day of highly purified water.

Highly purified water

Highly purified water is water that has been filtered, disinfected and purified to very high quality, and verified through monitoring to meet all California Primary and Secondary Drinking Water Standards. The highly purified water can be used for various purposes, including potentially expanding Silicon Valley's future drinking water supplies, by adding purified water into our percolation ponds for groundwater replenishment or blending it with other water sources.

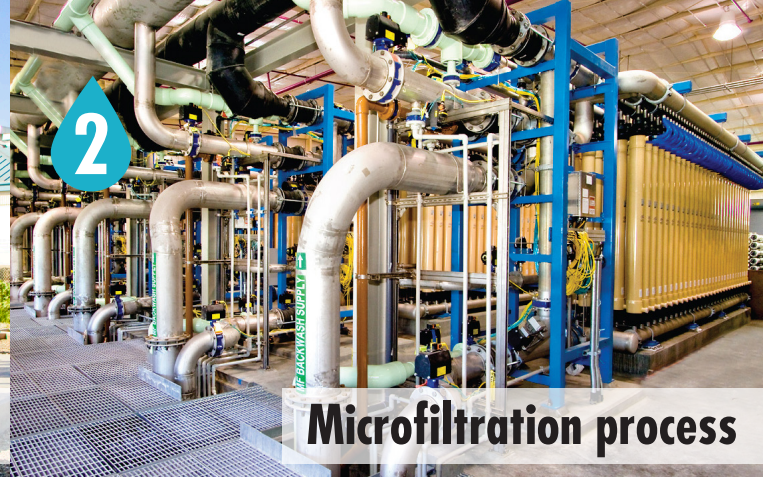
Around the world ... Water reuse for drinking.





Intake pumps

At the purification center, the 8 million gallons of water start their journey right here at the intake pumps. Three basic processes happen at the intake pumps area: pressurization, disinfection, and straining. This water has already gone through two levels of treatment at the neighboring San José-Santa Clara Regional Wastewater Facility before arriving at the purification center. There are four 200 horsepower pumps (including one back up pump) that move the incoming, secondary treated water from the wastewater plant.



Microfiltration process

In this initial process, water is forced through filtration membrane modules made up of thousands of hollow fibers, similar to straws. These fibers have microscopic pores that are about 1/3,000th the width of a human hair.

As the water is drawn through the pores into the center of the fibers, solids, bacteria, protozoa and some viruses are filtered out of the water.



Inter-process tank & the transfer pumps

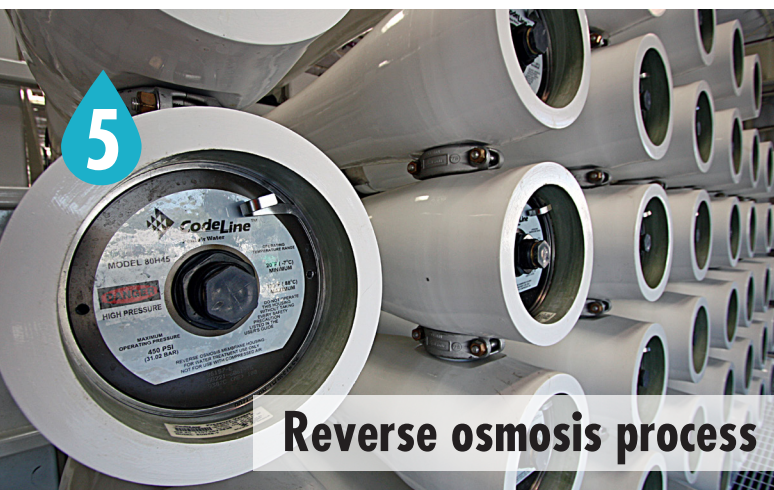
The filtered water from microfiltration system is conveyed to a 250,000 gallon stainless steel tank.

From here, the water flows to the reverse osmosis (RO) transfer pumps, where it is pumped through cartridge filters as a pre-treatment step before going to the RO feed pumps.



Reverse osmosis feed pumps

The center has three 500 horsepower RO feed pumps that boost the pressure very high and push the water to the next phase of the reverse osmosis purification process. Before entering the RO system, two chemicals are added to eliminate scaling, or the buildup of minerals, and protect the RO membranes.



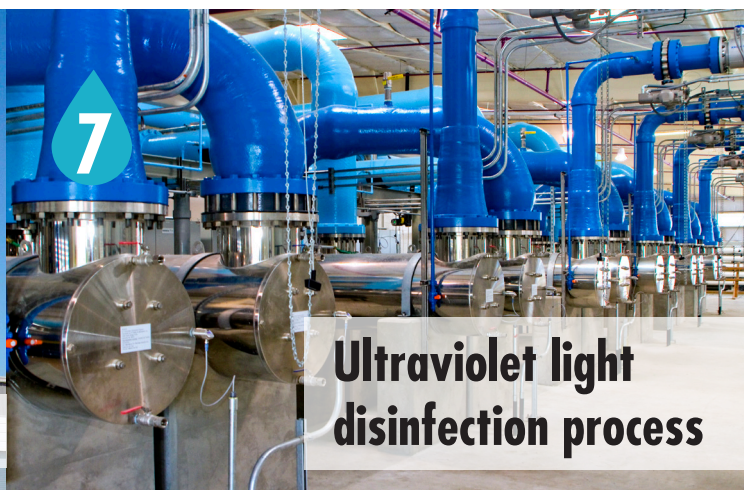
Reverse osmosis process

In this process, high pressure forces the treated water through tightly wound sheets of thin membranes with pores so small that most substances larger than a water molecule cannot pass through. RO removes contaminants, viruses, pesticides, salts and other materials from the water, producing highly purified water. This is the same process that is used by some bottled water companies, baby food manufacturers and for kidney dialysis.



Decarbonation Towers

The water produced by reverse osmosis process contains a lot of carbon dioxide (CO₂), which would make the water corrosive to the pipelines. Decarbonation removes carbon dioxide and raises the pH of the water, reducing corrosion in downstream facilities, including the distribution pipelines. Water cascades from the top of the tanks and the air blowers, adjacent to each tower, provide an upwards airflow, which removes excess CO₂.



Ultraviolet light disinfection process

Now the water is very clean. But as a further safety back-up step, the water is disinfected using ultraviolet (UV) lights. There are six UV trains, each consisting of a pair of UV vessels. Each vessel holds 40 high-intensity UV lamp bulbs, similar to extremely concentrated sunlight. This technique is often used to sterilize medicines, food and fruit juices. Hospitals and dental offices use it to sterilize instruments.



Highly purified water storage tank

After ultraviolet light disinfection, the highly purified water is sent to a 2.25 million gallon stainless steel product water storage tank.

From the storage tank, the purified water is sent to the Transmission Pump Station where it is blended with tertiary-treated recycled water. From here the improved recycled water is sent to the South Bay Water Recycling distribution system and on to more than 800 customers, that use recycled water for non-potable uses such as landscaping and industrial processes.

Handouts

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A monthly assessment of trends in water supply and use for Santa Clara County, California

Outlook as of January 1, 2017

Santa Clara County residents and businesses reduced water use by 32% in November 2016 compared to November 2013. This brings the cumulative 2016 water savings through November to 28% compared to the same period of 2013. Realizing parts of the state were better off than others in terms of water supply, the State Water Resources Control Board adopted an updated Emergency Regulation in May that allowed water retailers throughout the state to determine their individual conservation standards based on local conditions.

At its June 14 meeting, the District's Board of Directors (Board) lowered its water use reduction target to 20% for the period extending through January 2017, but emphasized that residents should continue their efforts to conserve in this ongoing drought. The Board also called for local water providers to continue to institute mandatory measures, as needed, to reach the 20% target, and called for restrictions on watering schedules to a maximum of three times a week, up from the two day a week schedule most areas of the county have had in place since the spring of 2015.

Groundwater recharge in 2016 was greater than in normal years and preliminary water supply analysis shows that 2017 recharge should meet or exceed normal year recharge.

Weather



Rainfall in San Jose

- Month of December = 1.49 inches
- Rainfall year total = 4.13 inches or 80% of average to date (Rainfall year is July 1 to June 30)
- January 3 Northern Sierra snowpack was 68% of normal for this date

Local Reservoirs



- Total January 1 storage = 74,498 acre-feet
 - » 95% of 20-year average for that date
 - » 44% of total capacity
 - » 61% of restricted capacity (169,009 acre-feet total storage capacity limited by seismic restrictions to 122,924 acre-feet)
- Approximately 254 acre-feet of imported water delivered into local reservoirs during December 2016
- Total estimated releases to streams (local and imported water) during December was 7,320 acre-feet

Groundwater



- Groundwater (GW) Storage: Estimated end of 2016 storage was within the lower range of Stage 1 (Normal) of the Water Shortage Contingency Plan

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
December managed recharge estimate (AF)	6,700	900	1,400
January to December managed recharge estimate (AF)	103,300	11,300	26,300
January to December managed recharge, % of 5-year avg.	242%	108%	128%
November pumping estimate (AF)	3,700	900	3,700
January to November pumping estimate (AF)	51,300	10,200	38,200
January to November pumping, % of 5-year average	65%	101%	95%
GW index well level compared to last December	Increase	Increase	Increase

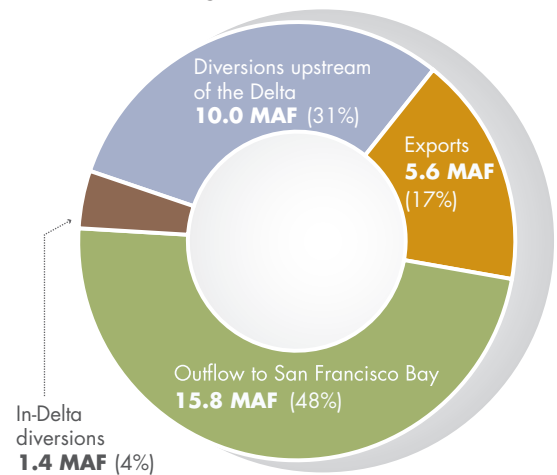
AF = acre-feet

Imported Water



- 2017 State Water Project (SWP) and Central Valley Project (CVP) allocations:
 - » 2017 SWP allocation: 45% = 45,000 acre-feet announced on December 21, 2016
 - » 2017 CVP allocations: A 2017 CVP allocation has not yet been identified
- Reservoir storage information, as of January 3, 2017:
 - » Shasta Reservoir at 73% of capacity (118% of average for this date)
 - » Oroville Reservoir at 56% of capacity (91% of average for this date)
 - » San Luis Reservoir at 62% of capacity (90% of average for this date)
- District's Semitropic groundwater bank reserves: An estimated 190,339 acre-feet as of January 3, 2017
- Estimated SFPUC deliveries to Santa Clara County:
 - » Month of December = 2,787 acre-feet
 - » 2016 Total to Date = 43,509 acre-feet
 - » Five-year average is 48,700 acre-feet

**Delta Watershed Diversions and Outflow
Typical Annual Balance
Average Years (32.8 MAF)**



Treated Water



- Below average demands of 5,990 acre-feet (estimated) delivered in December
- This total is 93% of the five-year average for the month of December
- Year-to-date = 97,654 acre-feet or 85% of the five-year average

Conserved Water

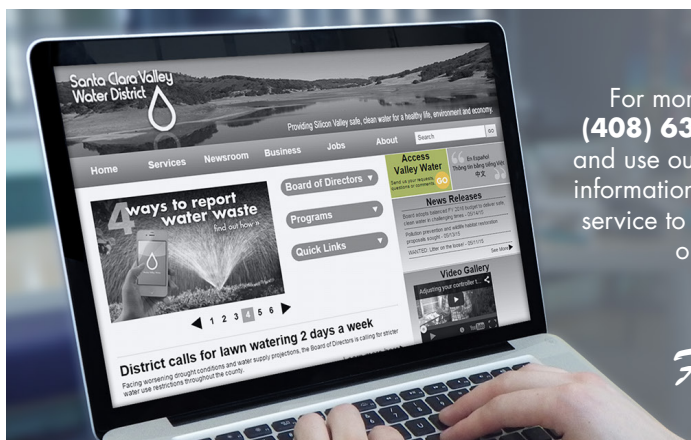


- Saved 69,000 acre-feet in FY16 from long-term program (baseline year is 1992)
- Long-term program goal is to save nearly 72,000 acre-feet in FY17
- The Board has called for a 20% reduction and a limit of three days per week for irrigation of ornamental landscape with potable water
- Achieved a 28% reduction in water use through the first eleven months of 2016, compared to 2013

Recycled Water



- Estimated December 2016 production = 700 acre-feet
- Estimated 2016 through December = 18,870 acre-feet or 99% of the five-year average
- Silicon Valley Advanced Water Purification Center produced an estimated 4.3 billion gallons (13,200 acre-feet) of purified recycled water since March 25, 2014. The purified water is blended with existing tertiary recycled water for South Bay Water Recycling Program's customers



CONTACT US

For more information, contact **Customer relations** at **(408) 630-2880**, or visit our website at valleywater.org and use our **Access Valley Water** customer request and information system. With three easy steps, you can use this service to find out the latest information on district projects or to submit questions, complaints or compliments directly to a district staff person.



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