



REVISION #1

BOARD MEETING

RAINBOW MUNICIPAL WATER DISTRICT
Tuesday, June 28, 2016
Open Session - Time: 1:00 p.m.

THE PURPOSE OF THE REGULAR BOARD MEETING IS TO DISCUSS THE ATTACHED AGENDA

District Office	3707 Old Highway 395	Fallbrook, CA 92028
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Board Agenda Policies

Board of Directors Meeting Schedule Regular Board meetings are normally scheduled for the 4th Tuesday of the month with Open Session discussions starting time certain at 1:00 p.m.

Breaks It is the intent of the Board to take a ten minute break every hour and one-half during the meeting.

Public Input on Specific Agenda Items and those items not on the Agenda, Except Public Hearings Any person of the public desiring to speak shall fill out a "Speaker's Slip", encouraging them to state their name, though not mandatory. Such person shall be allowed to speak during public comment time and has the option of speaking once on any agenda item when it is being discussed. Speaking time shall generally be limited to three minutes, unless a longer period is permitted by the Board President.

Public Items for the Board of Directors' agenda must be submitted in writing and received by the District office no later than 10 business days prior to a regular Board of Directors' Meeting.

Agenda Posting and Materials Agendas for all regular Board of Directors' meetings are posted at least seventy-two hours prior to the meeting on bulletin boards outside the entrance gate and the main entrance door of the District, 3707 Old Highway 395, Fallbrook, California 92028. The agendas and all background material may also be inspected at the District Office.

You may also visit us at www.rainbowmwd.com.

Time Certain Agenda items identified as "time certain" indicate the item will not be heard prior to the time indicated.

Board meetings will be recorded on CD's as a secretarial aid. If you wish to listen to the recordings, they will be available after the draft minutes of the meeting have been prepared. There is no charge associated with copies of CD's. Recordings will be kept for two years. Copies of public records are available as a service to the public; a charge of \$.10 per page up to 99 pages will be collected and \$.14 per page for 100 pages or more.

If you have special needs because of a disability which makes it difficult for you to participate in the meeting or you require assistance or auxiliary aids to participate in the meeting, please contact the District Secretary, (760) 728-1178, by at least noon on the Friday preceding the meeting. The District will attempt to make arrangements to accommodate your disability.

(*) - Asterisk indicates a report is attached.

Notice is hereby given that the Rainbow Municipal Water District Board of Directors will hold Open Session at 1:00 p.m. Tuesday, June 28, 2016, at the District Office located at 3707 Old Highway 395, Fallbrook, CA 92028. At any time during the session, the Board of Directors Meeting may adjourn to Closed Session to consider litigation or to discuss with legal counsel matters within the attorney client privilege.

AGENDA

1. **CALL TO ORDER**
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL CALL: Sanford_____ Walker_____ Brazier_____ Bigley___ Stewart_____**
4. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**
5. **ORAL/WRITTEN COMMUNICATIONS FROM THE PUBLIC
OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING
ITEMS NOT ON THIS AGENDA (Government Code § 54954.2).**
Under Oral Communications, any person wishing to address the Board on matters not on this agenda should indicate their desire to speak by filling out and submitting a "Speaker's Slip" to the Board Secretary before the meeting begins. *No action will be taken on any oral communications item since such item does not appear on this Agenda, unless the Board of Directors makes a determination that an emergency exists or that the need to take action on the item arose subsequent to posting of the Agenda (Government Code §54954.2). Speaking time shall generally be limited to three minutes, unless a longer period is permitted by the Board President.*
- *6. **APPROVAL OF MINUTES**
 - A. May 24, 2016 - Regular Board Meeting
7. **BOARD OF DIRECTORS' COMMENTS/REPORTS**
Directors' comments are comments by Directors concerning District business, which may be of interest to the Board. This is placed on the agenda to enable individual Board members to convey information to the Board and to the public. There is to be no discussion or action taken by the Board of Directors unless the item is noticed as part of the meeting agenda.
 - A. President's Report (Director Sanford)
 - B. Representative Report (Appointed Representative)
 1. SDCWA
 - A. Summary of Formal Board of Directors' Meeting May 26, 2016
 2. CSDA
 3. LAFCO
 4. San Luis Rey Watershed Council
 5. Santa Margarita Watershed Council
 - C. Meeting, Workshop, Committee, Seminar, Etc. Reports by Directors (AB1234)
 - D. Directors Comments
- *8. **COMMITTEE REPORTS (Approved Minutes have been attached for reference only.)**
 - A. Budget and Finance Committee
 1. May 10, 2016 Minutes

(*) - Asterisk indicates a report is attached.

- B. Communications Committee
 - 1. May 2, 2016 Minutes
- C. Engineering Committee
 - 1. May 4, 2016

BOARD ACTION ITEMS

- *9. **DISCUSSION AND POSSIBLE ACTION TO ADOPT RESOLUTION NO. 16-14 APPROVING FISCAL YEAR 2016-17 BUDGET**
(The Operating & Capital Improvement Budget for 2016-2017 has been reviewed by the Board of Directors, Budget and Finance Committee and staff. This proposed FY 2017 Budget is now presented to the Board for final adoption.)
- *10. **DISCUSSION AND POSSIBLE ACTION ON APPROVAL OF RESOLUTION 16-13, ADOPTING THE DISTRICT’S DRAFT 2015 URBAN WATER MANAGEMENT PLAN**
(The District’s Draft 2015 Urban Water Management Plan (UWMP) has been prepared to satisfy Water Code Section 10620 which requires every urban water supplier to prepare and adopt an UWMP. It requires that urban water suppliers develop UWMPs to assess current demands and supplies over a 20-year planning horizon, and address methods to ensure reliable and adequate water service to meet the needs of the various categories of customers during normal, dry, and multiple dry years. The plan documents that the water supplies available to RMWD customers are adequate to meet demands over the required 20 year planning period.)
- *11. **DROUGHT ORDINANCE UPDATE**
(Since the end of the winter rainy season, the statewide water supply conditions have improved considerably. Because of this the State Water Resources Control Board have rescinded most of the mandatory conservation targets and replaced them with supply based targets. In San Diego County, the investments in water supply reliability have enabled us to move to a 0% conservation target with certain end use restrictions on water waste remaining. This agenda item is to revise the Drought Ordinance to comply with the current regulatory environment.)
- *12. **DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 16-16 REDUCING THE DROUGHT LEVEL FROM LEVEL 2 TO LEVEL 1 IN ACCORDANCE WITH RMWD DROUGHT ORDINANCE NO. 16-10**
(On May 18, 2015 the State Water Resources Control Board rescinded most of the mandatory conservation targets and replaced them with supply based targets. On May 26, 2015 the San Diego County Water Authority rescinded its drought regulations and have now certified full supply for the region. These two actions mean that the current Drought Level 2 status is inappropriate based on water supply conditions and this agenda item is intended to move the District down to Drought Level 1.)
- *13. **DISCUSSION AND POSSIBLE ACTION TO APPROVE ORDINANCE NO. 16-11 AMENDING AND UPDATING ADMINISTRATIVE CODE SECTION 8.20 – CROSS-CONNECTION CONTROL**
(The District’s Cross-Connection Control Program was last reviewed, amended and approved on November 18, 2014 by Ordinance No. 14-08. This version is outdated and needs to be revised to incorporate changes pertaining to the degree of hazards on the customer’s property and clarification of certain specifications in determining if a cross-connection control device is required.)
- *14. **DISCUSSION AND POSSIBLE ACTION REGARDING CALIFORNIA SPECIAL DISTRICTS ASSOCIATION (CSDA) 2016 BOARD ELECTIONS**
(RMWD is in receipt of a mail ballot to utilize in voting to elect a representative to the CSDA Board of Directors in the RMWD’s Region for Seat B. Each of CSDA’s six (6) networks has three seats on the Board. Each Regular Member (district) in good standing shall be entitled to vote for one (1) director to represent its network. Ballots must be received at the CSDA by 5:00 p.m. on Friday, August 5, 2016.)

(*) - Asterisk indicates a report is attached.

- 15. DISCUSSION AND POSSIBLE ACTION TO APPOINT CYNTHIA GRAY AS AN ALTERNATE MEMBER TO THE COMMUNICATIONS COMMITTEE AND VANESSA MARTINEZ AS AN ALTERATE MEMBER TO THE BUDGET AND FINANCE COMMITTEE**
(In the past, there have been staff members appointed to serve as alternate members on the respective committees as a means of ensuring a quorum is present at each committee meeting. Since both the Communications Committee and Budget and Finance Committee have a low number of members at this time, both of these committees have decided to recommend the Board appoint a staff member to each until the committee membership number increases.)
- *16. DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 16-15 — A RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ESTABLISHING CLASSIFICATIONS AND MONTHLY PAY RANGES FOR DISTRICT EMPLOYEES EFFECTIVE JULY 1, 2016 THROUGH JUNE 30, 2017 AND THE GENERAL MANAGER’S SALARY EFFECTIVE AUGUST 29, 2015 THROUGH AUGUST 28, 2016**
(In compliance with state and CalPERS regulations, the District maintains a Salary Grade structure that includes all job titles, salary grade levels, and monthly salary ranges for each grade. The table is available for public review, accessible from the RMWD website, and is published on a website hosted by the California State Controller. The 2% COLA increase was approved at the August 26, 2014, board meeting through the Memorandums of Understanding between the District and the employee associations.)
- *17. DISCUSSION AND POSSIBLE ACTION ON BOARD RELATED PROFESSIONAL SERVICES CONTRACTS**
(At the May Board of Directors meeting, staff was asked to compile information about the various professional services that are contracted for the Board of Directors. These include the auditor, legal counsel, and tax roll billing services for ID-1. Staff has compiled information about these services for Board consideration.)
- *18. DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 16-17 ACCEPTING CALIFORNIA DEPARTMENT OF WATER RESOURCES PROPOSITION 50 WATER USE EFFICIENCY GRANT FUNDS AND DESIGNATE A REPRESENTATIVE AUTHORIZED TO EXECUTE THE CONTRACT AND SIGN REQUESTS FOR DISBURSEMENT**
(In accordance with the Agricultural Water Management Plan (AWMP) 2015 Grants Application requirements, the District must submit a resolution from their Board accepting the funds and designating a representative authorized to execute the contract and sign disbursement requests. Supporting documents and Resolution No. 16-17 will be provided under separate cover at the June 28, 2016 Board meeting.)
- *19. RECEIVE AND FILE INFORMATION AND FINANCIAL ITEMS FOR MAY 2016**
- A. General Manager Comments**
 - 1. Meetings, Conferences and Seminar Calendar
 - B. Communications**
 - 1. Ratepayer Letters
 - 2. Staff Training Reports
 - C. Operations Comments**
 - 1. Operations Report
 - D. Engineering Comments**
 - 1. Engineering Report
 - E. Customer Service Comments**
 - 1. Customer Service Report
 - F. Human Resource & Safety Comments**
 - 1. Human Resources Report
 - 2. Organizational Chart

(*) - Asterisk indicates a report is attached.

G. Finance Manager Comments

1. Credit Card Breakdown
2. Check Register
3. RMWD Sewer Equivalent Dwelling Units (EDU's) Status

20. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT REGULAR BOARD MEETING

21. ADJOURNMENT - To Tuesday, July 26, 2016 at 1:00 p.m.

ATTEST TO POSTING:



Helene Brazier
Secretary of the Board

6-23-16 @ 4:10 P.M.

Date and Time of Posting
Outside Display Cases

(*) - Asterisk indicates a report is attached.

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**MINUTES OF THE REGULAR BOARD MEETING
OF THE BOARD OF DIRECTORS
AND SPECIAL BUDGET AND FINANCE COMMITTEE MEETING OF THE
RAINBOW MUNICIPAL WATER DISTRICT
MAY 24, 2016**

1. **CALL TO ORDER** - The Regular Meeting of the Board of Directors of the Rainbow Municipal Water District on May 24, 2016 was called to order by President Sanford at 1:01 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. President Sanford presiding.

2. **PLEDGE OF ALLEGIANCE**



3. **ROLL CALL:**

Board of Directors Roll Call:

Present: Director Sanford, Director Walker, Director Brazier, Director Bigley, Director Stewart.

Budget and Finance Committee Roll Call:

Present: Member Stitle, Member Clyde, Member Moss.

Absent: Member Hensley, Member Ross.

Also Present: General Manager Kennedy, Executive Assistant Washburn, Legal Counsel Stender, Operations Manager Milner, Engineering Manager Kirkpatrick, Finance Manager Martinez, Superintendent Maccarrone, Superintendent Zuniga, Superintendent Walker, Administrative Analyst Gray, Acting Human Resources Manager Keetin, Human Resources Manager Harp, Associate Engineer Powers, Crew Leader-Meter Services Diaz.

Three members of the public were present for Open Session.

4. **ADDITIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**



There were no changes to the agenda.

5. **ORAL/WRITTEN COMMUNICATIONS FROM THE PUBLIC
OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING
ITEMS NOT ON THIS AGENDA (Government Code § 54954.2).**



There were no comments.

(*) - Asterisk indicates a report is attached.

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6. ANNIVERSARY ACKNOWLEDGEMENT

A. Justin Demary (10 Years)



Mr. Kennedy announced Mr. Demary started at RMWD in 2006 in construction. He noted since then Mr. Demary has continued to work on achieving different certifications and has moved up from Utility Worker I, II, and III. He mentioned Mr. Demary's certifications as well as how Mr. Demary was one of the main construction staff members in the Construction and Maintenance department. He presented Mr. Demary with a check and plaque in recognition of his tenure at RMWD.

Time Certain: 1:00 p.m. Public Hearings

7. PUBLIC HEARINGS



A. PUBLIC HEARING ON IMPROVEMENT DISTRICT NO. 1 WATER STANDBY CHARGES AND DISCUSSION AND POSSIBLE ACTION TO ADOPT ORDINANCE NO. 16-08, ESTABLISHING READINESS TO SERVE WATER SERVICE STANDBY ASSESSMENTS OR AVAILABILITY CHARGES FOR ALL OF THE RAINBOW MUNICIPAL WATER DISTRICT IMPROVEMENT DISTRICT NO. 1

President Sanford opened the public hearing at 1:04 p.m.

There were no comments.

It was noted a there was not a direct conflict of interest for the Board of Directors on this matter.

Ms. Washburn reported there were no written materials submitted from anyone wishing to submit comments without speaking on this matter.

President Sanford closed the public hearing at 1:06 p.m.

Motion:

To approve Ordinance No. 16-08.

Action: Approve, Moved by Director Walker, Seconded by Director Brazier.

Vote: Motion carried by unanimous roll call vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.



B. PUBLIC HEARING FOR THE PURPOSE OF SOLICITING PUBLIC INPUT REGARDING THE PROPOSED 2015 URBAN WATER MANAGEMENT PLAN

President Sanford opened the public hearing at 1:07 p.m.

Ms. Washburn reported there was no written material submitted on this item.

Doug Bellingham from Atkins gave a presentation on the 2015 Urban Water Management Plan for the purpose of the public hearing.

(*) - Asterisk indicates a report is attached.

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President Sanford closed the public hearing at 1:25 p.m.

No action taken.

***8. APPROVAL OF MINUTES**



A. December 15, 2015 – REVISED Approved Regular Board Meeting Minutes



Motion:

To approve the revised minutes of the Board Meeting of December 15, 2015 to correct a misstated date.

Action: Approve, Moved by Director Brazier, Seconded by Director Walker.



Vote: Motion carried by unanimous vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.

B. April 26, 2016 - Regular Board Meeting



Motion:

To approve the minutes of the Regular Board Meeting of April 26, 2016.

Action: Approve, Moved by Director Brazier, Seconded by Director Walker.



Vote: Motion carried by unanimous vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.

9. BOARD OF DIRECTORS' COMMENTS/REPORTS

Directors' comments are comments by Directors concerning District business, which may be of interest to the Board. This is placed on the agenda to enable individual Board members to convey information to the Board and to the public. There is to be no discussion or action taken by the Board of Directors unless the item is noticed as part of the meeting agenda.



A. President's Report (Director Sanford)

President Sanford talked about his and Mr. Kennedy's visits with various legislators while attending the CSDA Legislative Days.

(*) - Asterisk indicates a report is attached.

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- B.** Representative Report (Appointed Representative)
1. SDCWA

Mr. Kennedy reported SDCWA will meet later this week at which the main discussion will be rescinding the drought ordinances which will end the TSWAR allocations immediately. He stated RMWD will be sending a postcard to each of the TSWAR accounts informing them there are no more restrictions nor penalties.

Discussion ensued regarding the MWD/SDCWA lawsuit. Director Bigley suggested RMWD listen with an open mind through the process. Mr. Kennedy stated he would report back the Board on the workshop at the RMWD June Board meeting, possibly in Closed Session.

2. CSDA

Mr. Kennedy reported on the Legislative Days conference he and President Sanford attended the previous week.

3. LAFCO

Mr. Kennedy mentioned he made a request at last week's Special Districts Advisory Committee for an agenda item for their next meeting agenda.

It was noted the results of the LAFCO elections will be known over the next month.

Director Brazier mentioned FPUD has called for a Special meeting with LAFCO regarding exercising FPUD's latent powers. She said it would behoove the District to have a representative of RMWD attend this meeting.

4. San Luis Rey Watershed Council

Director Walker reported there was discussion on prioritizing different issues that should be looked at over the next five years. He noted these issues include water conservation and sustainability, flood plaining management, public education outreach on groundwater, working committees, and storm water quality. He expressed the importance of RMWD maintaining its relationship with the watershed council.

Director Walker announced the Council received a grant from the California Department of Fish and Wildlife of which the core will go toward hiring an Administration Grant Coordinator Project Manager part time. He noted this will provide for an opportunity for RMWD to act as an agency and partner with a non-profit to get grants. He explained the two priorities for the person upon being hired is to work on two pilot programs: (1) an agriculture pilot and (2) homeowner pilot program.

Director Walker expressed concern there was an opening for an agricultural representative on the Council. Mr. Kennedy offered to contact other agricultural customers to see if they would be interested in serving.

Director Walker announced the Council will have a booth at the upcoming Strawberry Festival.

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President Sanford announced the next meeting will be in July.

C. Meeting, Workshop, Committee, Seminar, Etc. Reports by Directors (AB1234)

Director Stewart reported on the 2016 ACWA Spring Conference at which he attended the required AB1234 Ethics Training. He pointed out many of the programs for promoting conservation are no longer available.

D. Directors Comments

There were no comments.

E. Budget and Finance Committee Member Comments

Mr. Stitle reported the committee has not had an opportunity to review the detailed budget due to the District not receiving numbers from SDCWA until recently.

***10. COMMITTEE REPORTS (Approved Minutes have been attached for reference only.)**

A. Budget and Finance Committee
1. April 12, 2016 Minutes

No report given.

B. Communications Committee
1. April 4, 2016

No report given.

C. Engineering Committee
1. April 6, 2016

Mrs. Kirkpatrick reported the committee saw the same presentation given to the Board today as well as reviewed the CIP list that will be presented as part of the budget later in this meeting.

***11. CONSENT CALENDAR**

(The consent calendar items are matters voted on together by a single motion unless separate action is requested by a Board member, staff or member of the audience.)



A. DISCUSSION AND POSSIBLE ACTION REGARDING EXECUTION OF A JOINT AGREEMENT TO IMPROVE MAJOR SUBDIVISION COUNTY OF SAN DIEGO TRACT NO. TM 5498-1, GOLF GREEN ESTATES

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B. APPROVAL OF RESOLUTION NO. 16-11 ESTABLISHING CHECK SIGNING AUTHORITY



Motion:

To approve the Consent Calendar.



Action: Approve, Moved by Director Brazier, Seconded by Director Stewart.

Vote: Motion carried by unanimous vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.

BOARD INFORMATION ITEMS

12. INITIAL REVIEW OF OPERATING AND CAPITAL IMPROVEMENT BUDGET FOR FISCAL YEAR 2016-2017



Mrs. Martinez presented the Annual Operating & Capital Improvement Budget FY 2017. She noted the purpose of this item was to have open discussion as well as solicit input.

Discussion ensued regarding the Rate Stabilization Reserve as well as options for addressing Ordinance 95-1.

Mr. Kennedy mentioned there would be another rate discussion with the Board in the Fall.

Discussion ensued regarding projected water sales, capital reserves, and proposed developments.

It was noted there was a problem in the calculations that needed to be corrected by Mrs. Kirkpatrick.

Mrs. Martinez proceeded with presenting information on the sewer budget. Mr. Kennedy pointed out sewer rates have not increased for many years; therefore, RMWD would have a sewer rate study conducted in the near future.

Discussion ensued regarding how RMWD would address wet weather conditions as well as drastic conservation efforts in terms of revenue changes.

Mr. Kennedy explained staff would review the budget further with the committee members in the next couple of weeks and bring it back to the Board in June.

13. DROUGHT ORDINANCE UPDATE



Mr. Kennedy reported State Board voted last week to end their conservation requirements and how SDCWA was going to vote to rescind their Drought Ordinance. He noted depending on what takes place, staff may bring RMWD's drought ordinance back to the Board in June with revisions for consideration.

(*) - Asterisk indicates a report is attached.

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Director Walker suggested RMWD tailor its messaging noting how long San Diego has been conserving quite aggressively for 20 years.

***14. DISCUSSION ABOUT PARLIAMENTARY PROCEDURES FOR RMWD MEETINGS**



Director Brazier mentioned she was pleased with the repetition of the motions and votes. She asked whether there should be a mechanism in place for addressing filibusters to whom the Board President may be sympathetic. Discussion followed.

Director Brazier inquired as to how one seeks recognition from the Board President. It was noted those wishing to be recognized should raise their hands.

President Sanford suggested the Board use this as the presented parliamentary procedures as a guideline and working document. Mr. Kennedy stated it would be made a policy document as adopted and the Administrative Code would be revised to say rather than following Robert's Rules of Orders, RMWD will follow the District's modified parliamentary procedures. Legal Counsel explained RMWD does not necessarily need to change the Administrative Code due to the fact it says "general guideline".

Legal Counsel suggested the policy include the Board take a roll call vote on every Ordinance.

Mr. Kennedy stated this information would be provided to RMWD's three committees.

BOARD ACTION ITEMS

***15. DISCUSSION AND POSSIBLE ACTION TO APPROVE ORDINANCE NO. 16-09 UPDATING ADMINISTRATIVE CODE SECTION 8.04 TO INCLUDE ALLOWING ESTABLISHMENT OF SERVICE ON A TEMPORARY BASIS WITHOUT PROPERTY OWNER ACKNOWLEDGEMENT**



Mr. Kennedy explained this item was to address situations related to pending real estate transactions involving transferring property ownership. Discussion ensued.



Motion:

To approve Option 1 approving Ordinance No. 16-09 as presented.

Action: Approve, Moved by Director Stewart, Seconded by Director Walker.



Vote: Motion carried by unanimous roll call vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.

***16. DISCUSSION AND POSSIBLE ACTION TO VOTE ON PROPOSED CSDA BYLAWS UPDATES**



Motion:

Accept and approve the proposed bylaw changes for CSDA.

(*) - Asterisk indicates a report is attached.

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Action: Approve, Moved by Director Stitle, Seconded by Director Bigley.



Vote: Motion carried by unanimous vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.

***17. DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 16-12 RELATED TO NORTH COUNTY IRRIGATED LANDS GROUP**



Mr. Kennedy recalled the discussion at the last Board meeting regarding winding up the North County Irrigated Lands Group. He mentioned letters were sent out to all the affected members to which RMWD did not receive any response. He said in light of the last meeting, staff and Legal Counsel reviewed the draft Resolution which he felt should be made part of the record to show members had an opportunity to come and speak on the matter as well as to clarify that he would now be designated as the manager of the NCILG. He pointed out he has notified the Regional Board of RMWD's decision to which he did not receive a response.

Director Walker mentioned Dave Gibson spoke at the recent Council of Water Utilities meeting and noted how Mr. Gibson mentioned consideration would be given to new regulations for agricultural users.



Motion:

Approve Resolution No. 16-12.

Action: Approve, Moved by Director Brazier, Seconded by Director Walker.



Vote: Motion carried by unanimous vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.

***18. RECEIVE AND FILE INFORMATION AND FINANCIAL ITEMS FOR APRIL 2016**

A. General Manager Comments

1. Meetings, Conferences and Seminar Calendar

B. Communications

1. Ratepayer Letters
2. Staff Training Reports

C. Construction & Maintenance Comments

1. Construction and Maintenance Report
2. Valve Maintenance Report
3. Garage/Shop Repair

D. Water Operations Comments

1. Water Operations Report
2. Electrical/Telemetry Report

E. Wastewater Comments

1. Wastewater Report

F. Operations Comments

1. Water Quality Report

(*) - Asterisk indicates a report is attached.

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2. Cross Connection Control Program Report
- G. Engineering Comments**
 1. Engineering Report
- H. Customer Service Comments**
 1. Field Customer Service Report
 2. Meters Report
- I. Safety Comments**
 1. Safety Report
- J. Human Resources Comments**
 1. Personnel Changes
 2. Organizational Chart
- K. Finance Manager Comments**
 1. Visa Breakdown
 2. Directors' Expense
 3. Check Register
 4. Office Petty Cash
 5. Water Usage Report
 6. RMWD Sewer Equivalent Dwelling Units (EDU's) Status

Mr. Kennedy solicited the Board for their input regarding whether they would like to continue receiving all of these informational reports or if there were some were more meaningful than others. He noted the financial reports would remain a part of every agenda packet.

Director Brazier stated she would prefer operations providing information to the Board that may be pertinent to bring to the Board's attention as opposed to information that may not be vital.

Mr. Kennedy offered to provide narrative reports from each of the departments in their functional areas as opposed to the information previously provided.

Director Sanford said it would be more important to him to see the financial information.

Director Stewart suggested the wastewater and water quality information be included in summarized reports.

It was noted the personnel changes should continue to be presented in every agenda packet.

Mr. Kennedy pointed out staff training reports would now be provided as part of the packet.

It was confirmed the employee suggestion box was still available.



Motion:

To receive and file information and financial information.



Action: Receive and file, Moved by Director Brazier, Seconded by Director Stewart.

Vote: Motion carried by unanimous vote (summary: Ayes = 5).

Ayes: Director Brazier, Director Walker, Director Sanford, Director Stewart, and Director Bigley.

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19. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT REGULAR BOARD MEETING



It was noted the budget, drought ordinance, Urban Water Management Plan, and review of all RMWD professional contracts for review and reconsideration.

Director Stewart announced he would not be at the June meeting due to a prior commitment.

20. ADJOURNMENT - To Tuesday, June 28, 2016 at 1:00 p.m.



The meeting was adjourned with a motion made by Director Brazier and seconded by Director Stewart to a regular meeting on June 28, 2016, 2016 at 1:00 p.m.

The meeting was adjourned at 4:05 p.m.

Dennis Sanford, Board President

Dawn M. Washburn, Board Secretary



SUMMARY OF FORMAL BOARD OF DIRECTORS' MEETING MAY 26, 2016

- 1 Notice of Completion for the Twin Oaks Valley Water Treatment Plant Expanded Service Area project.
The Board authorized the General Manager to accept the Twin Oaks Valley Water Treatment Plant Expanded Service Area project as complete, record the Notice of Completion, and release funds held in retention to NEWest Construction Company, Inc. following expiration of the retention period.

- 2 Reimbursement Agreement with Carlsbad Municipal Water District for the Carlsbad 5 Flow Control Facility and Pressure Reducing Valve.
The Board authorized the General Manager to execute Amendment No. 1 for the Reimbursement Agreement between the Carlsbad Municipal Water District and the San Diego County Water Authority for the Carlsbad 5 Service Connection Facility Planning Study to include design, permitting, and right-of-way services increasing the amount by \$919,300 for a total value of \$1,014,300.

- 3 Adopt positions on various state bills.
 - A) The Board adopted a position of Support if Amended on AB 2444 (Garcia), relating to park bonds.
 - B) The Board adopted a position of Oppose Unless Amended on AB 2480 (Bloom), relating to funding sources for watershed protection.
 - C) The Board adopted a position of Support on AB 2543 (Gordon), relating to water use efficiency in state facilities.
 - D) The Board adopted a position of Support on AB 2555 (Levine), relating to extension of sunset dates for ongoing quagga and zebra mussel control programs.
 - E) The Board adopted a position of Support if Amended on AB 2617 (Mayes), relating to outdoor water use efficiency.
 - F) The Board adopted a position of Support if Amended on AB 2868 (Gatto), relating to energy storage.
 - G) The Board adopted a position of Support if Amended on SB 886 (Pavley), relating to energy storage.

- 4 Monthly Treasurer's Report on Investments and Cash Flow.
The Board noted and filed monthly Treasurer's Report.



San Diego County Water Authority

- 5 Reschedule December 15, 2016 Board meeting date.
The Board rescheduled the December 15, 2016 Board meeting date to December 8, 2016.
- 6 Capacity charge refunds to a customer where water connections had not been established.
The Board authorized the General Manager to approve refunding previously paid capacity charges of \$82,410 to applicant Abraham Artenstein.
- 7 Resolution setting a Public Hearing date for the Water Authority's proposed calendar year 2017 Rate and Charge increases.
The Board adopted Resolution Number 2016-06 setting the time and place for a public hearing on June 23, 2016, at or after 9:00 a.m., or as soon thereafter as may practicably be heard, during the Administrative and Finance Committee meeting, to receive comments regarding proposed rates and charges to be effective January 1, 2017.
- 8 Drought Management Actions In Response To Rescission of Water Supply Allocation by Metropolitan Water District of Southern California and Actions of the State Water Resources Control Board.
The Board rescinded Ordinance No. 2016-01, *An Ordinance of the Board of Directors of the San Diego County Water Authority Allocating Water Pursuant to the Water Authority's Drought Management Plan and Establishing Penalties for Violations of Allocations*; and establishment of a Drought Awareness effort to ensure continued community focus on drought awareness and commitment to water use efficiency across the service area.
- 9 Settlement agreement with San Diego Coastkeeper regarding the following cases: San Diego Superior Court Case No. 37-2014-00013216-CU-JR-CTL; Court of Appeal Case No. D069199.
The Board approved the Water Planning Committee recommendation authorizing the General Manager to sign the settlement agreement with Coastkeeper.

**MINUTES OF THE BUDGET AND FINANCE COMMITTEE MEETING
OF THE RAINBOW MUNICIPAL WATER DISTRICT
MAY 10, 2016**

1. **CALL TO ORDER:** The Budget & Finance Committee meeting of the Rainbow Municipal Water District was called to order on May 10, 2016 by Chairperson Stitle in the Board Room of the District Office at 3707 Old Highway 395, Fallbrook, CA 92028 at 1:06 p.m. Chairperson Stitle presiding.

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL:**

Present: Member Stitle, Member Hensley, Member Moss.

Absent: Member Ross, Member Clyde.

Also Present: General Manager Kennedy, Executive Assistant Washburn, Finance Manager Martinez, Engineering Manager Kirkpatrick.

Two members of the public were present.

4. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**

Mr. Kennedy suggested deferring Items #9 and #10 to the June committee meeting.

5. **PUBLIC COMMENT RELATING TO ITEMS NOT ON THE AGENDA (Limit 3 Minutes)**

There were no comments.

COMMITTEE ACTION ITEMS

6. **COMMITTEE MEMBER COMMENTS**

Member Moss

*7. **APPROVAL OF MINUTES**

A. April 12, 2016

Motion:

To approve the minutes.

Action: Approve, Moved by Member Moss, Seconded by Member Hensley.

Vote: Motion carried by unanimous vote (summary: Ayes = 3).

Ayes: Member Stitle, Member Hensley, Member Moss.

8. DISCUSSION REGARDING THE DRAFT BUDGET

General Manager Kennedy commented on the extensive work and effort that was exerted in order to put together the budget being presented today. Finance Manger Martinez opened up her presentation with a number of topics and occurrences that impacted revenue this year including El Nino, media and news releases and water use restrictions. Mrs. Martinez continued with water sales trends, projected sales, and an expense breakdown.

Mr. Kennedy noted the State Water Resource Control Board (SWRCB) will be releasing a statement on possible changes in the current state restrictions sometime in the next week or two. Mr. Kennedy pointed out several new Capital Improvement Project (CIP) will be brought to the Board of Directors for approval this month to include items not currently budgeted for. Discussion on target balances for liability, rate structure and operating reserves took place.

Mr. Kennedy mentioned San Diego County Water Authority (SDCWA) rate increases will be passed on to our stakeholders. Mr. Kennedy explained a variety of rate options will be brought to the committee for appropriate stabilized funding after SDCWA makes a formal announcement on their upcoming rate increases.

Mrs. Martinez concluded her presentation with the topic of sewer including possible upcoming CIPs, debt financing, funding and budgeting items where applicable, open discussion among members and the General Manager ensued.

9. DISCUSSION REGARDING WATER CONSERVATION/RESOURCES

Mr. Kennedy mentioned the expected conservation requirement changes coming from the SWRCB. Discussed ensued on groundwater water management regarding the San Luis Rey Basin and the prospects of receiving news on the reclassification of this local supply.

10. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT SCHEDULED BUDGET AND FINANCE COMMITTEE MEETING

It was noted the next Board meeting will be a joint meeting with the Budget and Finance Committee.

Items #9 and #10 will be on the June 14th committee meeting agenda as well as an item to discuss committee membership.

11. ADJOURNMENT

Motion:

Action: Adjourn, Moved by Member Stitle, Seconded by Member Hensley.

Harry Stitle, Committee Chairperson

Dawn M. Washburn, Board Secretary

**MINUTES OF THE COMMUNICATIONS COMMITTEE MEETING
OF THE RAINBOW MUNICIPAL WATER DISTRICT
MAY 2, 2016**

1. **CALL TO ORDER** – The Communications Committee Meeting of the Rainbow Municipal Water District on May 2, 2016 was called to order by Chairperson Daily at 3:32 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. Chairperson Daily, presiding.

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL:**

Present: Member Daily, Member O'Leary, Member Brazier, Member Kirby.

Absent: Member Kurnik.

Also Present: General Manager Kennedy, Executive Assistant Washburn, Administrative Analyst Gray.

Two members of the public was present.

4. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**

There were no changes to the agenda.

5. **PUBLIC COMMENT RELATING TO ITEMS NOT ON THE AGENDA**

There were no comments.

COMMITTEE ACTION ITEMS

*6. **APPROVAL OF MINUTES**

A. April 4, 2016

Motion:

To approve the minutes as written.

Action: Approve, Moved by Member Brazier, Seconded by Member Kirby.

Vote: Motion carried by unanimous vote (summary: Ayes = 4).

Ayes: Member Daily, Member O'Leary, Member Brazier, Member Kirby.

7. **DISCUSSION AND POSSIBLE ACTION REGARDING COMMITTEE MEMBERSHIP**

Ms. Washburn mentioned Dorothy Romani has decided to resign from the committee and thanked everyone for their patience over the last few months.

It was noted there was an advertisement in the last newsletter soliciting for new members. Mr. Kennedy pointed out there was an option to add staff members as an alternate member to

ensure business can be conducted with a quorum. Ms. Brazier mentioned if there was enough interest, she would be happy to step down to allow room for someone else to join.

8. COMMUNICATIONS PLAN

Mrs. Gray provided copies of the updated 2016 Newsletters Topics Suggestions and Strategic Plan.

Mr. Kennedy talked about there may be something to report to the customer regarding MWD's potential rate increase once RMWD is notified by MWD. Discussion ensued.

Mr. O'Leary offered to provide a write-up on the May 2016 California Avocado Commission meeting for the RMWD June newsletter.

Discussion ensued.

Mr. Kennedy reviewed the RMWD Strategic Plan 2016 Communications Objectives. Mrs. Gray mentioned she has received copies from several other agencies; however, until it is defined how much Springbrook can actually do in terms of format changes we will not know exactly what the modifications will include.

Discussions continued as the committee reviewed the Strategic Plan Communications Objectives.

9. DISCUSSION AND POSSIBLE ACTION TO CHANGE NOMENCLATURE FOR CUSTOMERS

Discussion ensued regarding what nomenclature should be used to appropriately constitute ownership.

Mr. Kennedy pointed out Legal Counsel suggested utilizing the term "constituents". Discussion ensued regarding the terms "shareholders", "stockholders", and "ratepayers". It was noted the term "stakeholders" means the customer has a vested interest in paying attention to what is going on.

10. DISCUSSION AND POSSIBLE ACTION REGARDING INCORPORATING NEW GRAPHICS INTO WEBSITE, NEWSLETTER, ETC.

It was noted there was nothing to report at this time.

11. REVIEW AND ANALYSIS OF RMWD RELATED MEDIA STORIES

Discussion ensued regarding current media stories as well as regarding after hour services and shutdown notifications.

It was noted there was an article in The Village News regarding FPUD's seeking a replacement for one of their directors.

12. COMMITTEE MEMBER COMMENTS

Mr. O'Leary inquired about the Board item regarding the Robert's Rules of Order. Mr. Kennedy explained this item was to review the District's parliamentary procedures and discuss how both the Board and committee meetings should be handled.

13. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT SCHEDULED COMMUNICATIONS COMMITTEE MEETING

It was noted there should be an item to consider adding a staff member to the committee and the possible resignation of Director Brazier as well as repeat Item #10 on the next agenda.

Mrs. Kirby mentioned she would not be at the June meeting.

14. ADJOURNMENT

Motion:

Action: Adjourn, Moved by Member O'Leary, Seconded by Member Brazier.

Vote: Motion carried by unanimous vote (summary: Ayes = 4).

Ayes: Member Daily, Member O'Leary, Member Brazier, Member Kirby.

The meeting adjourned at 4:58 p.m.

Mike Daily, Committee Chairperson

Dawn M. Washburn, Board Secretary

**MINUTES OF THE ENGINEERING COMMITTEE MEETING
OF THE RAINBOW MUNICIPAL WATER DISTRICT
MAY 4, 2016**

1. **CALL TO ORDER** – The Engineering Committee Meeting of the Rainbow Municipal Water District on May 4, 2016 was called to order by Chairperson Prince at 3:00 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. Chairperson Prince, presiding.

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL:**

Present: Member Prince, Member Taufer, Member Murray, Member Brazier Member Kirby, Alternate Marnett

Absent: Member Stitle, Member Ratican, Alternate Robertson

Also Present: General Manager Kennedy, Engineering Manager Kirkpatrick, Associate Engineer Powers, Engineering Tech Rubio

There was one member of the public present: Mr. MacFarlane (DLM Consultant)

4. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**

There were no changes to the agenda.

5. **PUBLIC COMMENT RELATING TO ITEMS NOT ON THE AGENDA**

There were no public comments.

COMMITTEE ACTION ITEMS

*6. **APPROVAL OF MINUTES**
A. April 6, 2016

Motion: Accept the minutes as drafted.

Action: Approve, Moved by Member Brazier, Seconded by Member Murray.

Vote: Motion carried by unanimous vote (summary: Ayes = 6).

Ayes: Member Prince, Member Taufer, Member Murray, Member Brazier, Member Kirby, Alternate Marnett.

7. DISCUSSION AND POSSIBLE ACTION REGARDING URBAN WATER MANAGEMENT PLAN

Mrs. Kirkpatrick said a copy of the preliminary draft Urban Water Management Plan (UWMP) was provided for review and discussion. She stated the public draft would be available on May 10, 2016 followed by a public hearing scheduled at the May 24, 2016 Board Meeting. She said the plan was to adopt the final UWMP at the June 28, 2016 Board Meeting. She introduced Mr. MacFarlane a subconsultant for Atkins to provide a brief summary of the preliminary draft UWMP as follows:

Summary:

- Plan meets the California Water Code (CWC) and Department of Water Resources (DWR) requirements
- Plan uses latest updated population demand projections based on latest San Diego Association of Governments (SANDAG) forecast
- County Water Authority (CWA) capable of meeting Normal and Dry year demands
- Effective contingency plans, reduction or interruptions
- District met interim 2015 urban use target
- Plan on schedule for submission to DWR by the July 1, 2016 due date

Background:

- UWMP Act began in 1983
- Involves self-assessment of deliveries and uses, baselines and targets, supplies and reliability, water use efficiency, water shortage contingency planning and demand management
- Updated every five years
- Reviewed by DWR
- Approval required for grant or loan administered by DWR, State Water Board, or Delta Stewardship Council
- Plans provide legal documentation of available water supplies for planned development
- Water conservation act of 2009 to reduce 20% by 2020

New for 2015:

- More specific data, wastewater (recycled)
- Demand projections to account codes, standards, ordinances, land use plans
- Quantify and report on water loss
- Demand Management Measures (DMM), Implement to achieve targets
- Revised report organization
- Submit electronically with standardized tables

Discussion ensued regarding the UWMP updates.

Mrs. Kirkpatrick stated in summary this water supply reliably plan was required every five years to ensure there was enough water for everyone within the District. She asked for emailed questions and comments to be sent as soon as possible.

8. DISCUSSION REGARDING CAPITAL PROJECT PHASING FOR MASTER PLAN

Mrs. Kirkpatrick said the Master Plan was adopted by the Board last month. She provided copies of the draft projected 5 year CIP list for review and discussion. She said the draft CIP list would be reviewed by the Budget and Finance Committee to be incorporated into the budget. She mentioned the water CIP was on schedule for funding, however the wastewater with the Water Reclamation Plant project costs of approximately \$66M would require the District to obtain government grants to offset the costs. Discussion ensued.

9. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT SCHEDULED ENGINEERING COMMITTEE MEETING

Mrs. Kirkpatrick would bring back the UWMP for Board recommendation.

10. ADJOURNMENT

The meeting adjourned at 4:00 p.m.

Timothy Prince, Committee Chairperson

Dawn M. Washburn, Board Secretary



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO ADOPT RESOLUTION NO. 16-14 APPROVING FISCAL YEAR 2016-2017 BUDGET

DESCRIPTION

The Operating & Capital Improvement Budget for 2016-2017 has been reviewed by the Board of Directors, Budget and Finance Committee and staff. This proposed FY 2017 Budget is now presented to the Board for final adoption.

POLICY

Government Code 53901 requires that RMWD file a copy of the annual budget with the San Diego County Auditor and Controller.

BOARD OPTIONS/FISCAL IMPACTS

The budget will serve as a guideline to generate the funds for the operations and maintenance, capital improvements and debt service of the District.

1. Approve Resolution No. 16-14 Adopting the 2016-2017 Budget in its present form.
2. Direct the Staff to make further adjustments to the budget.

STAFF RECOMMENDATION

Staff recommends the Board adopt Resolution No. 16-14 approving the 2016-2017 Operating & Capital Improvement Budget.

Vanessa Martinez, Finance Manager

06/28/15

RESOLUTION NO. 16-14**RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ADOPTING THE ANNUAL OPERATING AND CAPITAL IMPROVEMENT BUDGET FOR THE FISCAL YEAR ENDING JUNE 30, 2017**

WHEREAS, the Rainbow Municipal Water District ("District") is organized and operates pursuant to the Municipal Water District Law of 1911 commencing with Section 71000 of the California Water Code; and

WHEREAS, there has been presented to the Board of Directors a proposed Annual Operating and Capital Improvement Budget for The Fiscal Year Ending June 30, 2017 ("2017 Budget"); and

WHEREAS, on June 28, 2016, the Board of Directors received and considered all comments regarding the proposed 2017 Budget; and

WHEREAS, the proposed 2017 Budget has been reviewed and considered by the Board of Directors and it has been determined to be in the best interests of the District to adopt said budget for the sound financial operation of the District.

BE IT HEREBY RESOLVED by the Board of Directors of Rainbow Municipal Water District as follows:

1. The 2017 Budget, as detailed in the budget document entitled "Annual Operating and Capital Improvement Budget for the Fiscal Year Ending June 30, 2017," is hereby adopted. A copy of the 2017 Budget is attached hereto and incorporated herein by reference.
2. The expenditure amounts designated for the Fiscal Year 2016-2017, pursuant to the 2017 Budget, are hereby appropriated and may be expended by the departments or funds for which they are designated.
3. The proposed amount of the San Diego County Water Authority Rate pass-through, as allowed shall be increased effective 01/01/2017.
4. The Recitals set forth above are incorporated herein and made an operative part of this Resolution.
5. If any section, subsection, sentence, clause or phrase in this Resolution or the application thereof to any person or circumstances is for any reason held invalid, the validity of the remainder of this Resolution or the application of such provisions to other persons or circumstances shall not be affected thereby. The Board of Directors hereby declares that it would have passed this Resolution and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses, or phrases or the application thereof to any person or circumstance be held invalid.
6. This Resolution will be effective immediately upon adoption.

PASSED, APPROVED, AND ADOPTED in Open Session at a meeting of the Board of Directors of the Rainbow Municipal Water District held on the 28th day of June, 2016 by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

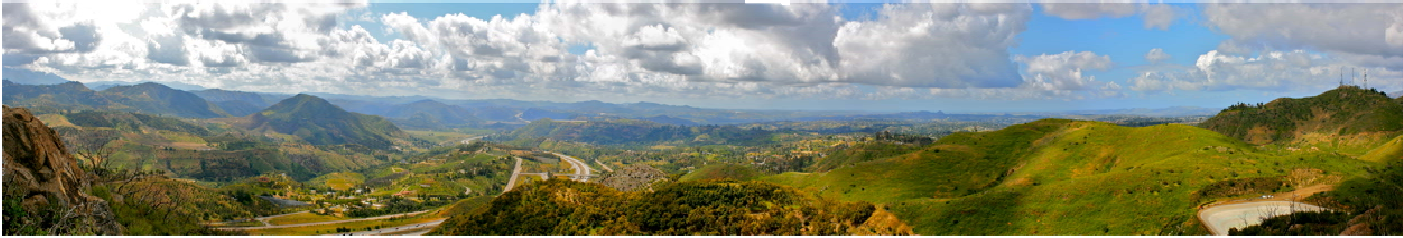
Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary



**ANNUAL OPERATING
& CAPITAL BUDGET**
FISCAL YEAR 2016/2017



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ANNUAL OPERATING & CAPITAL IMPROVEMENT BUDGET

FOR THE FISCAL YEAR ENDING JUNE 30, 2017



RAINBOW MUNICIPAL WATER DISTRICT

3707 OLD HIGHWAY 395 FALLBROOK, CA 92028

(760) 728-1178

WWW.RAINBOWMWD.COM

COMMITTED TO EXCELLENCE

RAINBOW MUNICIPAL WATER DISTRICT

ANNUAL OPERATING AND CAPITAL IMPROVEMENT BUDGET

For the Fiscal Year Ending June 30, 2017

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MISSION STATEMENT:

“To provide our customers reliable high quality water and sewer service at the most efficient cost.”



RAINBOW MUNICIPAL WATER DISTRICT

BOARD OF DIRECTORS

STARTING FROM LEFT – DIRECTOR WALKER, DIRECTOR BIGLEY, DIRECTOR BRAZIER, DIRECTOR SANFORD, AND DIRECTOR STEWART

CERTIFICATE OF TRANSPARENCY AWARD



The Rainbow Municipal Water District received the District Transparency Certificate of Excellence by the Special District Leadership Foundation (SDLF) in recognition of its outstanding efforts to promote transparency and good governance.

"This award is a testament to Rainbow Municipal Water District's commitment to open government," said Tom Kennedy, General Manager. "The entire district staff is to be commended for their contributions that empower the public with information and facilitate engagement and oversight."

In order to receive the award, a special district must demonstrate the completion of eight essential governance transparency requirements, including conducting ethics training for all board members, properly conducting open and public meetings, and filing financial transactions and compensation reports to the State Controller in a timely manner.

The Rainbow Municipal Water District also fulfilled fifteen website requirements, including providing readily available information to the public, such as board agendas, past minutes, current district budget, and the most recent financial audit.

FISCAL YEAR 2017 BUDGET MESSAGE



To the Board of Directors of Rainbow Municipal Water District:

I am pleased to present for your consideration Fiscal Year 2016-17 Operating and Capital Improvement Budget. During the present Fiscal Year 2015-16, the District endured a grueling first quarter trying to protect the organization from a potential forced merger with the Fallbrook Public Utility District. In Mid-September 2015, the Local Agency Formation Commission (LAFCO) voted on the potential merger, and Rainbow successfully defeated the attempt by 5-3 vote.

Accomplishments in Current FY 2016

With the successful resolution of the LAFCO issue during FY 2016, the senior management staff at RMWD have been able to focus internally to improve operations. In FY 2016, the Strategic Plan, Water and Wastewater Master Plan Update and the Urban Water Management Plan have been adopted by the Board of Directors. The District and Staff will be using these planning documents to guide the District toward its goals. There has also been significant change in the statewide conservation mandates that has relieved RMWD from the onerous mandatory conservation requirements that were featured in the previous year.

Water resources is a key focus of the Strategic Plan and the Operations Department is working collaboratively with the Engineering Department on supporting ongoing and future projects consisting of bringing recycled water to the District, and recovering imported return flow in the subterranean portions of the San Luis Rey River. The Engineering Department will complete a preliminary design report on the feasibility of bringing recycled water to the District. While the final method has not been fully identified, it will be either through a District operated water reclamation plant or a contract with a neighboring agency to provide the District with a drought resilient local water supply. In addition, the District is finalizing a study to recover imported water return flows from the subterranean portions of the San Luis Rey River. These two projects would decrease dependence on the San Diego County Water Authority and imported water. Economically, the District's ultimate goal is to provide all customers within the service area with reliable and sustainable potable drinking water and sewer services. Protecting the public's health, the environment, and satisfying all mandatory drinking water and wastewater requirements is our highest priority

The completion of the Master Plan Update for both water and wastewater provides a phased project list for the District to complete to increase system reliability. Since water demand has dropped significantly, the Capital Improvement Program for water does not include any major transmission or expansion projects, but includes projects to increase reliability. Projects include permanent pump stations for the yearly San Diego County Water Authority shutdowns, District wide system pressure regulation, and facility improvements for redundancy and reliability.

The District is starting to see an increase in development activity. It is projected that in the next year, approximately 60 equivalent dwelling units will be added to the system. Within the next 5 years, significant residential and commercial growth is expected near the I-15 and SR 76. The wastewater projects consist of increasing capacity of the sewer system for buildout. Due to the upcoming growth

the District hired an Associate Engineer to help offset workloads in the Engineering Department from development and execute the Capital Improvement Program.

Priorities for Fiscal Year 2017 include:

- Completion of water and wastewater Capacity Fee Update – this process will include the establishment of accurate asset valuation as a component of the Capacity Fee study. The revised fees will ensure that new development pays a fair and appropriate fee to connect to the water and wastewater system.
- Complete the implementation of the Enterprise Asset Management System (EAM) – this system will consist of a database that documents every asset that is owned and operated by RMWD. When complete, the system will track over 100,000 individual assets and will record the amount of labor that is dedicated to the O&M of each asset. This system will allow RMWD to accurately document both work that is done and track backlogs of work that needs to be done. The productivity of individuals and work groups will be monitored for continuous improvement. Additionally, the goal is to enable RMWD Managers to control and pro-actively optimize operations for quality and efficiency.
- Initiate a comprehensive review of various administrative policies, especially within the Human Resources Department – the District has a number of long standing administrative policies that are due for review and updates. The new HR Manager will be conducting detailed reviews of these policies and providing updated version for Board approval.
- Initiate and complete negotiations with employee labor groups – the three-year contracts that were executed in 2014 expire in 2017, so a negotiation process will be conducted to come to agreement on terms for new labor agreements. A comprehensive salary survey will be conducted to ensure that pay rates are appropriate. Negotiations will include how to fairly distribute the cost of employee and dependent health care as well as other benefits.
- Continue review of Fiscal policies – during FY2016 a comprehensive water cost of service study was initiated that culminated in a modest rate change in January 2016. Steep drops in water demand are placing additional stress on the District’s finances so a comprehensive review of financial forecasts will be conducted with an eye toward fiscal stability. A primary focus will be how to keep rates low in the face of increased wholesale costs while establishing and maintaining appropriate reserves.

Revenue Assumptions

Water demand has been negatively impacted by the State’s restrictions on water use and the requirement for water agencies to meet certain conservation targets. Our District was placed in the 36% conservation target, which later early in the fourth quarter of Fiscal Year it was reduced to 28%. Furthermore, this year’s El Nino weather pattern caused customer’s to lessen their water demand. This chain of events caused revenues to be drastically lower than anticipated.

Last year's forecast was projecting sales at 18,000 acre feet, whereas it appears the District may sell less than 16,000 acre feet by fiscal year end. This represents an overall 11% decrease from the budgetary projection, but a 16% decrease in actuals from prior year. Partly due to successful water conservation efforts, improved water saving fixtures/devices and technology, and a number of other factors, both water sales and water related revenues are declining in parallel. As a result for this upcoming budgeted forecast, the District was conservative in its projections for water consumption demand. Current demand forecasts project an overall increase of 3% in demand from FY2016 projected actual demand. This includes an estimate for development activity that will add to our service accounts.

Confidence in this forecast is supported by positive news in recent weeks. The first positive news, is that both the Metropolitan Water District and the San Diego County Water Authority have rescinded their allocation programs for Transitional Special Agricultural Water Rate (TSAWR) users. This will allow all TSAWR customers released from any allocation restrictions on water use.

Secondly, On May 18, 2016, in response to a revised Executive Order from Governor Brown, the State Water Resources Control Board (SWRCB) acted to end the statewide mandatory conservation requirements that were imposed in May 2015. The action by the SWRCB replaced the arbitrary statewide standards with conservation goals that are based on the actual water supply conditions present at each agency. The San Diego County Water Authority has determined that our conservation target based on the SWRCB's new rules will be 0% for the foreseeable future.

The impact of this change on water demands is unknown at this time, but a slight rebound in sales is expected. Weather patterns will play a big part in demands so significant uncertainty remains in the projections.

The District has also received increases in wholesale costs for supply and when combined with lower sales volumes a rate increase will be required. Depending on whether there is a rebound in sales or not over the summer of 2016, the rate increase will be in the 6% of total revenue range. The final rate increase values will be identified in the fall of 2016 for implementation in early 2017.

Sewer revenues has been relatively stagnant the past few years. There has not been an increase in rates for sewer since January 1, 2014, as a result this year the budget includes funds for a Cost of Service Study to be conducted.

Expense Assumptions

The largest component of the expenditures in the water sector is the cost of purchased water from San Diego County Water Authority, ultimately coming from Metropolitan Water District. Today, imported water supplies are becoming increasingly unreliable and more expensive. Creating a diversified water portfolio is a priority at the District including pursuing alternative water sources and having the capability of providing a reliable, drought-resilient water supply. In addition, reducing nonrevenue water is a goal of the District.

The second largest component to expenses is labor cost. Effective July, per prior agreed MOU's all three of the bargaining units will received a 2% Cost of Living Adjustment. In response, to the declining water sales management made the difficult but vigilant decision in May to eliminate a position. Further review of labor resources will be conducted with the aim of ensuring that the staffing levels are adequate to

perform key functions with no excess of staffing. This Fiscal Year the labor negotiations will be open as the MOU's agreed terms terminate the end of the FY 2016-17. Both Management and the employee groups are dedicated to working on an agreement that is sensible for the overall financial stability of the District.

Lastly, the other remaining expenses make up slightly over 10% of total cost. These costs include maintenance and supplies, legal, professional services, utilities, insurance, and capital expenditures. This includes a contract with Utility Service Company that services all of our steel tanks on a quarterly basis, with an annual cost of \$665K. The District's general liability insurance coverage costs annually \$200K, legal counsel is approximately the same cost however it can vary depending on current issues. For FY 2015-16 legal cost was a bit higher than expected as the District successfully defended itself from the Fallbrook Public Utility District takeover attempt. The District does incur high electrical costs for pumping, as the different elevation terrain in the service area causes a greater need to push water to higher elevation. Utility cost was increased by 5%.

The greatest challenge the District faces for capital projects is the funding of proposed projects. In the short term the District is relying on development activity to fund the capital funding needs of the District. Currently Ordinance Number 95-1 requires the District to seek public approval for debt financing in excess of one million dollars. Development activity is slated to occur in the near future. If for some reason the proposed developments do not take place, the District will likely have to take proactive steps in accessing how we can obtain funds to pay for the proposed capital projects. Currently the District has two agreements with the State of California for funding in the form of loans and grants in the amount of \$18M. The loans and grants are allowable funding source, and were obtained in compliance with Ordinance 95-1. Accessing additional capital through debt financing will require the District to address the limitations of Ordinance 95-1.

Conclusion

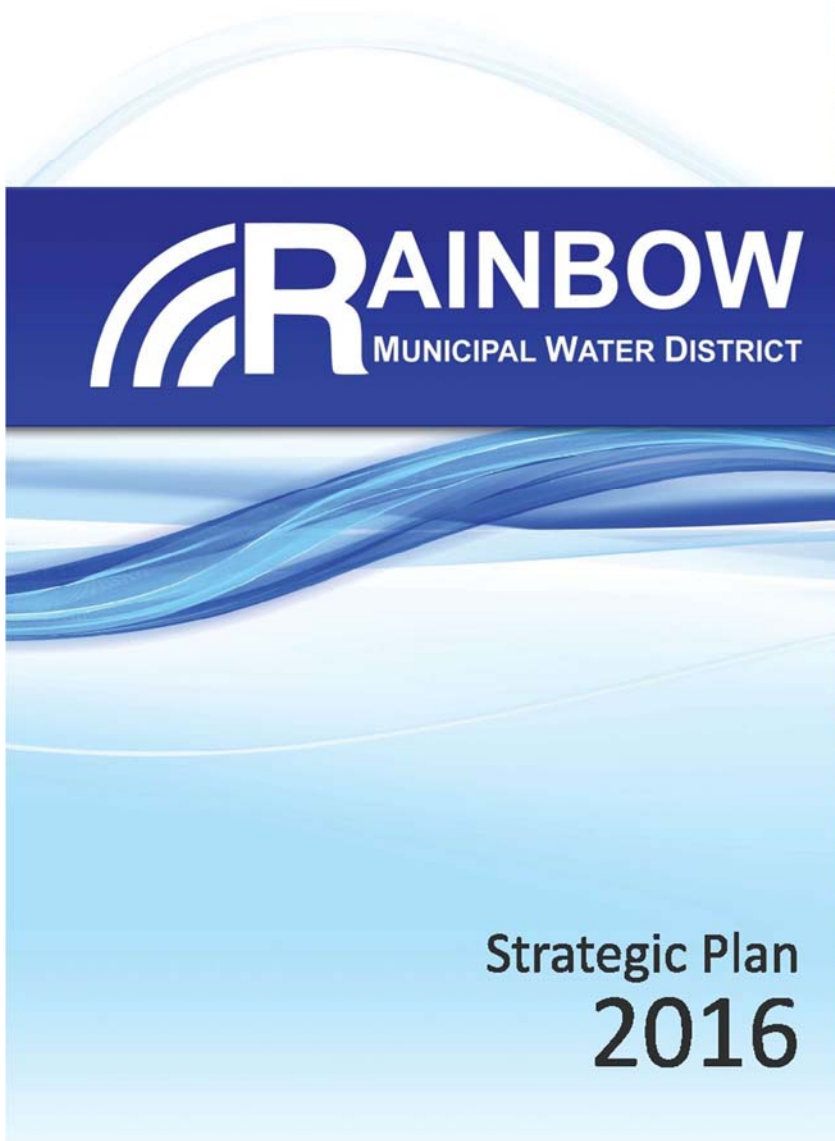
The District's mission statement is "To provide our customers reliable high quality water and sewer service at the most efficient cost." The budget incorporates the mission statement and all of the strategic focus areas in the proposed Fiscal Year 2016-17 document.

This year's budget document represents a significant departure from previous budgets as it is formatted to follow the Government Finance Officers Association (GFOA) standards for budget preparation. When combined with significant uncertainty as to the regulatory environment regarding mandatory conservation levels, the task of developing this year's budget presented significant challenges. A great deal of effort was put forth by Vanessa Martinez, Finance Manager, the Budget & Finance Committee, the Board, and District staff who diligently worked on participating in this newly formatted budget.

Respectfully submitted,



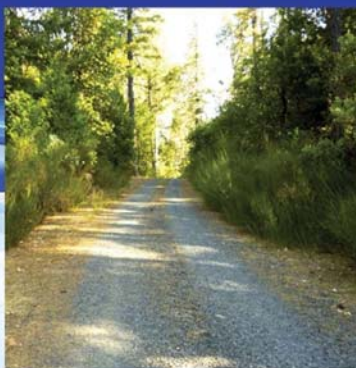
Thomas Kennedy, General Manager



RAINBOW
MUNICIPAL WATER DISTRICT

**Strategic Plan
2016**

The central graphic features a dark blue horizontal band containing the organization's logo. Below this band are stylized, flowing blue waves. The background is a light blue gradient with a subtle white arc at the top.



INTRODUCTION:

The Rainbow Municipal Water District Board of Directors is pleased to present the Rainbow Municipal Water District 2016 Strategic Plan. This plan was developed through a series of collaborative workshops and working sessions with the Board of Directors, Volunteer Committees, Strategic Planning Team, and all RMWD staff. In addition, the Community was invited to provide input to the plan and a good number of their ideas have been incorporated. The result of these combined efforts is a Plan that provides organizational focus and clarifies priorities that will drive the District's activities to effectively serve its customers.

The Plan reaffirms our Mission, clarifies our Core Values, and outlines six Strategic Focus Areas. The Strategic Focus Areas reflect the "vital few" core business issues that are critical for the District's continued success. Each Strategic Focus Area includes a brief description of its fundamental importance to the District. Strategic Focus Areas are supported by a broad Goal to address the focus area. Specific Objectives have been identified to provide meaningful, practical steps to be taken to accomplish the Goal. Each year, the General Manager, Department Managers, and Superintendents will develop detailed plans that include specific, measurable actions that are designed to ensure implementation of the goals and objectives.

This is a living document as the conditions in the area of water supply and reclamation change over time. This document will be reviewed by the Board of Directors on an annual basis along with the various goals and objectives presented by the RMWD staff. At intervals not to exceed five years, the Board of Directors will revisit the Mission Statement, Values, and Strategic Focus Areas to ensure that they remain aligned with the needs of the District at that time.

Thank you to all who participated in this collaborative effort. Every contribution, however small, was important and all contributions were greatly appreciated. This Strategic Plan will serve as the primary roadmap as the Board of Directors and staff continue to strive forward in our mission to providing our customers reliable, high quality water and water reclamation services in a fiscally sustainable manner!

Board of Directors
Rainbow Municipal Water District

STRATEGIC PLANNING PROCESS:

The Strategic Planning process for Rainbow Municipal Water District was comprehensive and inclusive. The Board of Directors, Volunteer Committees, and all District employees contributed to creating a practical and relevant plan to help guide the future of the District. In addition, the Community was invited to provide their input and a good number of their ideas have been incorporated.



The process began with the establishment of the Strategic Planning Team, made up of six key staff members representing major departments within the District. The SPT met frequently to plan and facilitate the process, review all data gathered from the various participants and finalize the plan document. The planning activity followed a four-phased planning process:

Phase I — Planning to Plan

The Board of Directors and the SPT established outcomes for the process, provided focus and identified participants for the effort. The planning process was customized to meet the specific needs and issues identified by the Board of Directors in June 2015.

Phase II — Analyze the Situation

This critical phase included taking an objective look at the District to identify organizational strengths and needs. Several analyses were conducted including:

- 1) Review of existing mission and key mandates
- 2) Identification of various stakeholders and changing needs
- 3) Environmental Scan to identify issues facing the organization from a social, political, economic, environmental, technological and legal perspective
- 4) SWOT Analysis to identify organizational Strengths, Weaknesses, Opportunities and Threats

Phase III — Set Strategic Direction

All of the data generated from Phase II was used to set the Strategic Direction for District for the next few years. This included reaffirming the Mission, creating Core Values and outlining six Strategic Focus Areas. The Strategic Focus Areas are the most critical “make or break” issues for the District’s continued success. Each Strategic Focus Area is supported by a broad Goal. Specific objectives were developed to provide practical steps to be taken to accomplish the Goal.

Phase IV — Complete and Monitor the Plan

The end result of the planning process is a practical document that serves as a roadmap for the future direction of the District. The General Manager, Department Managers and Superintendents will develop detailed plans, including measurable actions that will ensure implementation of the goals and objectives. The Board of Directors will review the Strategic Plan on an annual basis to ensure that the Strategic Focus Areas continue to meet the needs of the District.

MISSION STATEMENT:

To provide our customers reliable, high quality water and water reclamation services in a fiscally sustainable manner.

OUR VALUES:

INTEGRITY:

We believe in openness, trust, ethics and transparency. We practice direct and honest communication in all of our day-to-day interactions.

PROFESSIONALISM:

A professional work place is the cornerstone of any quality organization. We have open and respectful communication and interactions, both internally and with our customers. Our employees will always exhibit professionalism in all of their day to day interactions.

RESPONSIBILITY:

Individual and organizational responsibility and accountability for accomplishing the District's mission is a core value. We focus on doing our work in an efficient, reliable, and cost effective manner.

TEAMWORK:

We understand the value of teamwork and are committed to working together both internally and externally. Our focus is on supporting one another to collectively be our best. We encourage communication and collaboration. We focus on quality and have pride in the work we do in service to our customers.

INNOVATION:

Innovation and creative thinking are supported and encouraged. We realize that good ideas can come from many sources, including our customers, and we continually encourage new and better ways of doing our work. Our goal is not innovation for innovation's sake, but for finding ways to improve service and lower costs.

STRATEGIC FOCUS AREA ONE: Water Resources

Imported water supplies are becoming increasingly unreliable and more expensive.

Increasing costs from drought, government regulations and additional forces outside of the District's control require that RMWD diversify its water supply portfolio to ensure a safe, sustainable, and reliable source for its customers.

GOAL:

A diversified water portfolio, including conservation and alternative sources, to provide a reliable, drought-proof supply.

OBJECTIVES:

- Complete feasibility study of water reclamation plant and recycled water distribution system. Commence full design if project is deemed feasible.
- Complete feasibility study for the San Luis Rey groundwater development project. Commence full design if project is deemed feasible.
- Initiate the formation of the Groundwater Sustainability Agency for the San Luis Rey River Groundwater Basin.



STRATEGIC FOCUS AREA TWO: Asset Management

Aging infrastructure, rising costs, increasing regulations and security concerns require that key assets are maintained properly. Careful planning for anticipated future demands and pipeline rehabilitation is essential for efficient operation of the system. Effective asset management is an important tool to ensure we get the best value from the investments made by our customers in our assets.

GOAL:

Well organized asset management process to plan for, prioritize and fund maintenance, replacement, expansion and rehabilitation of District infrastructure, facilities and equipment.

OBJECTIVES:

- Implement a proactive asset management system to include inventory of all assets and establish appropriate maintenance schedules.
- Document asset condition through continuous condition assessment.
- Develop long-term asset rehabilitation schedules.



STRATEGIC FOCUS AREA THREE: Workforce Development

Employees are the most valuable asset in any organization. Increasing demands, rapidly increasing regulations, and an aging workforce, require water districts to have highly motivated employees that are committed to continuous learning and improvement.

GOAL:

Recruit, develop and retain a highly skilled and knowledgeable workforce that is experienced, up-to-date, creative and loyal to the District and its customers.

OBJECTIVES:

- Maintain education and training opportunities to ensure continuous improvement and learning for all staff.
- Develop a cross training program to help build internal capacity.
- Create a succession planning process to identify, assess and develop employees who exhibit potential.
- Implement cost effective employee recognition programs to acknowledge performance, encourage development and improve morale.
- Create a safety culture for the District workforce and promote safe work practices.
- Ensure continuous Board development and participation in industry-related activities.



STRATEGIC FOCUS AREA FOUR: Fiscal Responsibility

Increasing costs of water, labor, supplies and energy, along with public scrutiny require that all public agencies be especially conscious of planning and managing their fiscal resources. It is critical that agencies have sound financial plans and make the best possible decisions for the sustainability of the District in service to its customers.

GOAL:

Fiscally responsible, transparent and sustainable approaches to managing and forecasting the District's finances.

OBJECTIVES:

- Develop budgets in compliance with Government Financial Officers Association (GFOA) standards.
- Update appropriate reserve and investment policies to protect customers.
- Proactively manage and maintain sustainable employee benefits.
- Implement a Continuous Improvement Process for all district operations.
- Complete transition to new financial software system.



STRATEGIC FOCUS AREA FIVE: Customer Service

The primary purpose of RMWD is to provide reliable, quality water and water reclamation to our customers. Water customers expect and deserve the best service at the best value.

GOAL:

Provide top quality customer service by meeting customer needs, being responsive, providing timely communication, and being financially responsible.

OBJECTIVES:

- Complete feasibility studies for enhancing the delivery of information to customers through technologies such as Advanced Metering Infrastructure.
- Expand options for customer on-line bill pay and timely account information.
- Enhance capabilities of field customer service staff through geographic dispatching and information systems.



STRATEGIC FOCUS AREA SIX: Communication

Effective communication is the glue that keeps organizations working together and operating efficiently. In this age of information overload and competing technologies, it is more important than ever to ensure clear, concise and accurate communication, both within the organization and to the public. Effective communication ensures better understanding, improved teamwork and increased customer satisfaction.

GOAL:

Ensure effective communication and good working relationships within the District and with our customers.

OBJECTIVES:

- Expand public outreach, information and education.
- Ensure that District website is a valuable resource that meets the needs of customers.
- Enhance educational programs in local school systems.
- Implement district facility tours for interested members of the public.
- Improve communications between Board advisory committees and Board of Directors.



CONTRIBUTORS:

The 2015 Strategic Plan would not have been possible without participation from the Board of Directors, volunteer Committee Members, a Strategic Planning Committee, RMWD Staff, and members of the public. Each contributing party played an important and critical role in the planning process; sharing what they know about Rainbow Municipal Water District and its business operations. This collaborative process allowed the group to establish a clear and positive direction for the future of the District.

MEMBERS INCLUDED:

BOARD OF DIRECTORS:

- Division 1: Helene Brazier
- Division 2: Jack Griffiths
- Division 3: Tory Walker
- Division 4: Bob Lucy
- Division 5: Dennis Sanford

STRATEGIC PLANNING COMMITTEE:

- Tom Kennedy, General Manager
- Dawn Washburn, Executive Assistant
- Sherry Kirkpatrick, Engineering Manager
- Ed Bradley, Electrical/Electronic Technician
- Rene Bush, Human Resources Manager
- Juan Atilano, Operations Manager

COMMITTEE MEMBERS:

Budget & Finance Committee	Engineering Committee	Communications Committee
Harry Stitle, Chair	Timothy Prince, Chair	Mike Daily, Chair
Larry Carlstrom	Helene Brazier	Helene Brazier
Harry Clyde	Lee Kirby	Jeanna Kirby
Peter Hensley	Jim Murray	Elysian Kurnik
Bob Lucy	Mick Ratican	Tim O'Leary
Pam Moss	John Roberston	Dorothy Romani
Randy Ross	Harry Stitle	
	Tom Taufer	

STAFF MEMBERS:

GENERAL MANAGER OFFICE:

General Manager
Tom Kennedy

Executive Assistant
Dawn Washburn

Administrative Analyst
Cynthia Gray

Human Resources
Rene Bush
Jenn Wise

ENGINEERING:

Engineer
Sherry Kirkpatrick

Technician
Delia Rubio

Administration
Gloria Dechert

Inspections
David Hill

FINANCE:

Finance Manager
Vanessa Martinez
Midge Thomas (retired)

Accounting
Tammy Rakusan

Customer Service
Cindy Steward
Renee Rubio
Victor Tornero

Meters
Kenny Diaz
Chris Waite
Justin Chandler
Clem Taylor
Chris Hoelscher

OPERATIONS AND MAINTENANCE:

Construction
John Maccarrone
Armando Lopez
Wayne Nault
Scott Terrell
Thomas Sjuneson
Kyle Schilling
Justin Demary
Carlos Ramos
Ricardo Zaragoza

Valve Maintenance
Bryan Rose
Scott Simpson
Gerardo Cancino
Chuck Faust

Water Quality
Joe Perreira

Electrical
Ed Bradley
Mark Cline

Fleet
Rene Del Rio

Water Operations
Juan Atilano
Marc Walker
Steve Coffey
Jesus Hernandez
Chris Heincy
Jerry Kraft

Safety
Jeff Stacy

Wastewater
Ramon Zuniga
Victor Veenstra
Ruben Lopez
Brian Fonseca
Chris Hand

Purchasing
Andrew Echols

Information
Technology
Jordan Olmstead

RESOLUTION NO. 16-14**RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT
ADOPTING THE ANNUAL OPERATING AND CAPITAL IMPROVEMENT BUDGET FOR THE FISCAL
YEAR ENDING JUNE 30, 2017**

WHEREAS, the Rainbow Municipal Water District (“District”) is organized and operates pursuant to the Municipal Water District Law of 1911 commencing with Section 71000 of the California Water Code; and

WHEREAS, there has been presented to the Board of Directors a proposed Annual Operating and Capital Improvement Budget for The Fiscal Year Ending June 30, 2017 (“2017 Budget”); and

WHEREAS, on June 28, 2016, the Board of Directors received and considered all comments regarding the proposed 2017 Budget; and

WHEREAS, the proposed 2017 Budget has been reviewed and considered by the Board of Directors and it has been determined to be in the best interests of the District to adopt said budget for the sound financial operation of the District.

BE IT HEREBY RESOLVED by the Board of Directors of Rainbow Municipal Water District as follows:

1. The 2017 Budget, as detailed in the budget document entitled “Annual Operating and Capital Improvement Budget for the Fiscal Year Ending June 30, 2017,” is hereby adopted. A copy of the 2017 Budget is attached hereto and incorporated herein by reference.

2. The expenditure amounts designated for the Fiscal Year 2016-2017, pursuant to the 2017 Budget, are hereby appropriated and may be expended by the departments or funds for which they are designated.

3. The proposed amount of the San Diego County Water Authority Rate pass-through, as allowed shall be increased effective 01/01/2017.

4. The Recitals set forth above are incorporated herein and made an operative part of this Resolution.

5. If any section, subsection, sentence, clause or phrase in this Resolution or the application thereof to any person or circumstances is for any reason held invalid, the validity of the remainder of this Resolution or the application of such provisions to other persons or circumstances shall not be affected thereby. The Board of Directors hereby declares that it would have passed this Resolution and each section, subsection, sentence, clause or phrase

thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses, or phrases or the application thereof to any person or circumstance be held invalid.

6. This Resolution will be effective immediately upon adoption.

Adopted this 28th day of June, 2016.

Director Sanford, President Board of Director

Attest:

Dawn Washburn, Executive Secretary

RAINBOW MUNICIPAL WATER DISTRICT OFFICIALS

FOR THE FISCAL YEAR ENDING JUNE 30, 2017

BOARD OF DIRECTORS

DIVISION 1: DIRECTOR HELENE BRAZIER

DIVISION 2: DIRECTOR RICH BIGLEY

DIVISION 3: DIRECTOR TORY WALKER

DIVISION 4: DIRECTOR BILL STEWART

DIVISION 5: PRESIDENT DENNIS SANFORD

DISTRICT MANAGEMENT

TOM KENNEDY - GENERAL MANAGER

KARLEEN HARP - HUMAN RESOURCE MANAGER

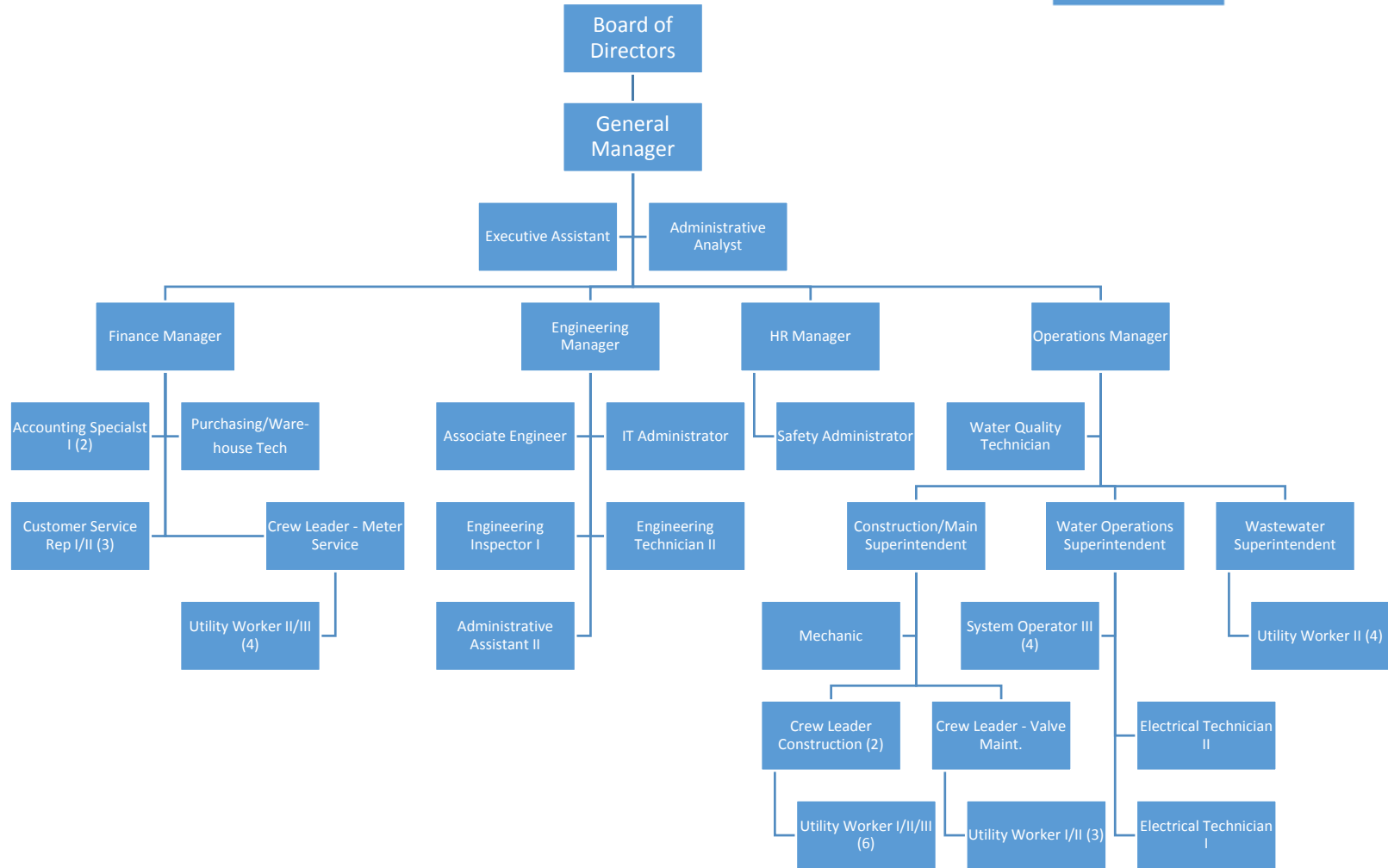
SHERRY KIRKPATRICK - ENGINEERING MANAGER

VANESSA MARTINEZ - FINANCE MANAGER

DARREN MILNER - OPERATIONS MANAGER

RAINBOW MUNICIPAL WATER DISTRICT ORGANIZATIONAL CHART

51 FTE's



PROFILE OF RAINBOW MUNICIPAL WATER DISTRICT

THE DISTRICT

The Rainbow Municipal Water District was organized on December 20, 1953, under the Municipal Water District Act of 1911 (commencing with section 71000 of the California Water Code). The Board of Directors is composed of five members who are elected by divisions of the District for four-year alternating terms, with the president being elected by the Board from among its members. Advisory Committees composed of residents from all divisions of the District assist the Board in water issues and financial planning. Operation, maintenance, and administration of the system is carried out by a staff of 51 full time employees under the direction of the General Manager, Thomas Kennedy.

The Rainbow Municipal Water District, comprising a total area of 82 square miles, is located in northwestern San Diego County, approximately two hours driving time from Los Angeles and one hour from San Diego. It is approximately 40 miles northeast of downtown San Diego, California and 90 miles southeast of the City of Los Angeles. The District share common boundaries with Riverside County, Camp Pendleton Marine Corps Base, the unincorporated community of Fallbrook and the City of Oceanside. The District boundaries encompass the unincorporated communities of Rainbow and Bonsall, as well as portions of Pala, Fallbrook and Vista.

The principal activity of the District is the development and operation of a water transmission and distribution system capable of delivering potable water throughout the District. The District's area of service is predominantly agricultural and includes approximately 5,200 homes and a total metered service of 7,800. In addition to water service, the District provides sewerage collection and disposal service to approximately 2300 accounts. On February 13, 2002, Rainbow Municipal Water District entered into a contract with the City of Oceanside, California to provide for the construction, operation, maintenance, and replacement of a wastewater system to service the needs of both The City and the District. The City owns the wastewater conveyance, treatment, and disposal facilities and the District has the contractual right to discharge wastewater in to the City's system. The City and the District have previously entered into agreements on January 2, 1973 and September 10, 1989. This agreement reflects the planned expansion and rehabilitation of facilities built from those previous agreements. Under the agreement, the District's share of cost for planned expansion and rehabilitation of the facilities would be 10%.

DISTRICT POWERS

The District has broad general powers to perform all necessary or proper acts, including but limited to the authority to acquire, plan, construct, maintain, improve, operate and repair

necessary works for the transmission and distribution of water for irrigation and other purposes and for reclamation of such water; the right of eminent domain; authority to levy taxes or, in lieu thereof, to fix and collect charges for water, including standby charges made to holders of title to land to which water may be made available, whether or not the water is actually used; authority to establish rules and regulations for the sale and distribution of water including rules for providing that water shall not be furnished to persons against whom there are delinquent water charges; authority to contract with the United States, the State and the agencies of either; and the power to join with one or more public agencies, private corporations or other persons for the purpose of carrying out any of the powers of the District.

WATER SUPPLY OPERATIONS

Since Rainbow Municipal Water District began water service in 1954, the District's source of supply has been water purchased from the San Diego County Water Authority ("SDCWA"). About 70% of the water used is for agricultural purposes; all water is of domestic quality.

The SDCWA is a County Authority organized on June 9, 1944 under the County Authority Act, California Statutes 1943, Chapter 545, as amended. SDCWA's primary purpose is to supply water to areas in the County for distribution to the SDCWA's member agencies in order to meet their respective needs. SDCWA's service area encompasses 1,418.2 square miles, which represents about one-half of the land acreage of the County. There are currently 24 member agencies served by the SDCWA consisting of 6 cities, 17 special districts and the US Marine Corps base at Camp Pendleton. The San Diego County Water Authority receives its water from The Metropolitan Water District of Southern California, of which the Authority is a member agency. Delivery of this water is made by the San Diego County Water Authority through aqueducts, all of which traverse the District.

Historically, the Water Authority depended almost exclusively on water supplies imported from the Colorado River and Northern California by the Metropolitan Water District of Southern California. That changed in 2003 with the start of the largest farm-to-urban water conservation and transfer agreement in the nation with the Imperial Irrigation District, which now accounts for about one-third of San Diego County's water supply. In late 2015, the Water Authority added a historic new water source to its portfolio with the completion of the nation's largest seawater desalination plant in Carlsbad. Today, the Water Authority and its member agencies have identified potable reuse of recycled water as the next major source of local water supply, while continuing to aggressively promote water conservation as a civic responsibility.

The Water Authority is governed by a 36-member Board of Directors representing the 24 member agencies. A member of the San Diego County Board of Supervisors also serves as a non-voting member to the Water Authority Board.

The Metropolitan Water District is a regional wholesaler that delivers water to 26 member public agencies – 14 cities, 11 municipal water districts, one county water authority – which in

turn provides water to more than 19 million people in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties. The Metropolitan Water District, to supplement its water supply from the Colorado River, has entered into a contract with the State of California for the delivery of water via the State Water Project. Metropolitan is governed by a 38-member board of directors who represent their respective member agencies ensuring each member agency is part of the governance of Metropolitan.

To supply the more than 300 cities and unincorporated areas in Southern California with reliable and safe water, Metropolitan owns and operates an extensive water system including: The Colorado River Aqueduct, 16 hydroelectric facilities, nine reservoirs, 819 miles of large-scale pipes and five water treatment plants. Four of these treatment plants are among the 10 largest plants in the world. In fact, Metropolitan is the largest distributor of treated drinking water in the United States. The District imports water from the Feather River in Northern California and the Colorado River to supplement local supplies. It also helps its member agencies develop water recycling, storage and other local resource programs to provide additional supplies and conservation programs to reduce regional demands.

Metropolitan currently delivers an average of 1.7 billion gallons of water per day to a 5,200-square-mile service area.

SYSTEM PRESSURES

The range of water pressures experienced at any location is a function of the hydraulic grade and the service elevation. Within a specific pressure zone, the hydraulic grade is affected by the reservoir or tank water level and/or pressure reducing valve settings, friction losses in the distribution system, and the flow delivered through aqueduct connections, if applicable. The maximum static pressure within a pressure zone is based on the high-water level of the reservoir or highest pressure reducing valve setting and the elevation at any specific point in the zone. The maximum desired pressure within the distribution system is 150 pounds per square inch (psi) and the maximum pressure should be no greater than 200 psi. It is noted however that, due to the hilly terrain and dominance of agricultural customers, there are currently many areas of the RMWD distribution system where pressures exceed 200 psi. The maximum desired pressure within the transmission system is 300 psi. It is much more difficult to control the pressure in transmission pipelines as they must maintain the grade line of the zone and are typically less flexible in terms of installation locations. Despite the District's terrain, the vast majority of the District transmission system is within the desired maximum pressure.

LEGEND

- XX' XX RESVR 00.0 MG
HIGH WATER ELEVATION
RESERVOIR NAME
RESERVOIR CAPACITY
- XX' XX TANK
HIGH WATER ELEVATION
TANK NAME
TANK CAPACITY
- PX
BOOSTER PUMP STATION AND REFERENCE NO.
- EMERGENCY PUMP
- SDCWA AQUEDUCT CONNECTION NO.
(MAXIMUM/MINIMUM HGL)
- EMERGENCY INTERCONNECT SUPPLY
(MAXIMUM/MINIMUM HGL)
- XX
ZONE DESIGNATION
(LENGTH OF SYMBOL REPRESENTS SERVICE ELEVATION RANGE)
- PX
PRESSURE REDUCING STATION AND REFERENCE NO.
- ⊗
GATE/BALL/PLUG VALVE - NORMALLY CLOSED
(OPENED TO FILL TANKS OR UNDER EMERGENCY CONDITIONS)

PRESSURE REDUCING STATION REFERENCE (HI/LOW) PSI

1	MAGEE PUMP STATION (337/223) PSI	33	BONSALL VESSELS RANCH (350/120) PSI
2	U1 U2 PUMP STATION (170/50) PSI	34	MOOSA CANYON LINE
3	BOOSTER STATION #4 (100/50) PSI	35	WEST LILAC PR (225/0) PSI
4	VALLECITOS (PUMP STATION NORTH) (240/45) PSI	36	ASCOT PARK (260/70) PSI
5	PUMP STATION 1 SOUTH (35/0) PSI	37	VILLAS FORE (250/125) PSI
6	STEWART CANYON (220/150) PSI	38	BONSALL PARK
7	MOON RIDGE (200/107) PSI	39	THE HEIGHTS (CONDOS)
8	LOS ALAMOS (210/20) PSI	40	VIA CASITAS (260/110) PSI
9	GARRET RANCH (270/187) PSI	41	LAS CASITAS (225/0) PSI
10	HUNTLEY PUMP STATION (240/143) PSI	42	WEST LILAC (300/220) PSI
11	ATKINS (124/100) PSI	43	SUNSET (200/95) PSI
12	PALA LAKE NORTH (260/100) PSI	45	SLR DOWNS TRACK (265/125) PSI
13	PALA LAKE SOUTH (290/120) PSI	46	LAKE VISTA (260/100) PSI
14	HORSE RANCH CREEK (253/120) PSI	47	COTTON TAIL (220/110) PSI
15	PALA MESA CONDOS (300/75) PSI	48	CAMINO DEL REY (332/225) PSI
16	PALA MESA GREENS (285/120) PSI	49	VIA MARIPOSA WEST (295/95) PSI
17	WILT & CITRUS	50	TRES AMIGOS EAST (110/85) PSI
18	CANONITA (135/85) PSI	51	TRES AMIGOS WEST (110/70) PSI
19	LAKE TREE EAST (230/110) PSI	52	VIA PUERTA DEL SOL (240/0) PSI
20	BECK	53	DENTRO DE LOMAS (365/260) PSI
21	LAKE TREE WEST (230/100) PSI	54	VILLA MEDICI (140/60) PSI
22	OKLAFF (200/120) PSI	55	VILLA TOSCANA (110/70) PSI
23	DAISEY LANE (245/75) PSI	56	VIA MARIPOSA EAST (295/95) PSI
24	U-4 (210/70) PSI	57	HUTTON 4" (100/80) PSI
25	ESTERILINA (116/70) PSI	58	TRENDAL 4" (150/85) PSI
26	FIRE ROAD (105/55) PSI	59	OLD RIVER ROAD (270/0) PSI
27	76 & GIRD (277/225) PSI	60	HOLLY LANE (250/70) PSI
28	VIA MONSERATE (280/0) PSI	61	SAGEWOOD (320/273) PSI
29	RANCHO MONSERATE "W" (290/110) PSI	62	MOOSA CREST (HIALEAH) (125/110) PSI
30	RANCHO MONSERATE "E" (290/110) PSI		
31	MORRO BOOSTER STATION (140/120) PSI		
32	SWEETGRASS (249/90) PSI		

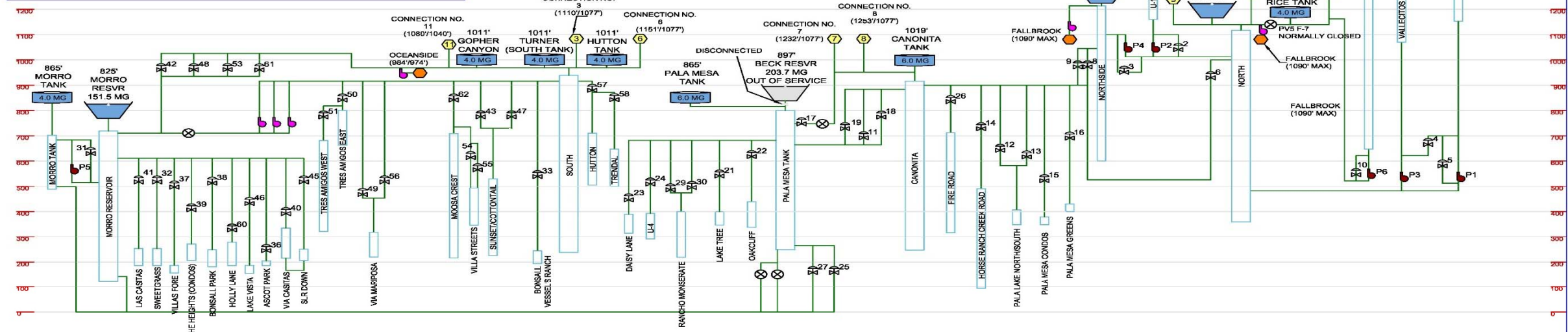


FIGURE 5-1
EXISTING SYSTEM HYDRAULIC SCHEMATIC

SYSTEM DESCRIPTION

RMWD's existing water distribution system is comprised of 12 major pressure zones with storage facilities. Four of the major zones are supplied directly from SDCWA aqueduct connections and the remaining major zones are supplied through pressure reducing stations or booster pump stations. In addition to the major zones, there are 30 reduced pressure areas that are supplied from the major zones through pressure reducing stations. The RMWD hydraulic profile schematic showing the aqueduct connections, pressure zones, storage facilities, booster pump stations, pressure reducing stations and emergency supply interconnects.

The twelve major pressure zones within the RMWD system are identified by a name and number that corresponds to the hydraulic grade elevation set by the high water level of the tank or reservoir. The District is characterized by steep and varying terrain, and the pressure zone grades range from 825 feet to 2,160 feet above mean sea level. The hydraulic grade line and water supply sources for each major pressure zone are summarized in Table below. The District was formed from the merging of several water purveyors' decades ago, and as a result the gradient spacing between zones is irregular. Zone boundaries have been modified over time to increase pressures in some local critical areas or reduce pressures in older pipelines. Field operators adjust some of the pressure boundaries seasonally to improve water circulation. The Morro, South, Pala Mesa and Canonita zones each include multiple smaller reduced pressure areas that are supplied from pressure reducing stations.

Zone	HGL (feet)	Main	Secondary
Magee	2,160	Rainbow Heights via Booster PS 7	None
Rainbow Heights	1,967	North Zone via Booster PS 1	Magee
Gomez	1,710	North Zone via Booster PS 6	Rainbow Heights
U-1	1,579	North Zone via Booster PS 2	None
Vallecitos	1,338	North Zone via Booster PS 3	Rainbow Heights
Northside	1,282	North Zone thru Booster PS 4	None
North	1,212	Connections 1,9, and 10	Northside & Rainbow Heights
Canonita	1,019	Connections 7 and 8	Northside & North
South	1,011	Connections 3,6, and 11	Morro via emergency pumps
Pala Mesa	897	Connection 7	Canonita
Morro Tank	865	Morro Zone thru Booster PS 5	Pala Mesa via Morro Zone
Morro	825	South	Pala Mesa
HGL = Hydraulic grade line			

The existing distribution system has over 320 miles of pipelines ranging in size from 4-inches to 42-inches in diameter. Most of the smaller diameter pipelines are constructed of asbestos cement pipe (ACP) or steel, although ductile iron pipe (DIP) is used in high pressure areas. Larger transmission mains are constructed of CMLC steel or DIP. Table below summarizes pipeline lengths by diameter.

Pipeline Summary			
Pipeline Diameter (inches)	Total Pipeline Length (miles)	Pipeline Diameter (inches)	Total Pipeline Length (miles)
4	4.5	20	10.9
6	65.1	22	1
8	114.7	24	5.8
10	17.7	27	0.3
12	42.2	30	0.6
14	20.3	36	0.4
16	27	42	0.6
18	11.7		
Total Length of Pipe			323

SYSTEM OPERATIONS

Operation of the RMWD water distribution system is very complex due to the large number of pressure zones, supply locations, and large capacity storage facilities which require frequent cycling or turnover to maintain water quality. Furthermore, the water distribution system is flexible in that supply from the eight aqueduct connections can be routed to different parts of the distribution system by making changes to several key valve settings. Reservoir water levels are connected to the RMWD SCADA system such that the water operators are able to monitor the system throughout the day at the water operations center. However, system operation relies upon a number of manual changes that are made from operator judgment rather than automation such as adjusting the flow orders from FCF connections based on tank levels.

The large storage capacity of Morro reservoir requires special operation of the distribution system to maintain water quality. The distribution system is operated in either a Morro fill or Morro drain mode, with the duration of each mode varying seasonally but typically lasting two weeks or more. Changing between modes requires the manual closing and opening of several pressure stations in addition to a number of operational changes. Tank water levels in several pumped zones are also operated in a fill/drain mode with water levels set low to improve the turnover rate. In addition to normal supply operations, system operators have several documented procedures for alternative supplies to zones in the event that pump stations fail,

tanks need to be removed from service, or when aqueducts are shut down for service. During planned shutdowns of the SDCWA Second Aqueduct (Connections 3, 6, 7, 8, 9, and 11), water from the North and Northside Reservoirs is supplied down to the Canonita Zone through bypass valves and pressure reducing stations. The remaining zones normally supplied from the Second Aqueduct are supplied from excess storage capacity in the Morro Reservoir via portable gas powered pumps. Four portable pumps are utilized to pump water from the Morro Zone to the South Zone. Supply to the South Zone can also be supplemented from the City of Oceanside's Weese Water Filtration Plant from a portable pump. The Northside Zone, North Zone, and all zones that are pumped from the North Zone are normally supplied from Connections 1 and 10 on the First Aqueduct and Connection 9 on the Second Aqueduct. During a shutdown of both aqueducts, these zones rely on water from in-zone tank storage, the North and Northside Reservoirs, and additional supply from FPUD's Red Mountain Reservoir, which is pumped into the North Reservoir. An emergency pump station at the Beck Reservoir site can also be utilized during a shutdown of both aqueducts to supply the Canonita Zone from the Pala Mesa Zone.



BECK RESERVOIR

SEWAGE FACILITIES

The collection and disposal of sewage was first undertaken by the District in March 3, 1963, in conjunction with two subdivisions and the Fallbrook Country Club. In 1964 the second system was constructed to accommodate Pala Mesa Village and the Pala Mesa Country Club facilities and Motel. Later a 200 space mobile home park was connected to the system. Both systems were financed through the sale of improvement district bonds.

The third sewage collection and disposal system was constructed by the developer of San Luis Rey Country Club and dedicated by the developer. In 1969 the subject improvement district was formed to expand sewerage facilities to accommodate the San Luis Rey Downs development and the community of Bonsall commercial businesses.

For 25 years following its founding in 1954, total water demands in the District service area steadily increased, as agricultural acreage and population increased. By 1984, demands had climbed to almost 34,000 acre feet per year (AFY). Demands then dropped sharply during the drought restrictions of 1991-93, as mandatory cutbacks led to the stumping of avocado groves and other water use reductions, but by 2002 had rebounded almost to pre- 1991 conditions. Beginning in 2008, demands again declined sharply, this time in response to economic recession, price increases, a new round of drought restrictions, and increased adoption of water conservation measures. These factors have combined to produce a fundamental downward shift in per capita water use, with per account use declining by 35 percent from 2006 to 2013. Per capita use reached a minimum during the period from 2010 to 2012, but this was in response to economic recession, cooler than normal summer weather, and other impermanent conditions. Considering factors of economic equilibrium, average weather conditions, and normal water supply conditions (without water use restrictions in place), the Master Plan has judged calendar year 2013 to be representative of normal water use conditions in the current era, and has defined calendar year 2013 water use as an appropriate baseline condition for use in demand forecasting.

Six wastewater lift stations are operated within the District's service area. The lift station type and location are described for each station below:

- Lift Station 1. This station is located just south of the intersection of Golf Club Drive and Old River Road on the south side of the San Luis Rey River. It consists of a Smith and Loveless packaged lift station with three 5-hp wetwell/drywell pumps and a 3,000 gallon working volume wet well. The existing pumps were rated at 625 gpm each and there is a backup generator in case of a power failure. The District replaced the pumps at this station in kind in 1994. Lift Station 1 is currently under design for replacement which will expand the station's capacity to serve peak wet weather and future projected sewer flow. The replacement design has considered relocating the station to the north side of the San Luis Rey River in order to

abandon the siphon crossing beneath the river and replacing it with a force main. In addition, the new design will strive to move the station further away from nearby residences.

- **Lift Station 2.** This station is located at the intersection of Little Gopher Canyon Road and Old River Road, in the southwest corner of the District. The station is a Flygt/Xylem packaged lift station consisting of three 70-hp wetwell/drywell pumps and a 14,000 gallon working volume wet well. The existing pumps are rated at 1,500 gpm each. There is also a backup generator in case of a power outage. This station was replaced in 2010 due to a history of problems with overflows. Capacity was increased from 1,000 gpm per pump to the current 1,500 gpm per pump to allow significant capacity to serve the ultimate projected sewer flow.

- **Plant B Lift Station.** This station is located south of the District offices on Old Highway 395. This station is a Smith & Loveless prefabricated station consisting of two 5-hp wet well/dry well pumps and an 800 gallon working volume wet well. The pumps are each rated at 320 gpm. The station has a standby generator to run the lift station in the case of a power failure. This is the District's oldest lift station and is located in a sub-basin subject to high infiltration. Abandonment of this station is planned to coincide with the construction of the Pankey Sewer Lift Station.

- **Rancho Monserate Lift Station.** Wastewater generated at the Rancho Monserate Mobile Home Park is tributary to this station, located north of the park off Dulin Road. Collected wastewater is conveyed north via forcemain for approximately 1,740 feet where it intercepts the Rancho Viejo Forcemain. The Rancho Viejo Forcemain transports the wastewater an additional 2,350 feet before it discharges into Manhole No. 20L-M020 at the intersection of Old Highway 395 and Pala Road. The Rancho Monserate lift station is a Flygt/Xylem lift station consisting of two 5-hp wet well/dry well pumps with a 300 gallon working volume wet well. The pumps are each rated at 320 gpm. The station also has a backup power generator in the case of a power failure.

- **Rancho Viejo Lift Station.** This station is located on Dulin Road east of I-15. This station was built in 1990 to transport wastewater generated in the Lake Rancho Viejo subdivision. The lift station is a Gorman-Rupp prefabricated station consisting of two 40-hp wet well/dry well pumps and a 600 gallon working volume wet well. The pumps are each rated at 805 gpm. This station also has a backup power generator.

- **Fallbrook Oaks Lift Station.** This station is located south of the intersection of Sarah Ann Drive and Kate Lendre Drive in the Fallbrook Oaks subdivision off Gird Road. This is the only station that contains two submersible Meyer's pumps inside of a 500 gallon working volume wet well. It consists of two 250 gpm, 5-hp submersible Meyer's pumps. The station has a standby generator to provide power to the lift station in the case of a power failure.

HISTORICAL USE AND RECENT TRENDS

Calendar Year	Deliveries (AF)
1980	29,300
1981	33,815
1982	24,843
1983	23,746
1984	33,806
1985	28,886
1986	29,298
1987	27,382
1988	32,028
1989	34,828
1990	34,920
1991	24,567
1992	26,460
1993	22,997
1994	22,832
1995	20,872
1996	23,223
1997	24,906
1998	19,924
1999	28,721
2000	29,203
2001	26,803
2002	32,125
2003	30,472
2004	30,336
2005	28,911
2006	29,929
2007	31,865
2008	24,128
2009	26,894
2010	18,322
2011	19,276
2012	21,918
2013	21,526
2014	22,625
2015	17,868

For 25 years following its founding in 1954, total water demands in the District service area steadily increased, as agricultural acreage and population increased. By 1984, demands had climbed to almost 34,000 acre feet per year (AFY). Demands then dropped sharply during the drought restrictions of 1991-93, as mandatory cutbacks led to the stumping of avocado groves and other water use reductions, but by 2002 had rebounded almost to pre- 1991 conditions.

Beginning in 2008, demands again declined sharply, this time in response to economic recession, price increases, a new round of drought restrictions, and increased adoption of water conservation measures. These factors have combined to produce a fundamental downward shift in per capita water use, with per account use declining by 35 percent from 2006 to 2013. Per capita use reached a minimum during the period from 2010 to 2012, but this was in response to economic recession, cooler than normal summer weather, and other impermanent conditions.

Considering factors of economic equilibrium, average weather conditions, and normal water supply conditions (without water use restrictions in place), the Master Plan has judged calendar year 2013 to be representative of normal water use conditions in the current era, and has defined calendar year 2013 water use as an appropriate baseline condition for use in demand

forecasting.



2050 REGIONAL GROWTH FORECAST (adopted Oct. 2011)
ZIP Code 92028

POPULATION AND HOUSING

	2008	2020	2030	2040	2050	2008 to 2050 Change*	
						Numeric	Percent
Total Population	47,191	50,245	58,362	64,424	67,484	20,293	43%
Household Population	46,584	49,540	57,465	63,242	66,128	19,544	42%
Group Quarters Population	607	705	897	1,182	1,356	749	123%
Civilian	607	705	897	1,182	1,356	749	123%
Military	0	0	0	0	0	0	0%
Total Housing Units	16,753	17,844	20,266	21,847	22,605	5,852	35%
Single Family	13,135	14,114	16,162	17,569	18,126	4,991	38%
Multiple Family	2,696	2,834	3,209	3,394	3,592	896	33%
Mobile Homes	922	896	895	884	887	-35	-4%
Occupied Housing Units	15,792	16,680	19,119	20,668	21,444	5,652	36%
Single Family	12,438	13,184	15,246	16,620	17,199	4,761	38%
Multiple Family	2,510	2,667	3,040	3,222	3,415	905	36%
Mobile Homes	844	829	833	826	830	-14	-2%
Vacancy Rate	5.7%	6.5%	5.7%	5.4%	5.1%	-0.6	-11%
Single Family	5.3%	6.6%	5.7%	5.4%	5.1%	-0.2	-4%
Multiple Family	6.9%	5.9%	5.3%	5.1%	4.9%	-2.0	-29%
Mobile Homes	8.5%	7.5%	6.9%	6.6%	0.0%	-8.5	-100%
Persons per Household	2.95	2.97	3.01	3.06	3.08	0.13	4%

HOUSEHOLD INCOME (real 1999 dollars, adjusted for inflation)

	2008	2020	2030	2040	2050	2008 to 2050 Change*	
						Numeric	Percent
Households by Income Category							
Less than \$15,000	1,495	1,259	1,146	1,052	986	-509	-34%
\$15,000-\$29,999	2,464	2,206	2,134	2,038	1,954	-510	-21%
\$30,000-\$44,999	2,474	2,401	2,459	2,438	2,393	-81	-3%
\$45,000-\$59,999	2,239	2,220	2,434	2,508	2,514	275	12%
\$60,000-\$74,999	1,959	1,873	2,157	2,302	2,359	400	20%
\$75,000-\$99,999	1,950	2,343	2,809	3,087	3,226	1,276	65%
\$100,000-\$124,999	1,451	1,556	1,969	2,250	2,398	947	65%
\$125,000-\$149,999	653	1,007	1,330	1,571	1,709	1,056	162%
\$150,000-\$199,999	541	1,053	1,468	1,800	2,002	1,461	270%
\$200,000 or more	566	762	1,213	1,622	1,903	1,337	236%
Total Households	15,792	16,680	19,119	20,668	21,444	5,652	36%
Median Household Income							
Adjusted for inflation (\$1999)	\$54,801	\$62,034	\$69,642	\$74,974	\$78,999	\$24,198	44%

***IMPORTANT INFORMATION ABOUT THIS FORECAST:**

This forecast was accepted by the SANDAG Board of Directors in October 2011 for distribution and use in planning and other studies. This forecast represents one possibility for future growth in the San Diego region. It is intended to represent a likely prediction of future growth, but it is not intended to be a prescription for growth. The 2050 Regional Growth Forecast represents a combination of economic and demographic projections, existing land use plans and policies, as well as potential land use plan changes that may occur in the region between 2030 and 2050. In general, growth between 2008 and 2030 is based on adopted land use plans and policies, and growth between 2030 and 2050 includes alternatives that may, in some cases, reach beyond existing adopted plans.

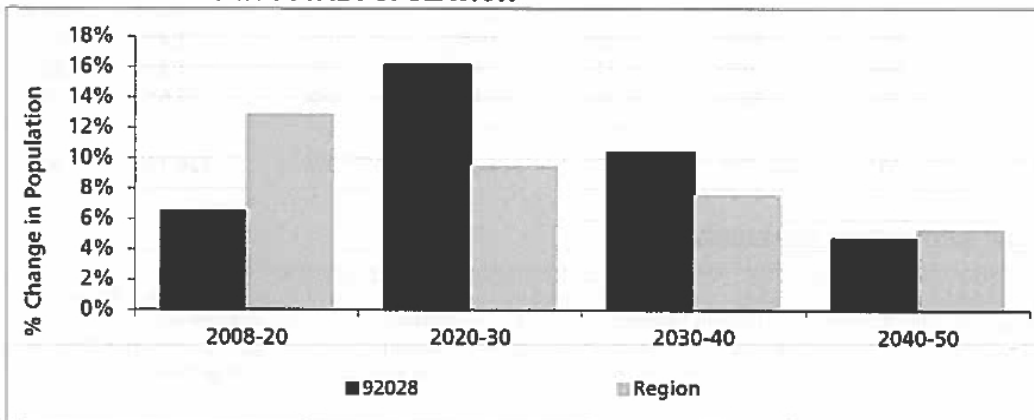
POPULATION BY AGE

	2008	2020	2030	2040	2050	2008 to 2050 Change*	
						Numeric	Percent
Total Population	47,191	50,245	58,362	64,424	67,484	20,293	43%
Under 5	3,564	3,312	3,761	4,007	4,016	452	13%
5 to 9	3,270	3,562	3,902	4,294	4,345	1,075	33%
10 to 14	3,096	3,444	3,612	3,992	4,168	1,072	35%
15 to 17	2,135	2,028	2,253	2,436	2,533	398	19%
18 to 19	1,529	1,271	1,448	1,514	1,615	86	6%
20 to 24	3,490	3,165	4,064	4,124	4,324	834	24%
25 to 29	3,845	4,331	4,730	5,175	5,303	1,458	38%
30 to 34	3,174	3,130	3,176	4,109	4,167	993	31%
35 to 39	2,542	2,242	2,947	3,151	3,476	934	37%
40 to 44	2,476	2,483	2,850	2,839	3,563	1,087	44%
45 to 49	2,901	2,686	2,689	3,328	3,516	615	21%
50 to 54	3,020	2,843	3,040	3,490	3,348	328	11%
55 to 59	2,713	3,218	3,278	3,132	3,849	1,136	42%
60 to 61	1,028	1,261	1,293	1,229	1,493	465	45%
62 to 64	1,176	1,816	1,870	1,953	2,079	903	77%
65 to 69	1,824	2,974	3,618	3,481	3,183	1,359	75%
70 to 74	1,536	2,437	3,461	3,357	3,184	1,648	107%
75 to 79	1,518	1,762	2,973	3,576	3,296	1,778	117%
80 to 84	1,101	964	1,732	2,387	2,272	1,171	106%
85 and over	1,253	1,316	1,665	2,850	3,754	2,501	200%
Median Age	34.2	37.0	38.8	39.1	39.7	5.5	16%

POPULATION BY RACE AND ETHNICITY

	2008	2020	2030	2040	2050	2008 to 2050 Change*	
						Numeric	Percent
Total Population	47,191	50,245	58,362	64,424	67,484	20,293	43%
Hispanic	18,005	21,721	27,673	33,158	37,150	19,145	106%
Non-Hispanic	29,186	28,524	30,689	31,266	30,334	1,148	4%
White	25,990	24,976	26,614	26,775	25,621	-369	-1%
Black	763	853	922	935	883	120	16%
American Indian	325	275	194	138	105	-220	-68%
Asian	892	1,134	1,474	1,773	2,002	1,110	124%
Hawaiian / Pacific Islander	203	165	174	176	182	-21	-10%
Other	61	56	57	65	70	9	15%
Two or More Races	952	1,065	1,254	1,404	1,471	519	55%

GROWTH TRENDS IN TOTAL POPULATION



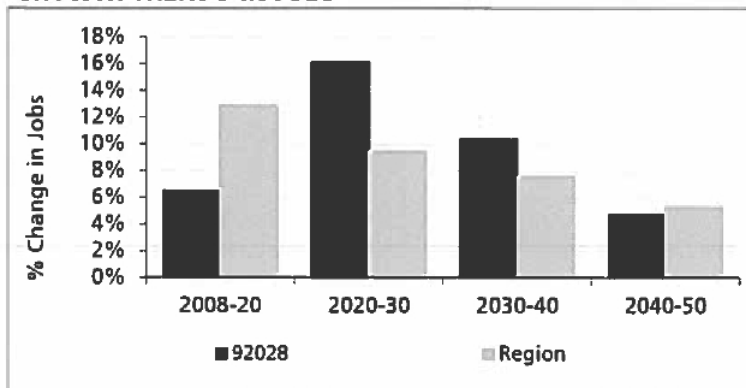
EMPLOYMENT

	2008	2020	2030	2040	2050	2008 to 2050 Change*	
						Numeric	Percent
Jobs	11,500	12,468	14,359	16,191	17,678	6,178	54%
Civilian Jobs	11,500	12,468	14,359	16,191	17,678	6,178	54%
Military Jobs	0	0	0	0	0	0	0%

LAND USE¹

	2008	2020	2030	2040	2050	2008 to 2050 Change*	
						Numeric	Percent
Total Acres	75,712	75,712	75,712	75,712	75,712	0	0%
Developed Acres	53,507	56,336	61,109	65,599	67,291	13,785	26%
Low Density Single Family	17,369	21,679	28,556	34,242	36,258	18,889	109%
Single Family	2,488	2,822	3,449	3,705	3,903	1,414	57%
Multiple Family	118	120	123	127	133	15	13%
Mobile Homes	233	233	233	233	233	0	0%
Other Residential	54	54	54	54	54	0	0%
Mixed Use	0	6	22	32	47	47	-
Industrial	498	794	910	1,006	1,091	593	119%
Commercial/Services	762	781	798	818	834	72	10%
Office	23	24	25	26	25	2	8%
Schools	163	185	222	250	268	105	65%
Roads and Freeways	2,253	2,253	2,253	2,253	2,253	0	0%
Agricultural and Extractive ²	13,197	11,037	8,112	6,500	5,838	-7,359	-56%
Parks and Military Use	16,348	16,348	16,352	16,354	16,354	7	0%
Vacant Developable Acres	20,107	17,278	12,504	8,015	6,323	-13,785	-69%
Low Density Single Family	18,918	16,335	12,052	7,800	6,247	-12,671	-67%
Single Family	934	720	319	132	48	-886	-95%
Multiple Family	5	4	1	0	0	-5	-100%
Mixed Use	7	5	4	4	2	-6	-78%
Industrial	174	150	81	48	6	-168	-96%
Commercial/Services	47	42	28	14	1	-46	-97%
Office	0	0	0	0	0	0	0%
Schools	12	12	11	11	11	-1	-11%
Parks and Other	2	2	2	0	0	-2	-100%
Future Roads and Freeways	7	7	7	7	7	0	0%
Constrained Acres	2,098	2,098	2,098	2,098	2,098	0	0%
Employment Density³	8.0	7.0	7.3	7.7	7.9	-0.1	-1%
Residential Density⁴	0.8	0.7	0.6	0.6	0.6	-0.3	-33%

GROWTH TRENDS IN JOBS



Notes:

- 1 - Figures may not add to total due to independent rounding.
- 2 - This is not a forecast of agricultural land, because the 2050 Regional Growth Forecast does not account for land that may become agricultural in the future. Also, some types of development that occur on agricultural land, such as low density single family residential, may allow for the continuation of existing agricultural use.
- 3 - Civilian jobs per developed employment acre (industrial, retail, office, schools, and half of mixed use acres).
- 4 - Total housing units per developed residential acre (single family, multiple family, mobile home, other, and half of mixed use acres).

CLIMATE AND TOPOGRAPHY

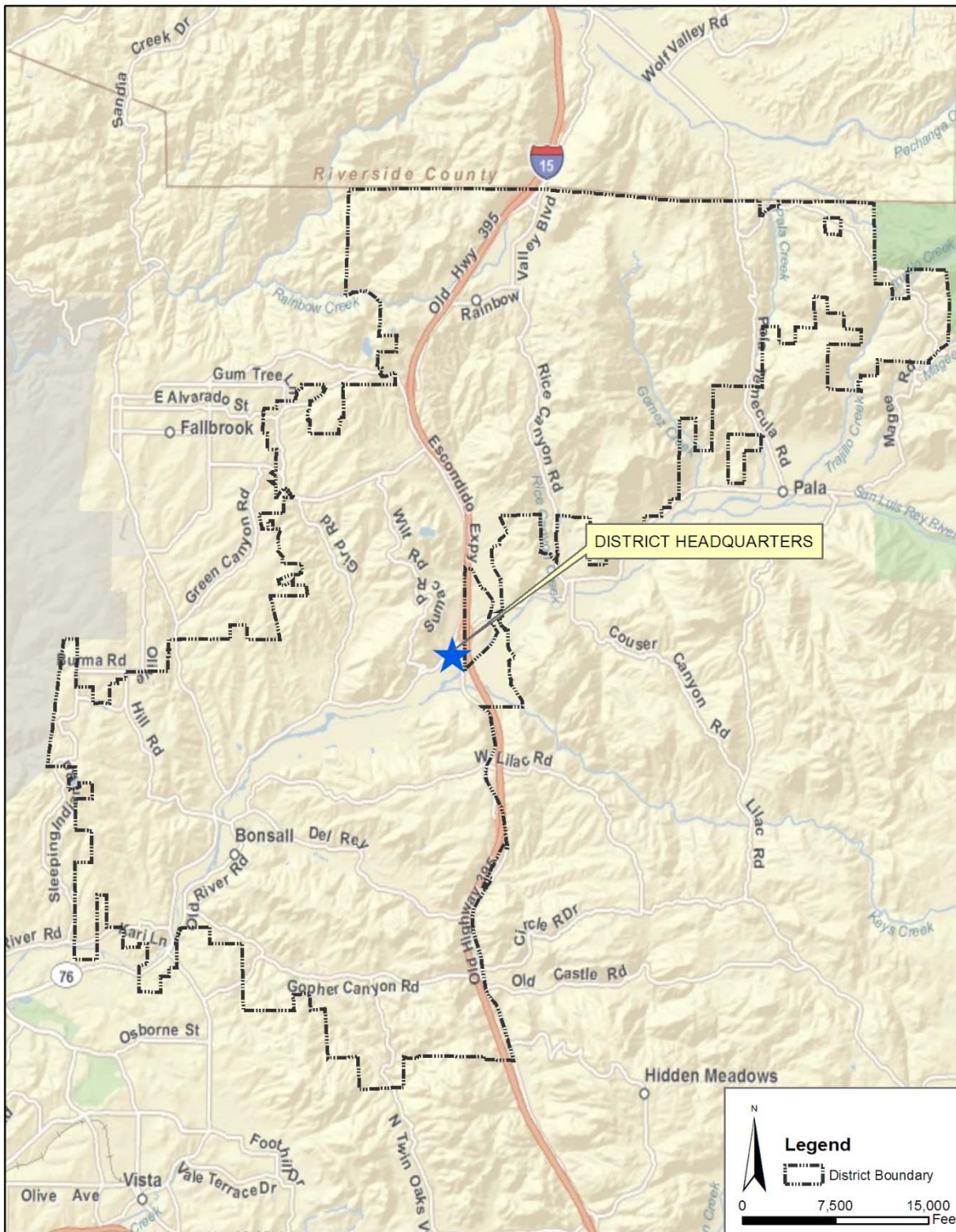
The District is about 20 miles from the ocean. While climate in the District is typical of Southern California, the Santa Margarita Mountains partially shield it from moderating cool sea breezes, so that it shows greater temperature extremes than most coastal areas. Rainfall usually occurs between November and April, and average 15 inches per year.

The topography of the District ranges from relatively level valley lands to steeply sloping ridges with long, narrow canyons. Elevations vary from 120 feet in the San Luis Rey River basin to mountains over 2,200 feet high. This configuration of land enables dense, cool air to slide off the valley sides, creating a continuous mild turbulence on the valley floor, which results in a low incidence of frost essential to the growth of avocados and citrus, the major crops grown in the District.

THE DISTRICT OFFICE



District's Service Area Map



EMPLOYEE COMPENSATION & BENEFITS

DEFERRED COMPENSATION MATCHING PROGRAM

As of August 15, 2014 the District has provided a matching program of up to \$100.00 per pay period per employee. The District's contribution would only be required if an employee contributes a like amount or more to the deferred compensation program.

ONE-TIME MERIT AWARD

When an employee has been at the top step of his/her classification for a year or more, the employee will be eligible for a 2 ½% merit award as a lump sum payment at his/her next annual evaluation with an overall rating of above satisfactory or better. Employees will be eligible for this award once during the current MOU term 2014-2017.

COMPENSATORY TIME

When any employee works overtime, the employee may be compensated by the use of compensatory time at a rate, either one and one-half or double his/her regular rate of pay as specified in the Overtime Section, except for Standby Duty or Patrol Duty.

Probationary employees are not eligible to accrue compensatory time during their 2080 work hour probationary period.

No employee shall be allowed to accumulate over 50 hours of compensatory time without written permission of the department head. Any time over 50 hours shall not be eligible for accumulation and shall be included as hours paid in the employee's paycheck for the period earned. Compensatory time shall be granted at such times and in such time blocks as are mutually agreed upon between the involved employee and his/her supervisor; permission to utilize compensatory time off shall not be unreasonably denied by the supervisor if operating requirements will not be adversely affected.

All unused compensatory time will be paid out on the last pay day in June if not used prior to that time.

Upon separation from the District employees shall be reimbursed for 100% of their accumulated compensatory time balance at their present rate of pay.

PAID TIME OFF

Paid Time Off shall be granted to each REA/RASCE employee and shall be accrued on a daily basis prorated as follows:

Period of Service	PTO Hours per Year	Maximum Accrual
0 through completed 4th year	200 hours	400 hours
Start of 5 th year through completed 9 th year	240 hours	480 hours
Start of 10 th year and on	280 hours	560 hours

Employees may accumulate Paid Time Off up to a maximum of two times the employee’s annual entitlement. Upon reaching the maximum, accrual will cease. If a General Leave request has been previously approved by the District, and through no fault of the employee the leave request is cancelled by the District and an employee reaches the maximum accrual then the District will compensate the employee for additional hours accumulated beyond the maximum accrual until the requested leave can be granted.

PAID TIME OFF BUY BACK

Employees may cash out accrued paid time off (PTO) of a minimum of 40 hours once per year with the following stipulations:

- An IRREVOCABLE request must be completed and submitted during the month of December for cashing out PTO in the following calendar year.
- The irrevocable request must state which month of the following calendar year the PTO cash out is to occur. The cash out will be paid on the last day payday
- The irrevocable request may not exceed one year’s PTO accrual (200, 240, 280 hours).
- Employee must have taken at least ten days’ cumulative leave (PTO) within the previous twelve-month period.
- Employee must maintain a minimum balance of 120 hours of accrued PTO.
- A request to cash out accrued PTO due to reasons of hardship may be made at any time. The hardship request must be approved by the general manager and is subject to the unforeseeable emergency definitions of the internal revenue code. (Title 26, section 1.409a-3).

This language will remain in effect as long as the IRS makes no other changes or the district and associations negotiate to eliminate the PTO buy back option.

HOLIDAYS

The District will provide 12 paid holidays as defined in the Employee Handbook.

MEDICAL, DENTAL AND VISION INSURANCE

The District shall pay for employees’ individual and dependent group health and hospitalization, dental and vision insurance as follows:

Dental and Vision:

The District will cover 100 percent of the premium for employees and dependents.

Medical Health Care Insurance:

The District will cover 100 percent of the premium for employees.

The District will freeze its current contribution rates for dependent insurance as follows:

PPO one dependent	\$660.23 monthly
PPO family	\$841.98 monthly
HMO one dependent	\$476.20 monthly
HMO family	\$842.89 monthly

If an employee desires to participate in dependent insurance, they will be required to pay any increase in insurance premium rates for the duration of this agreement.

RETIREMENT HEALTH CARE CONTRIBUTION

Upon retirement at age 50 or older and with a minimum of ten (10) years of continuous service with the District the District agrees to assist retired employees and their retired spouses with health and dental insurance plans. Effective August 15, 2014, the District’s contribution for the basic plan or premium plan will be \$363.00 per month for the retired employee and \$726.00 per month for the retired employee and retired spouse until each reach their respective ages for full Medicare coverage. If the retired employee or retired spouse reaches the eligible age first, the premium for the retired employee or retired spouse will be \$363.00 per month until reaching the eligible age. The assistance period for either will be for a maximum of ten (10) years

LIFE AND DISABILITY

The District shall pay for employees' life, short and long term disability, unemployment, and workers compensation insurance.

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

The District participates in the California Public Retirement System (CalPERS). All employees hired at the District before January 1, 2013 are under the CalPERS miscellaneous formula of 2.5% @ 55 with the one (1) year final compensation period used to calculate retirements and the employees contribute the 8% of their annual salary.

A full time new employee hired on or after January 1, 2013 will be subject to the Public Employees' Pension Reform Act (PEPRA).

A new employee who is also a "New Member" to CalPERS will participate under the mandatory miscellaneous formula of 2% @ 62 with the three (3) year final compensation period used to calculate retirements and the employee contributes 50% of the normal cost established by CalPERS as outlined in the Public Employees' Pension Reform Act of 2013 (PEPRA).

Pursuant to the PEPRA, a "New Member" is defined as:

1. An individual who is hired on or after January 1, 2013 and has no prior membership in any California public retirement system
2. An individual who is rehired by a different CalPERS employer on or after January 1, 2013 after a break in service greater than six (6) months
3. An individual who is brought into CalPERS membership for the first time on or after January 1, 2013 and who is not eligible for reciprocity with another California public retirement system

If a former CalPERS eligible employee of the District has a break in service of more than six (6) months but returns to service with the same District, the former employee **will not** be considered a new member pursuant to PEPRA.

TUITION REIMBURSEMENT

The District will refund tuition fees and educational material costs incurred by regular employees for approved courses of study and completion with a "C" grade or higher. A "pass" will be accepted for classes where a pass/fail grading system is used. The amount of reimbursement will be as follows:

- During the employee's initial 1040 hours of employment they will only be eligible to receive tuition reimbursement for courses directly related to obtaining job-required water distribution, water treatment, or collection system maintenance certifications to a maximum of \$400.
- For employees who have worked more than 1040 hours, but less than 6240 hours (three

years) employees may be reimbursed up to \$800 per year.

- For employees who have worked three years or more the District will reimburse employees up to \$2,400 per year for attendance at an accredited college or institution, providing the employee is pursuing a course of study leading to attainment of a degree or accreditation, and providing the course of study is pertinent to the employee's employment with the District. The employee must submit the course syllabus to HR for approval prior to being eligible for reimbursement.

For the purpose of determining employee eligibility the end date of the class will determine as to how long the employee has been employed by RMWD.

Employees are required to submit applications to their immediate supervisor and get approval from the Department Head before starting courses for which educational assistance is requested.

If an employee leaves District employment before completion of the approved course, the District will not reimburse the employee for the course.

No assistance will be made until after the completion of the course and no assistance will be made if the employee utilizes other sources (i.e. GI Bill) to pay for the course or portions of the course.

FINANCIAL POLICIES AND GOALS OF THE DISTRICT

RATE STABILIZATION RESERVE

As part of the District's Potable Water Cost of Service Study, an evaluation was made as to whether it would be beneficial to ratepayers to establish a Rate Stabilization Fund. The Rate Stabilization Fund will be equal to 10% of the annual water revenues and will be set aside to prevent rate hikes that are caused by unexpected changes in water revenues. The policy would provide five fiscal years to bring the reserve fund from a zero balance to the target balance in order to reduce the rate impact of creating this reserve fund.

This policy is typical to mitigate the disruption of a rapid decline in revenues: utilities with higher risk of revenue vulnerability due to the potential loss of customers or the rapid reduction in service purchases establish reserves (also sometimes called contingency reserves) to cover sudden un-forecasted revenue shortfalls. The term "rainy day fund" has been given new meaning for water districts that have grown accustomed to revenue from residential irrigation and are at risk of experiencing significant declines in revenue during a particularly naturally wet and rainy weather season. These reserves may also be labeled "rate stabilization reserves" in the sense that they protect against rates to adapt to sudden unexpected usage reductions.

Some "rate stabilization reserves" however are much more about planned revenue smoothing than contingency planning. Water districts with robust finance plans and rate models sometimes look towards the future and identify when rate increases are needed to meet costs. In some cases, the future can look quite bumpy with large projects going on line at the same time a large temporary whole purchaser may be planning to reduce usage. In an effort to smooth out the road ahead, many water districts are turning towards "rate stabilization reserves" to mitigate the size of a rate increase in a given year.

Fiscal Year 2015-2016, has been one of the sharpest declines in water demand for the District since inception. The culprits to the reduction of demand is two folds, one being the conservation restriction and second being the colder climate this year. It was planned to start funding the rate stabilization fund in Fiscal Year 2015-16, however there wasn't a sufficient amount of funds to transfer to this reserve. On the other hand, it is as if by not transferring funds, funds were utilized to smooth the sudden unexpected usage reduction. The future success of funding the rate stabilization reserve will be relying on a boost of demand with moderate rate increases.

OPERATING RESERVE

Operating reserves are essentially the accumulation of unrestricted surpluses that are liquid (as opposed to invested in fixed assets) and thus available for use at the discretion of our Board of

Directors. It is used to stabilize finances by providing a “rainy day savings account” for unexpected cash flow shortages, expense or losses. These might be caused by delayed payments, unexpected building repairs, or economic conditions.

Reserves should not be used to make up for income shortfalls, unless the District has a plan to replace the income or reduce expenses in the near-term future. In short, reserves should be used to solve timing problems, not deficit problems. Since operating reserves are most valuable if they are reliable, an important factor in using reserves is also having a realistic plan to replenish them. Operating reserves should not be used to cover a long-term or permanent income shortfall. Reserves can allow the District to weather serious bumps in the road by buying time to implement new strategies. To be prudent, reserves should be used to solve temporary problems, not structural financial problems. Usually, though, reserves are built up over time by generating an unrestricted surplus and intentionally designating a portion of the excess cash as a reserve fund.

While there are general guidelines for setting operating reserve goals, they should always have accompanied by “it depends.” Most standards are based on a formula to have enough unrestricted cash to cover operating expenses for a number of months. At the high end, reserves should not exceed the amount of two years’ budget. At the low end, reserves should be enough to cover at least one full payroll including taxes. The District’s operating reserve balance is limited to two months of budgeted operating expenses as determined by the monthly average of budgeted operating expenses (does not include the cost of water or depreciation). Keep in mind that generic target amounts for reserves don’t take some important variables into account, such as the stability of the District’s cash receipts. Factor in these considerations when setting an operating reserve target. The goal for operating reserves will change, too, when income or expenses become less reliable or predictable because of internal or external changes. Based on the proposed budget, the operating reserve should be set at minimum of approximately \$2M.

BASIS OF BUDGETING AND ACCOUNTING

A major element of financial data activity rests in the act of budgeting. Budgeting is the process of allocating finite resources to the prioritized needs of the District. The budget represents the legal authority to spend money. Adoption of the District's budget implies that a set of decisions has been made by the Board of Directors and administrators that culminates in matching District's resources with the needs. As such, the budget is a product of the planning process.

The budget also provides an important tool for the control and evaluation of sources and the uses of resources. Using the accounting system to enact the will of the board, administrators are able to execute and control activities that have been authorized by the budget and to evaluate financial performance on the basis of comparisons between budgeted and actual operations. Thus, the budget is implicitly linked to financial accountability and relates directly to the financial reporting objectives established by the GASB.

The planning and control functions inherent to any organization, underscore the importance of sound budgeting practices for the following reasons:

- The services provided by Rainbow Municipal Water District are not subject to the market forces of supply and demand. Thus, enacting and adhering to the budget establishes restrictions in the absence of a competitive market.
- These services provided by RMWD are considered critical to the public interest and welfare.
- The scope and diversity of operations water and sewer make comprehensive financial planning essential for good decision making.

The financial planning process is critical to the expression of citizen preferences and is the avenue for reaching consensus among stakeholders, directors of the board, and staff on the future direction of the District's operations.

The link between financial planning and budget preparation gives the budget document a unique role in the organization. Budgets in the public arena are often considered the definitive policy document because an adopted budget represents the financial plan used by the District to achieve its goals and objectives. The budget reflects:

- the prioritization of activities in which the District will be involved,
- the relative influence of various participants and advisory committees in the budget development process, and
- the District's plan for acquiring and using its resources.

Budgeting is an invaluable tool for both planning and evaluation. Budgeting provides a vehicle for translating goals and projects into financial resource plans-that is, developing a plan to meet performance goals should be directly linked to determining budgetary allocations. The link between goals and financial planning is critical to effective budgeting and enhances the evaluation of budgetary and accountability.

Performance evaluation allows stakeholders to hold directors and administrators in the District's organization accountable for their actions. Because accountability to citizens often is stated explicitly in state laws and state constitutions, it is a cornerstone of budgeting and financial reporting.

- Financial reporting should provide information to determine whether current-year revenues were sufficient to pay for current-year services.
- Financial reporting should demonstrate whether resources were obtained and used in accordance with the District's legally adopted budget. It should also demonstrate compliance with other finance-related legal or contractual requirements.

Financial reporting should provide information to assist users in assessing the service efforts, costs, and accomplishments of the District.

Although some form of a balanced budget requirement is generally necessary to ensure long-term fiscal health in any organization, variations such as the use of fund balance reserves to pay for current services may be appropriate over a short period. Generally, however, all departures from this fundamental objective must be in accordance with applicable state and local laws and policies.

Finally, the budget is evaluated for its effectiveness in attaining the District's stated goals and objectives. Evaluation typically involves an examination of how funds were expended, the outcomes that resulted from the expenditure of funds, and the degree to which these outcomes achieved the stated objectives. This phase is fundamental in developing the subsequent year's budgetary allocations. In effect, budget preparation not only is an annual exercise to determine the allocation of funds, but also is part of a continuous cycle of planning and evaluation to achieve the stated goals and objectives of the District.

ACCOUNTING POLICIES

Rainbow Municipal Water District accounts for its financial transaction in accordance with the policies and procedures of the Irrigation District Law, now Division 11 of the California State Water Code. The accounting policies of the District conform to accounting principles generally accepted in the United State of America (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB) and the American Institute of Certified Public Accountants (AICPA).

The District reports its activities as an enterprise fund, which is used to account for operations that financed and operated in a manner similar to a private business enterprise, where the intent of the District is that the costs of providing water to its customers on a continuing basis be financed or recovered primarily through user charges (water sales and services) or similar funding. Revenues and expenses are recognized on the full accrual basis of accounting. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred, regardless of when the related cash flow took place.

Operating revenues and expenses are generated and incurred through the water sales activities to the District's customers. Administration and depreciation expenses are also considered operating expenses. Other revenues and expenses not included in the above categories are reported as non-operating revenues and expenses.

DEPOSITS AND INVESTMENTS

For purposes of the statement of cash flows, cash and cash equivalents consist of short-term highly liquid investments with maturities of ninety days or less from the date of purchase. These include cash on hand, cash held in the restricted assets accounts, and the Local Agency Investment Fund.

The District's investment policy and state statutes authorize the District to invest in obligations of the U.S. Treasury, its agencies and instrumentalities, certificates of deposit with national and state-licensed or chartered banks or federal or state savings and loan associations, money market and mutual funds whose portfolios consist of one or more of the foregoing investments, and the Local Agency Investment Fund.

State statutes require all deposits be insured or collateralized. Depositories holding public funds on deposit are required to maintain collateral in the form of a pool of securities with the agent of the depository having a market value of at least 10 to 50 percent in excess of the total amount of all public funds on deposit.

INVENTORY AND CAPITAL ASSETS

Inventories are recorded using the purchase method in that the cost is recorded as an expenditure at the time individual inventory items are purchased. Inventories are valued at average cost and consist of expendable supplies held for consumption. Reported inventories are equally offset by a fund balance reserve, which indicates that these amounts are "available for appropriation and expenditure" even though they are a component of net current assets.

The District has the option of reporting an expenditure in governmental funds for prepaid items either when purchased or during the benefiting period. The District has chosen to report the expenditure during the benefiting period.

Purchased or constructed capital assets are reported at cost or estimated historical cost. Donated fixed assets are recorded at their estimated fair value at the date of the donation. The cost of normal maintenance and repairs that do not add to the value of the asset or materially extend the assets' lives are not capitalized. A capitalization threshold of \$5,000 is used.

Capital assets are being depreciated using the straight-line method over the following estimated useful lives:

<u>Asset Class</u>	<u>Estimated Useful Lives</u>
Buildings	10-50
Water Systems	10-50
Improvement of sites	7-25
Equipment	5-10

Rainbow Municipal Water District

Operating and Capital Budgets

Budget Calendar

2016/2017

Date	Task
February	Finance department projections of Wage & Benefits for all Personnel, including COLA's and merit increases. Preliminary Staffing analysis for District.
3/10/16	Senior Management Group meets to discuss general philosophy, assumptions, goals and objectives of the Operating Budget.
3/17/16	Senior Managers meet to discuss projected staffing plans. YTD Departmental expense report is distributed.
3/31/16	Senior Managers meet to review all departmental expenditures.
4/14/16	Senior Management meets to review Capital Budget submitted by Engineering Department.
4/28/16	Rough draft of Operating and Capital Budgets is reviewed by Senior Managers.
5/10/16	First Draft of the Budget receives additional review by the Budget/Finance Committee and Senior Managers. After budget reviewed by Committee and refined per input received from discussion copy of draft is sent to RMWD Board.
5/28/16	Joint meeting held with Finance & Budget committee with the Board of Directors for review of proposed budget. Open discussion roundtable for recommended amendments to budget prior to final adoption in June.
6/14/16	Second draft is presented to Senior Managers and Budget/Finance Committee for review and additional discussion. Full Board and the public may attend.
6/28/16	Final draft is presented to Board of Directors for adoption.

DEFINITION OF MAJOR FUNDS

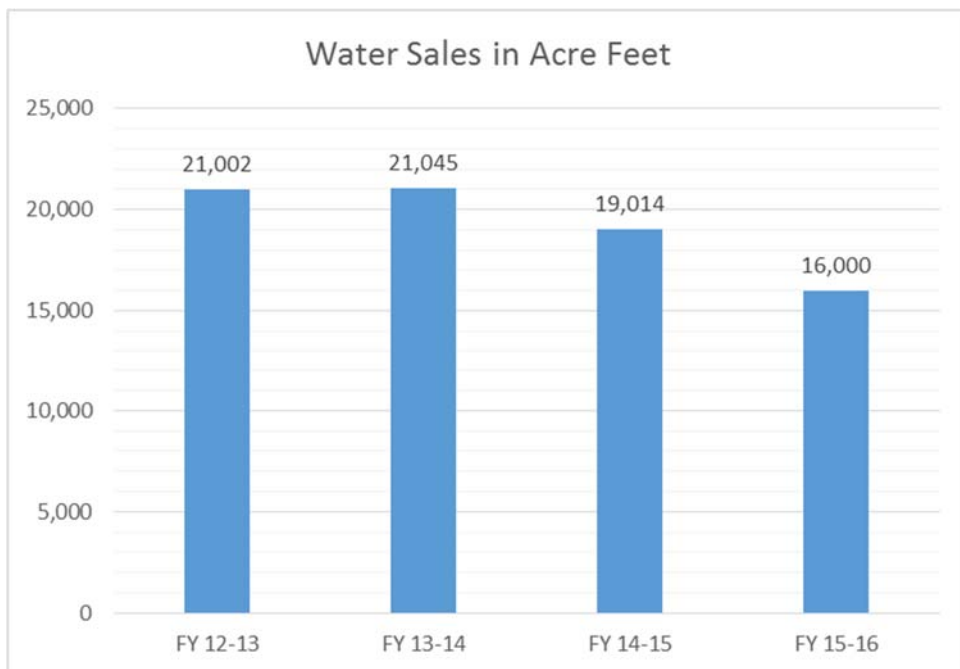
<u>Fund Name</u>	<u>Fund #</u>	<u>Description</u>
Water Operating Fund -	01	The purpose of this fund is to ensure cash resources are available to pay for day to day water related operations, including water purchases, to provide funding in case of water related operating emergencies and unforeseen circumstances. It includes the following cost center water operations, valve maintenance, pumping, distribution, and meters.
Sewer Operating Fund -	02	The purpose of this fund is to ensure cash resources are available to pay for day to day sewer related operations, including contractual payments to the City of Oceanside for treatment of sewage, and to provide funding in case of sewer related operating emergencies and unforeseen circumstances. This fund only includes the Sewer cost center.
General Operating Fund -	03	The purpose of this fund is used to account for general operations and activities not requiring the use of other funds. This includes the cost centers that provide day to day administrative duties for the District such as safety, human resources, finance, information technology, engineering, and the executive administration.
Rate Stabilization Fund -	05	The purpose of this fund is used to mitigate rate impacts from changes in water demand. The reserve should equal to 10% of annual water revenues. The fund was established on January 1, 2016 and will be brought to its target balance over a five year period. Funds for this reserve will come from water rates and charges.
Sewer Capital Fund -	53	The purpose of this fund is used to provide funding for the District’s long term sewer related capital improvement projects. It is funded by the cash collected for sewer capacity charges and surpluses generated by sewer operations (excess of revenue over expense before depreciation). Reserves will be used for fund for infrastructure repair, rehabilitations, and replacement projects.
Water Capital Fund -	60	The purpose of this fund is used to provide funding for the District’s long term water related capital improvement projects. It is funded by the cash collected for water capacity charges and by surpluses generated by water operations (excess of revenue over expenses before depreciation). Reserves will be used to fund infrastructure expansion, repairs, rehabilitations, and replacement projects.

REVENUE/EXPENSE ASSUMPTIONS

Water Operating Fund Commodity water sales are the largest source of District revenues, with the majority of sales approximately 70% for agricultural use and 20% for residential customers.

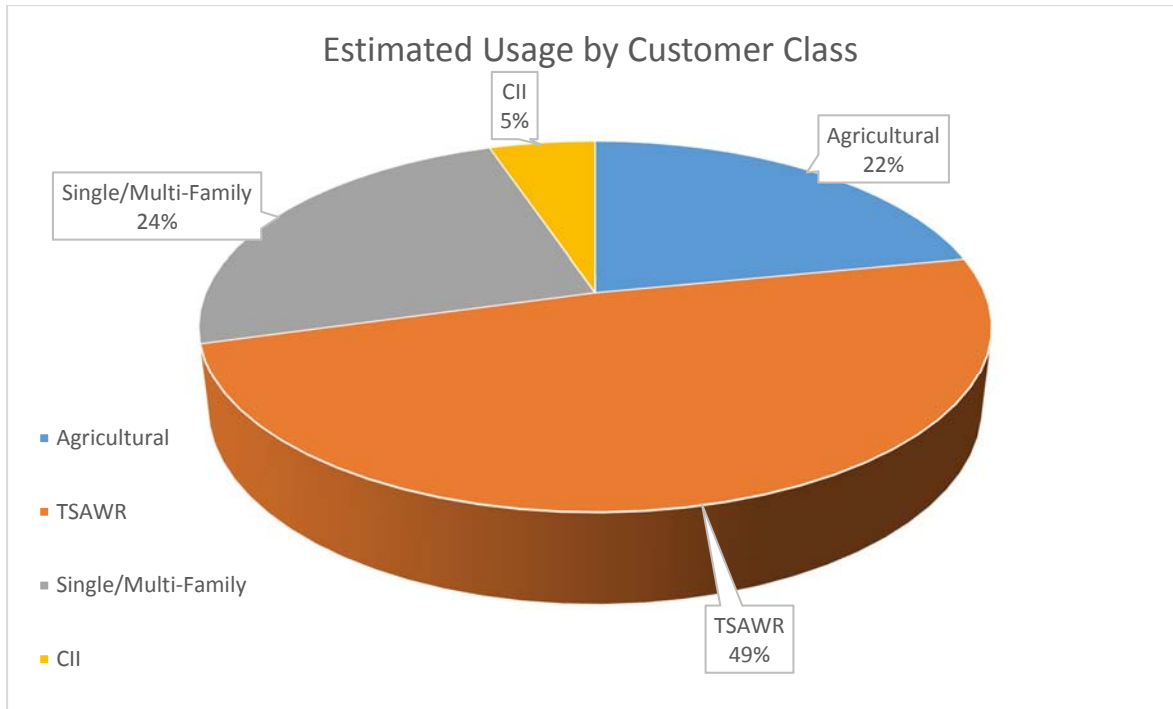
Water Sales Revenues are projected based upon the rates and consumption projections in each of the major water sales categories. The District implemented a three tiered water rate structure that better reflects the range of costs for various water supplies, keeps consumption charges low for customers who conserve water, and provides a financial incentive for conservation. The tier structure rate only applies to customer class that has domestic usage such as single family, agricultural with residence, and the TSAWR (transitional special agricultural water rate) with residence.

The projected water sales for FY 2016-2017 are the lowest estimated sales since 1968. This year’s forecast is at 16,500 acre feet, whereas last year’s budget had sales at 18,000 acre feet, and 20,000 the year before that. The declining water sales negatively impacts the overall budget, it reduces the net position. The projected forecast is based current trend demand, current Fiscal Year 2015-16 it is estimated that the District will have sold close to 16,000 acre feet. Year to date sales as of the end of May, are at 14,019 acre feet sold.



The volumetric commodity estimated sales by customer class are based on current demand with a 3% conservative increase per customer class for the upcoming Fiscal Year. For the agricultural customers that are not on the TSAWR program, it is estimated for them to have

consume 1,573,500 units In FY 2016-17. The agricultural customers that are on the TSAWR program, we are estimating their usage to be at 3,503,300 units. For both Single Family and Multi-Family combined, projections are at 1,739,400 units. Lastly, for the Commercial, Construction, and Institutional users estimates are at 371,200. Below is a chart that illustrates this data.



Rainbow O&M Fixed Charge – is a service fixed charge per meter to recovery some of the fixed costs such as meter related costs, customer related costs, a portion of the capacity related cost to provide a stable source of revenue independent of water consumption. The monthly fixed charge varies by customer class and by meter size. Minimal increase was applied to the Single Family class, as development should be underway in FY 2016-17. A 2% increase is reflective in this group representing the projected growth.

SDCWA O&M Monthly Fixed Charge – is a pass through fixed charge from SDCWA and MWD as a separated fixed charge. The District relies entirely on purchased water from SDCWA and these charges represent part of the costs of purchasing water which the District has no control. Annually SDCWA increases their rates effective January, in which the District will be passing through all increases to the customer.

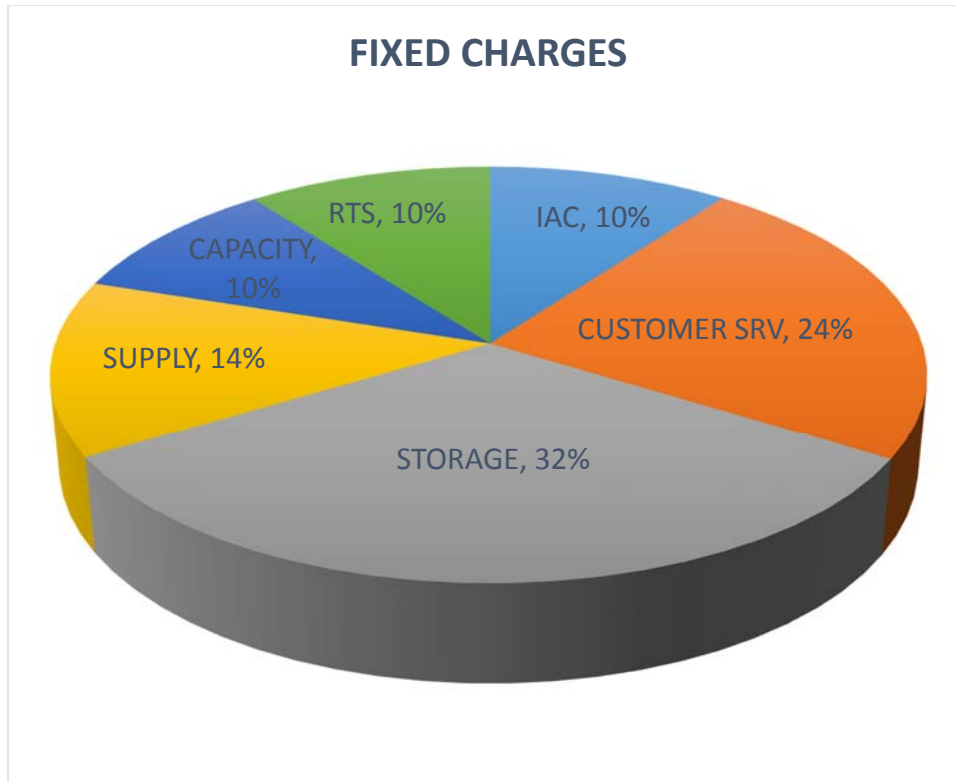
Other Water Services Revenues, including backflow fees, turn-on and reconnection fees, hydrant fees, plan check fees, NSF charges, and penalty fees, are projected based upon current fiscal year activity.

Rental and Lease Revenues are projected based upon contract agreements with various entities for use of the District’s vacant land, as well as a lease agreement with Sprint Communication for use of space on facility grounds for their communication equipment.

Interest Income for the water and sewer operating funds is projected based on an average yield of for LAIF investments and 1.00% for the balance of our investment portfolio.

Purchased Water Include the cost at the point of delivery of water purchased for resale. SDCWA fixed charges are the following categories Readiness-to-Serve charge, Infrastructure Access Charge, Customer Service Charge, Capacity Reservation Charge, Emergency Storage, and lastly Supply Reliability Charge. The total amount of fixed charges for the Fiscal Year 2016-17 is estimated to be at \$5.1M. Additionally to the fixed charges there is the commodity rate for the water purchase and transportation cost, it is proposed to be an 8% increase in the variable rate for water and that will be passed through to the customer. SDCWA is proposing a melded 6% increase to their rates that will take effect January 2017. However, some of SDCWA’s fixed costs are based on a 10 year rolling average of consumption, so RMWD’s fixed fees will be a bit higher per AF than many other agencies. During the District’s noticing under the Proposition 218 compliance, to avoid operational deficits, depletion of reserves, an inability to address infrastructure and water quality improvements, and to continue to provide a safe, reliable water supply, included was language to allow the District to pass through to its customers any increase imposed on the District by SDCWA.

<u>FIXED CHARGES</u>			
<u>Descriptions</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>% Change</u>
1. Infrastructure Access Charge	\$ 36,388	\$ 41,629	14%
2. Customer Srv	\$ 100,451	\$ 95,873	-5%
3. Storage Charge	\$ 142,863	\$ 132,476	-7%
4. Supply Reliability	\$ 61,648	\$ 55,410	-10%
5. Capacity Charge	\$ 54,813	\$ 39,028	-29%
6. Readiness to Serve	\$ 43,965	\$ 42,413	-4%
Monthly Total	\$ 440,129	\$ 406,829	-8%
<u>VARIABLE CHARGES</u>			
Regular Meter	\$ 1,165	\$ 1,255	8%
Direct Meter/No Trans	\$ 1,060	\$ 1,145	8%



Board of Directors: The District Board receives compensation for attendance at regular and board approved special meetings. The budget estimates that each director will be compensated for the eleven regular meetings and two special meetings. It is also budgeted for training and travel for educational purposes.

Pumping: The Pumping costs are maintained in a separate cost center in order to identify the specific costs of operating and maintaining the pumping equipment that pushes water to higher elevations within the district. The district identifies seven pumping zones to account for the cost and develop a discrete charge for customers in each zone.

Labor expenses are charged to this cost center by various staff members when they are assigned to perform work in maintaining the pumping equipment. For budget purposes a 1.0 FTE staffing equivalent is calculated into the labor cost.

The single largest expense item is the cost of the electricity and gas used by the 17 pumps. A 5% inflation factor has been added to the utility cost for the budget year.

Water Operations: The Operations Department is responsible for maintenance and testing of water quality with the six reservoirs and twelve water tanks. The water tanks are maintained by a long term contract with Utility Services. The tank maintenance program insures the tanks will remain in good operating condition for decades to come.

Annually, Metropolitan and SDCWA schedule shutdowns for the major repair or upgrade of their pipelines. Shutdowns are scheduled but will not require Rainbow to shut down any of our systems. This avoids significant cost and inconvenience for RMWD.

Valve Maintenance: is responsible for the maintenance, repair and replacement of nearly 5,000 valves within the district.

Water Distribution: The Water Distribution department is responsible the administration, construction and maintenance of 323 miles of water mainlines.

Meter Services: performs all monthly meter reads as well as customer onsite response, backflow services and the Itron radio read meter installation program.

Garage Services: performs the maintenance and repair of all district fleet vehicles. The district vehicles are typically kept in service for approximately 200,000 miles.

General Administration: this includes the General Manager, Human Resource, administrative support to the General Manager, insurance, legal, and miscellaneous supplies as needed.

Finance: responsible for the overall financial stability of the District, majority of expense is labor related in this department. An additional Accounting Specialist was added late Fiscal Year 2015-16.

Customer Service: performs all billing services and responds to customers' questions and concerns.

Engineering: performs capital project engineering and inspection services for the district.

As a proactive response to the declining water sales, and in an effort to trim down on expenses, management made the difficult decision to eliminate one position in the Human Resource department. The workforce total count included in Fiscal Year 2016-2017 will be 51 full-time employees. Per prior MOU agreements all three bargaining units will receive a cost of living adjustment of 2% effective the beginning of July 2016. The proposed capital expenditures are mostly related to (5) vehicle replacements and a backhoe. All these capital expenditures are needed as current equipment is dilapidated and have high repair costs.

Sewer Revenue Assumptions

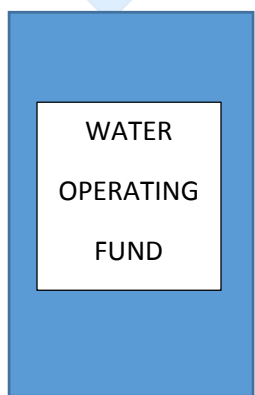
Sewer revenues are based on sewer collection and treatment services provided to our customers. Sewer Service Revenues are projected based upon a total of 5,296.6 Equivalent Dwelling Units (EDUs), a total of 2,340 sewer accounts compared to approximate 7,800 water accounts. Sewer revenue rate is based on the lowest wet month of water consumption during the months of December through April. The units consume will dictate the monthly fixed rate for Sewer based on the Sewer Rate Table. Also included in projections in this category is a possible increase to the District's sewer service rate. A cost of service study was budgeted in the upcoming fiscal year, as rates have not increased in over three years.

Sewer: responsible for maintenance and repair of all 50 miles of wastewater lines and pumping systems. The contract with the City of Oceanside for the treatment and discharge of the wastewater is the primary cost factor for this department.

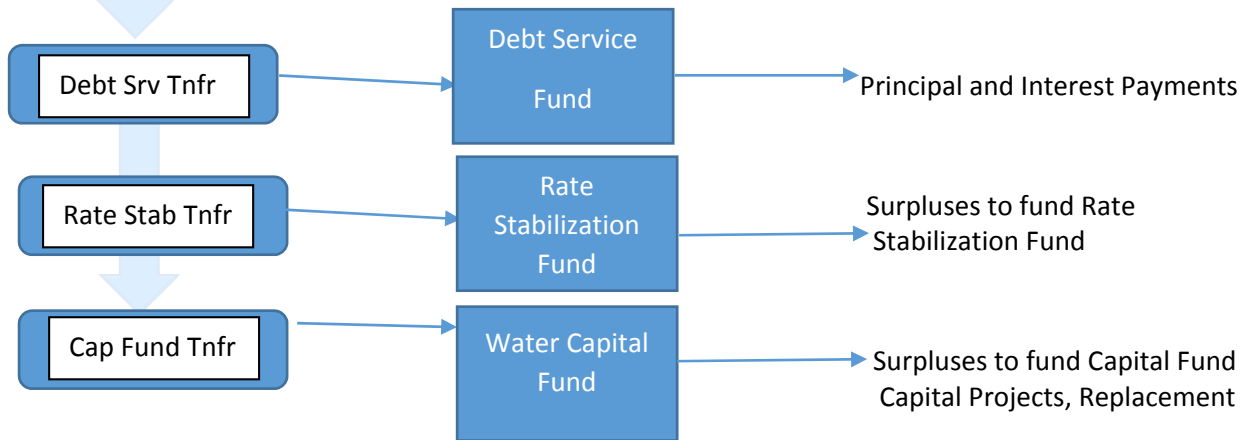
FUNDS STRUCTURE

WATER OPERATING FUND

Fixed Charges
 Commodity Charges
 Water Services
 Other Water Revenues

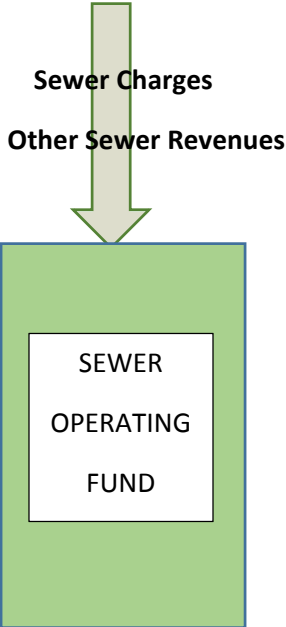


Water Purchases
 Labor
 Maintenance & Supplies

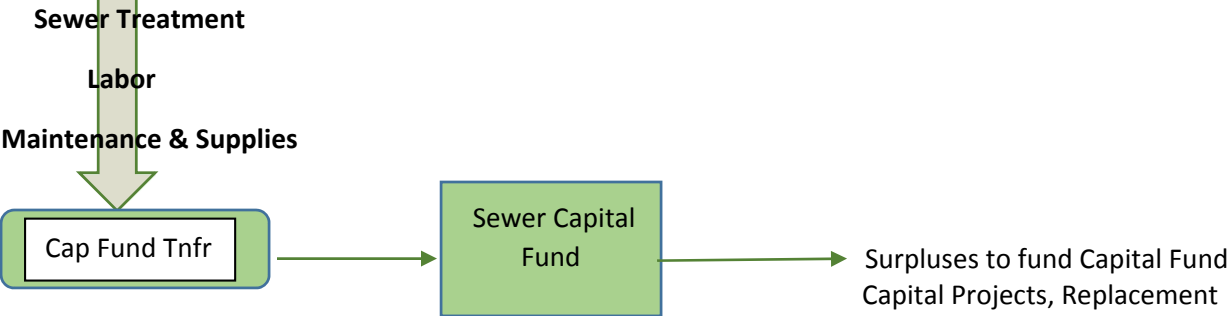


Gopher Tank

SEWER OPERATING FUND



Vac-Con Combination Sewer Truck



WATER FUND BUDGETED REVENUE AND EXPENSES

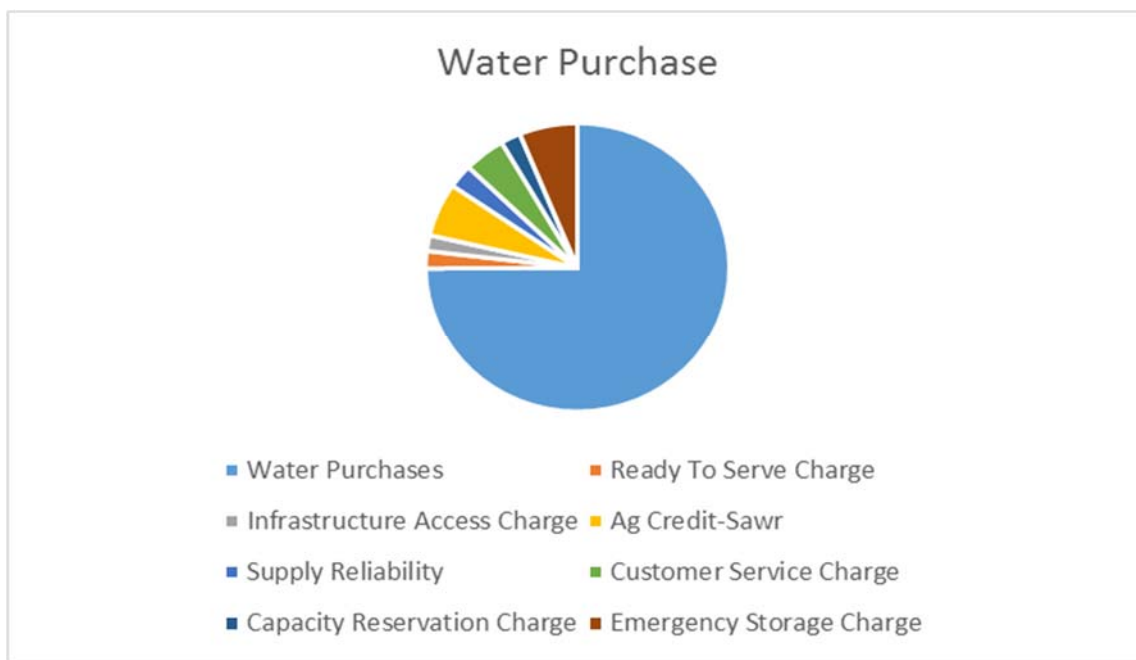
Description	2014-15 Actual	2015-16 Adopted	Proposed 2016-17 Budget	% Change From 15-16 Budget
<i>Operating Revenues</i>				
Water Sales	\$ 34,003,831	\$ 34,828,868	\$ 34,662,965	0%
Other Water Services	\$ 328,219	\$ 314,476	\$ 310,436	-1%
Total Operating Revenues	\$ 34,332,049	\$ 35,143,344	\$ 34,973,401	0%
<i>Operating Expenses</i>				
Purchased Water	\$ 24,541,845	\$ 21,295,311	\$ 23,427,592	10%
Pumping	\$ 618,387	\$ 743,059	\$ 779,487	5%
Operations	\$ 1,925,137	\$ 2,147,620	\$ 2,133,306	-1%
Valve Maintenance	\$ 608,962	\$ 597,599	\$ 617,742	3%
Distribution	\$ 1,404,880	\$ 1,832,526	\$ 1,956,664	7%
Meters	\$ 932,178	\$ 1,127,815	\$ 1,129,483	0%
Cost Allocation Expense	\$ 3,498,946	\$ 4,412,834	\$ 4,089,500	-7%
Total Operating Expenses	\$ 33,530,335	\$ 32,156,764	\$ 34,133,774	6%
<i>Non-Operating Revenues</i>				
Investment Income	\$ -	\$ 4,342	\$ -	-100%
Property Tax Revenue	\$ 328,836	\$ 316,383	\$ 315,000	0%
Other Non Operating Revenue	\$ 102,274	\$ 60,360	\$ 26,500	-56%
Total Non-Operating Revenues	\$ 431,110	\$ 381,085	\$ 341,500	-10%
<i>Non-Operating Expenses</i>				
Debt Service	\$ 1,120,142	\$ 1,120,142	\$ 1,120,142	0%
Total Non-Operating Expenses	\$ 1,120,142	\$ 1,120,142	\$ 1,120,142	0%
Net Income before Transfers	\$ 112,683	\$ 2,247,524	\$ 60,984	-97%
Overhead Transfer to Capital	\$ -	\$ -	\$ 500,000	-
Net Income after Transfers	\$ 112,683	\$ 2,247,524	\$ 560,984	-75%

WATER FUND BUDGETED DETAILED REVENUES

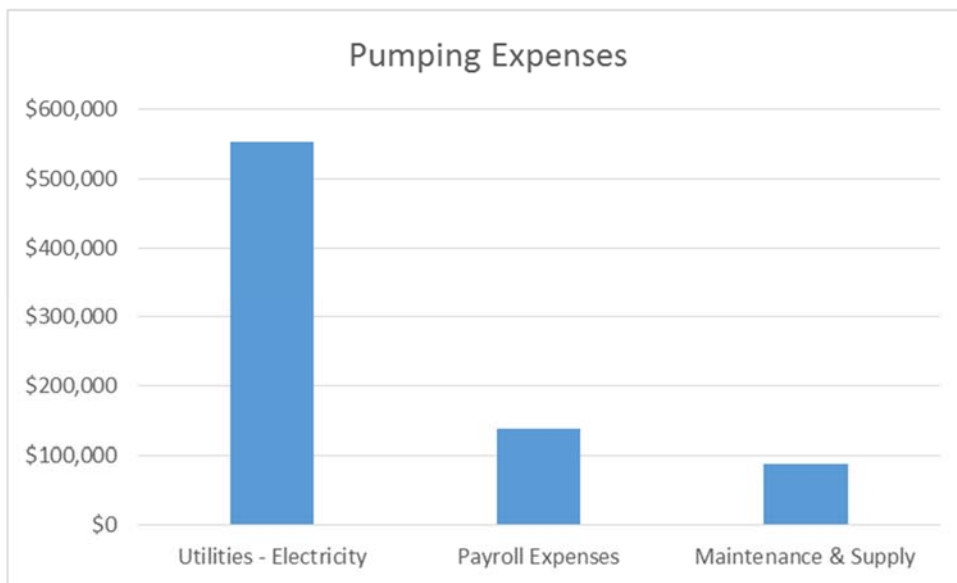
WATER REVENUE		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
01-00-41110	Water Sales-Domestic (SFR/MF)	\$6,238,216	\$6,200,000	\$6,075,496	-2%
01-00-41115	Water Sales-Domestic-Unbilled	-\$460,773	\$0	\$0	-
01-00-41120	Water Sales-Ag-Dom Non Cert	\$2,745,706	\$2,500,000	\$1,049,500	-58%
01-00-41125	Water Sales-Ad Noncert Unbilld	\$1,158,844	\$0	\$0	-
01-00-41130	Water Sales-Commercial/Institution	\$0	\$0	\$1,157,290	-
01-00-41160	Water Sales-Ag. Non Discount	\$3,157,582	\$3,000,000	\$4,207,195	40%
01-00-41165	Water Sales-Ag.Nondis Unbilled	-\$249,978	\$225,000	\$0	-100%
01-00-41170	Water Sales-Construction	\$114,748	\$0	\$216,282	-
01-00-41175	Water Sales-Construction-Unbil	\$2,287	\$0	\$0	-
01-00-41180	Water Sales Sawr Full Agric	\$5,157,234	\$5,000,000	\$4,106,205	-18%
01-00-41185	Water Sales-Sawr Ag Unbilled	-\$403,095	\$0	\$0	-
01-00-41190	Water Sales-Sawr Ag/Dom	\$7,229,564	\$7,199,355	\$6,081,872	-16%
01-00-41195	Water Sales Sawr Ag/D Unbilled	-\$493,694	\$0	\$0	-
01-00-42120	Monthly O & M Charges	\$4,609,460	\$5,283,629	\$5,542,712	5%
01-00-42121	Infrastructure Access Charge	\$4,496,777	\$4,508,351	\$5,389,049	20%
01-00-42130	Readiness-To-Serve Rev Id#1	\$294,617	\$486,481	\$300,000	-38%
01-00-42140	Pumping Charges	\$406,335	\$426,052	\$537,363	26%
01-00-43101	Operating Inc Turn On/Off Fees	\$6,275	\$2,500	\$5,000	100%
01-00-43104	Operating Inc. R.P. Charges	\$228,222	\$218,976	\$231,936	6%
01-00-43106	Operating Inc Water Letter Fee	\$390	\$500	\$500	0%
01-00-43109	Operating Inc Inspections	\$31,997	\$30,000	\$20,000	-33%
01-00-43110	Operating Inc Plans And Specs	\$0	\$3,000	\$1,000	-67%
01-00-43111	Operating Inc Install Fees,Hyd	\$5,249	\$2,400	\$3,500	46%
01-00-43114	Operating Inc-Miscellaneous	\$5,236	\$48,600	\$5,000	-90%
01-00-43116	New Meter Sales/Install Parts	\$7,850	\$8,500	\$8,500	0%
01-00-43117	Notice Delivery Revenue	\$43,000	\$0	\$35,000	-
	Total Operating Revenues	\$34,332,049	\$35,143,344	\$34,973,401	0%
01-00-49102	Non Oper Inc-Nsf Check Fees	\$1,650	\$0	\$1,500	-
01-00-49109	Non Oper Inc-Miscellaneous	\$100,624	\$60,360	\$25,000	-59%
01-00-49201	Interest Revenues-Water Fund	\$0	\$4,342	\$0	-100%
01-00-49301	Property Tax Rev. - Ad Valorem	\$328,836	\$316,383	\$315,000	0%
	Total Non-Operating Revenues	\$431,110	\$381,085	\$341,500	-10%
	TOTAL WATER REVENUES	\$34,763,159	\$35,524,429	\$35,314,901	-1%

WATER FUND BUDGETED DETAILED EXPENSES

PURCHASED WATER		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
01-00-50001	Water Purchases	\$ 21,073,480	\$ 17,962,087	\$ 19,938,700	11%
01-00-50003	Water In Storage	\$ 114,847	\$ -	\$ -	0%
01-00-50005	Ready To Serve Charge	\$ 516,825	\$ 527,580	\$ 518,268	-2%
01-00-50006	Infrastructure Access Charge	\$ 426,000	\$ 435,546	\$ 468,102	7%
01-00-50008	Ag Credit-Sawr	\$ (1,202,115)	\$ (1,605,655)	\$ (1,592,850)	-1%
01-00-50009	Supply Reliability	\$ -	\$ -	\$ 702,348	0%
01-00-50010	Customer Service Charge	\$ 1,203,398	\$ 1,204,946	\$ 1,177,944	-2%
01-00-50011	Capacity Reservation Charge	\$ 514,390	\$ 622,440	\$ 563,046	-10%
01-00-50012	Emergency Storage Charge	\$ 1,895,021	\$ 2,148,368	\$ 1,652,034	-23%
	Total Purchased Water	\$24,541,844.86	\$21,295,311.11	\$23,427,592.00	10%



<u>PUMPING EXPENSE</u>		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
01-31-56101	Regular Salaries	\$63,164	\$85,496	\$89,429	5%
01-31-56103	Overtime Paid, Comptime Earn.	\$170	\$500	\$500	0%
01-31-56501	Employer'S Share Fica Ssi	\$4,136	\$5,301	\$5,545	5%
01-31-56502	Employer'S Share Fica Medicare	\$1,069	\$1,240	\$1,297	5%
01-31-56503	Medical Ins Acwa Health Ben	\$12,026	\$18,110	\$17,465	-4%
01-31-56504	Dental Insurance	\$1,318	\$956	\$1,687	76%
01-31-56505	Vision Ins Acwa	\$181	\$223	\$228	2%
01-31-56506	Life, S/T,L/T Disability Ins	\$922	\$671	\$1,357	102%
01-31-56507	Retirement-Calpers	\$10,148	\$14,278	\$14,935	5%
01-31-56515	Worker'S Compensation Ins	\$1,637	\$3,244	\$3,393	5%
01-31-56516	State Unemployment Ins, E.T.T.	\$236	\$200	\$252	26%
01-31-56520	Deferred Comp-Employer Contrib	\$1,568	\$2,600	\$2,600	0%
01-31-56524	Other Post Employment Benefits	\$0	\$741	\$0	-100%
	Total Payroll Expenses	\$96,576	\$133,559	\$138,687	4%
01-31-63100	Equipment Maintenance/Repair	\$30,673	\$61,500	\$61,000	-1%
01-31-63401	Building Maintenance	\$63	\$1,500	\$1,500	0%
01-31-72000	Supplies & Services	\$10,487	\$12,000	\$20,000	67%
01-31-72150	Regulatory Permits	\$0	\$7,500	\$5,000	-33%
01-31-73000	Small Tools And Equipment	\$0	\$1,000	\$1,000	0%
01-31-78000	Utilities - Electricity	\$480,588	\$526,000	\$552,300	5%
	Total Maintenance & Supply	\$ 521,811	\$ 609,500	\$ 640,800	5%
	TOTAL PUMPING EXPENSE	\$ 618,387	\$ 743,059	\$ 779,487	5%



OPERATIONS EXPENSE		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
01-32-56101	Regular Salaries	\$490,836	\$625,641	\$631,710	1%
01-32-56103	Overtime Paid, Comptime Earn.	\$50,713	\$45,000	\$50,000	11%
01-32-56501	Employer'S Share Fica Ssi	\$37,266	\$38,790	\$39,166	1%
01-32-56502	Employer'S Share Fica Medicare	\$9,636	\$9,072	\$9,160	1%
01-32-56503	Medical Ins Acwa Health Ben	\$108,544	\$109,421	\$121,278	11%
01-32-56504	Dental Insurance	\$11,809	\$8,911	\$10,964	23%
01-32-56505	Vision Ins Acwa	\$1,630	\$2,339	\$1,484	-37%
01-32-56506	Life, S/T,L/T Disability Ins	\$8,161	\$6,136	\$9,181	50%
01-32-56507	Retirement-Calpers	\$91,229	\$104,482	\$105,496	1%
01-32-56509	Employee Holidays	\$30,423	\$0	\$0	-
01-32-56512	Employee Training/Tuition Reim	\$2,059	\$2,000	\$13,000	550%
01-32-56515	Worker'S Compensation Ins	\$15,432	\$20,493	\$23,967	17%
01-32-56516	State Unemployment Ins, E.T.T.	\$2,089	\$1,411	\$1,638	16%
01-32-56517	Employee Paid Time Off Exp	\$66,040	\$0	\$0	-
01-32-56518	Duty Pay	\$12,600	\$10,400	\$13,000	25%
01-32-56520	Deferred Comp-Employer Contri	\$13,975	\$16,900	\$16,900	0%
01-32-56524	Other Post Employment Benefit	\$0	\$5,424	\$0	-100%
	Total Payroll Expenses	\$952,442	\$1,006,420	\$1,046,943	4%
01-32-60000	Electronics	\$6,958	\$39,900	\$29,500	-26%
01-32-63100	Equipment Maintenance/Repair	\$7,246	\$20,500	\$13,500	-34%
01-32-63102	Equipment Maintenance Contra	\$11,057	\$52,800	\$38,000	-28%
01-32-63401	Building Maintenance	\$268	\$1,000	\$1,000	0%
01-32-70000	Professional Services	\$0	\$0	\$0	-
01-32-72000	Supplies And Services	\$103,339	\$310,000	\$257,000	-17%
01-32-72010	Tank Maintenance	\$794,816	\$661,600	\$664,643	0%
01-32-72150	Regulatory Permits	\$35,453	\$36,000	\$41,000	14%
01-32-72700	Printing & Reproductions	\$0	\$5,000	\$5,000	0%
01-32-73000	Small Tools And Equipment	\$1,241	\$1,000	\$1,000	0%
01-32-75300	Travel/Conf/Training	\$408	\$1,500	\$2,000	33%
01-32-78000	Utilities	\$11,910	\$11,900	\$12,600	6%
	Total Maintenance & Supply	\$972,695	\$1,141,200	\$1,065,243	-7%
01-32-82000	Capital Equipment	\$0	\$0	\$21,120	-
	Total Capital Expenses	\$0	\$0	\$21,120	-
	TOTAL OPERATIONS EXPENSE	\$1,925,137	\$2,147,620	\$2,133,306	-1%

VALVE MAINTENANCE EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
01-33-56101	Regular Salaries	\$282,372	\$300,525	\$309,284	3%
01-33-56103	Overtime Paid, Comptime Earn.	\$1,800	\$4,500	\$4,500	0%
01-33-56501	Employer'S Share Fica Ssi	\$19,375	\$18,633	\$19,176	3%
01-33-56502	Employer'S Share Fica Medicare	\$5,002	\$4,358	\$4,485	3%
01-33-56503	Medical Ins Acwa Health Ben	\$56,088	\$70,703	\$72,669	3%
01-33-56504	Dental Insurance	\$6,044	\$4,526	\$6,747	49%
01-33-56505	Vision Ins Acwa	\$844	\$891	\$913	2%
01-33-56506	Life, S/T,L/T Disability Ins	\$4,225	\$3,160	\$4,675	48%
01-33-56507	Retirement-Calpers	\$47,479	\$50,188	\$51,650	3%
01-33-56509	Employee Holidays	\$12,304	\$0	\$0	0%
01-33-56512	Employee Training/Tuition Reim	\$601	\$1,200	\$2,000	67%
01-33-56515	Worker'S Compensation Ins	\$7,498	\$11,402	\$11,734	3%
01-33-56516	State Unemployment Ins, E.T.T.	\$1,194	\$1,008	\$1,008	0%
01-33-56517	Employee Paid Time Off Exp	\$35,332	\$0	\$0	0%
01-33-56520	Deferred Comp-Employer Contrib	\$7,245	\$10,400	\$10,400	0%
01-33-56524	Other Post Employment Benefits	\$0	\$2,606	\$0	-100%
	Total Payroll Expenses	\$487,403	\$484,099	\$499,242	3%
01-33-72000	Supplies And Services-Sewer	\$77,967	\$61,500	\$66,500	8%
01-33-72200	Dues And Subscriptions	\$0	\$0	\$0	0%
01-33-73000	Small Tools And Equipment	\$0	\$1,000	\$1,000	0%
01-33-75300	Travel/Conferences/Training	\$95	\$1,000	\$1,000	0%
	Total Maintenance & Supply	\$78,062	\$63,500	\$68,500	8%
01-33-82000	Shop And Field Equipment	\$43,497	\$50,000	\$50,000	0%
	Total Capital Expenses	\$43,497	\$50,000	\$50,000	0%
	TOTAL VALVE MAINTEN. EXPENSE	\$608,962	\$597,599	\$617,742	3%

DISTRIBUTION EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
01-34-56101	Regular Salaries	\$ 572,636	\$ 894,169	\$ 903,611	1%
01-34-56103	Overtime Paid, Comptime Earn.	\$ 66,862	\$ 80,000	\$ 80,000	0%
01-34-56501	Employer'S Share Fica Ssi	\$ 43,659	\$ 55,438	\$ 56,024	1%
01-34-56502	Employer'S Share Fica Medicare	\$ 11,276	\$ 12,965	\$ 13,102	1%
01-34-56503	Medical Ins Acwa Health Ben	\$ 125,289	\$ 173,015	\$ 165,590	-4%
01-34-56504	Dental Insurance	\$ 13,781	\$ 11,027	\$ 16,584	50%
01-34-56505	Vision Ins Acwa	\$ 1,902	\$ 2,339	\$ 2,397	2%
01-34-56506	Life, S/T,L/T Disability Ins	\$ 9,627	\$ 7,700	\$ 13,286	73%
01-34-56507	Retirement-Calpers	\$ 106,212	\$ 149,326	\$ 150,903	1%
01-34-56509	Employee Holidays	\$ 33,109	\$ -	\$ -	-
01-34-56510	EMPLOYEE VACATION	\$ (2,609)	\$ -	\$ -	-
01-34-56512	Employee Training/Tuition Reim	\$ 2,520	\$ 5,000	\$ 7,000	40%
01-34-56514	Employee Training	\$ 1,200	\$ -	\$ -	-
01-34-56515	Worker'S Compensation Ins	\$ 16,298	\$ 34,863	\$ 35,220	1%
01-34-56516	State Unemployment Ins, E.T.T.	\$ 2,054	\$ 2,646	\$ 2,646	0%
01-34-56517	Employee Paid Time Off Exp	\$ 138,691	\$ -	\$ -	-
01-34-56518	Duty Pay	\$ 12,600	\$ 10,400	\$ 13,000	25%
01-34-56520	Deferred Comp-Employer Contri	\$ 16,208	\$ 24,700	\$ 24,700	0%
01-34-56524	Other Post Employment Benefit	\$ -	\$ 7,753	\$ -	-100%
	Total Payroll Expenses	\$1,171,315	\$1,471,342	\$1,484,064	1%
01-34-72000	Supplies And Services	\$ 232,675	\$ 358,184	\$ 353,000	-1%
01-34-73000	Small Tools And Equipment	\$ 394	\$ 1,500	\$ 2,000	33%
01-34-75300	Conferences/Training	\$ 496	\$ 1,500	\$ 3,000	100%
	Total Maintenance & Supply	\$ 233,565	\$ 361,184	\$ 358,000	-1%
01-34-82000	Capital Equipment	\$ -	\$ -	\$ 114,600	100%
	Total Capital Expenses	\$ -	\$ -	\$ 114,600	100%
	TOTAL DISTRIBUTION EXPENSE	\$1,404,880	\$1,832,526	\$1,956,664	7%

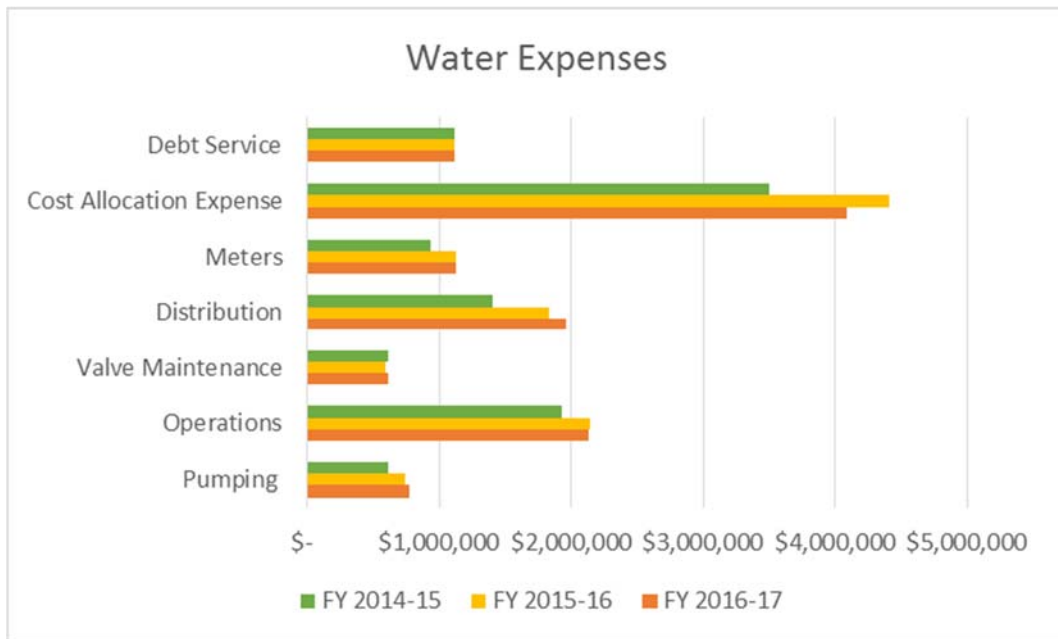
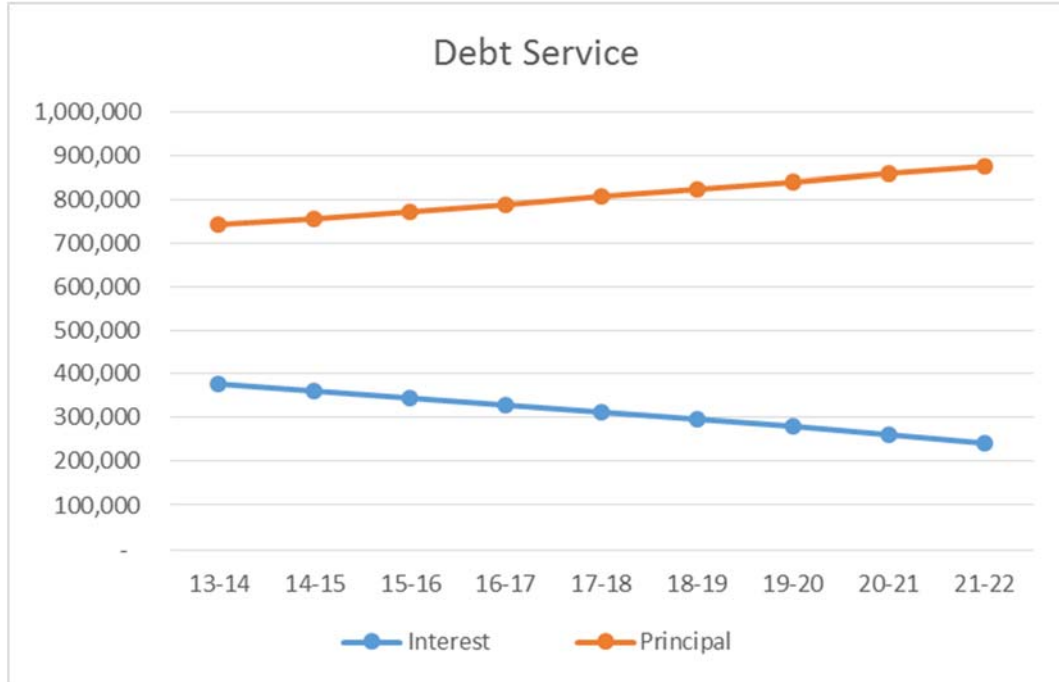
METERS EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
01-35-56101	Regular Salaries	\$ 319,674	\$ 436,907	\$ 429,602	-2%
01-35-56103	Overtime Paid, Comptime Earn.	\$ 1,865	\$ 3,000	\$ 3,000	0%
01-35-56501	Employer'S Share Fica Ssi	\$ 21,464	\$ 27,088	\$ 26,635	-2%
01-35-56502	Employer'S Share Fica Medicare	\$ 5,545	\$ 6,335	\$ 6,229	-2%
01-35-56503	Medical Ins Acwa Health Ben	\$ 62,364	\$ 80,818	\$ 72,699	-10%
01-35-56504	Dental Insurance	\$ 6,926	\$ 5,308	\$ 9,277	75%
01-35-56505	Vision Ins Acwa Serv Corp	\$ 940	\$ 1,058	\$ 1,027	-3%
01-35-56506	Life, S/T, L/T Disability Ins	\$ 4,816	\$ 3,692	\$ 6,496	76%
01-35-56507	Retirement - Calpers	\$ 52,391	\$ 72,964	\$ 71,743	-2%
01-35-56509	Employee Holidays	\$ 16,145	\$ -	\$ -	0%
01-35-56510	Employee Vacation	\$ 4,479	\$ -	\$ -	0%
01-35-56512	Employee Training/Tuition Reim	\$ 1,996	\$ 2,000	\$ 2,000	0%
01-35-56515	Worker'S Compensation Ins	\$ 8,578	\$ 19,070	\$ 18,751	-2%
01-35-56516	State Unemployment Ins, E.T.T.	\$ 1,059	\$ 1,486	\$ 1,386	-7%
01-35-56517	Employee Paid Time Off Exp	\$ 55,949	\$ -	\$ -	0%
01-35-56520	Deferred Comp-Employer Contrib	\$ 7,980	\$ 14,950	\$ 14,300	-4%
01-35-56524	OTHER POST EMPLOYMENT BENEF	\$ -	\$ 3,788	\$ 3,788	0%
	Total Payroll Expenses	\$572,171	\$ 678,465	\$ 666,933	-2%
01-35-63404	Maintenance	\$ 179,736	\$ 230,050	\$ 230,050	0%
01-35-72000	Supplies & Services	\$ 84,449	\$ 88,000	\$ 95,000	8%
01-35-73000	Small Tools And Equipment	\$ 377	\$ 800	\$ 2,000	150%
01-35-75300	Conferences/Training	\$ 100	\$ 500	\$ 500	0%
	Total Maintenance & Supply	\$264,662	\$ 319,350	\$ 327,550	3%
01-35-82000	Shop And Field Equipment	\$ 95,345	\$ 130,000	\$ 135,000	4%
	Total Capital Expenses	\$ 95,345	\$ 130,000	\$ 135,000	100%
	TOTAL METER EXPENSE	\$932,178	\$1,127,815	\$1,129,483	0%

WATER FUND DEBT SERVICE

Debt Service
2012 State Revolving Fund Loan
2.09%
20 Year Term

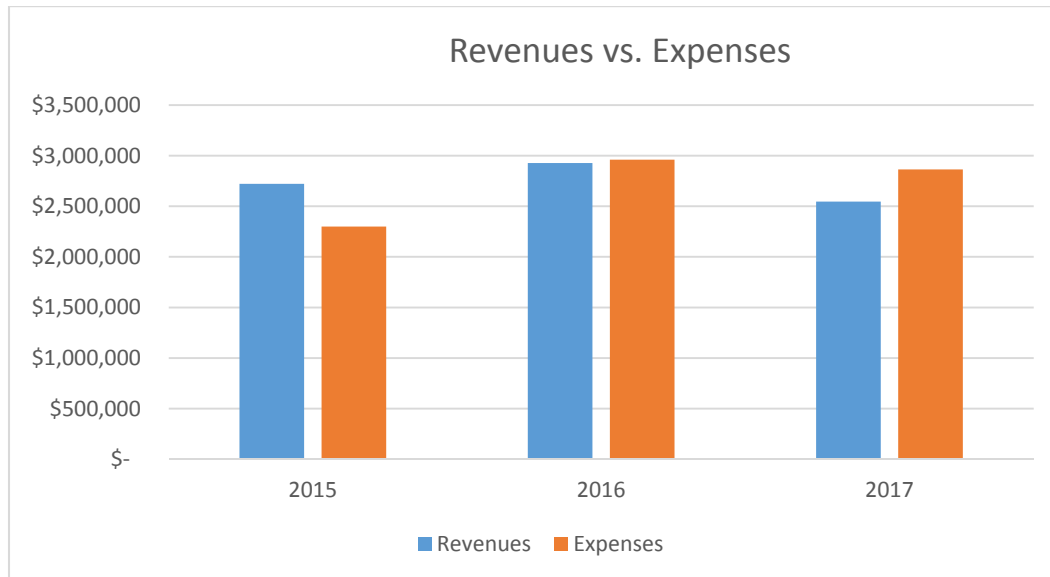
Beck	Interest Due	Principal Due	Total Annual Debt Service
2013-14	\$ 164,194	\$ 322,757	\$ 486,951
2014-15	\$ 157,403	\$ 329,549	\$ 486,952
2015-16	\$ 150,468	\$ 336,483	\$ 486,951
2016-17	\$ 143,388	\$ 343,564	\$ 486,952
2017-18	\$ 136,158	\$ 350,793	\$ 486,951
2018-19	\$ 128,777	\$ 358,175	\$ 486,952
2019-20	\$ 121,240	\$ 365,712	\$ 486,952
2020-21	\$ 113,544	\$ 373,407	\$ 486,951
2021-22	\$ 105,687	\$ 381,265	\$ 486,952
2023-2032	\$ 594,093	\$ 4,762,371	\$ 5,356,464
Total	\$ 1,814,952	\$ 7,924,076	\$ 9,739,028

Morro	Interest Due	Principal Due	Total Annual Debt Service
2013-14	\$ 213,505	\$ 419,686	\$ 633,191
2014-15	\$ 204,673	\$ 428,517	\$ 633,190
2015-16	\$ 195,656	\$ 437,525	\$ 633,191
2016-17	\$ 186,449	\$ 446,742	\$ 633,191
2017-18	\$ 177,049	\$ 456,142	\$ 633,191
2018-19	\$ 167,450	\$ 465,740	\$ 633,190
2019-20	\$ 157,650	\$ 475,541	\$ 633,191
2020-21	\$ 147,643	\$ 485,547	\$ 633,190
2021-22	\$ 137,426	\$ 495,764	\$ 633,190
2023-2032	\$ 772,509	\$ 6,192,590	\$ 6,965,099
Total	\$ 2,360,010	\$ 10,303,794	\$ 12,663,814



SEWER FUND BUDGETED REVENUES AND EXPENSES

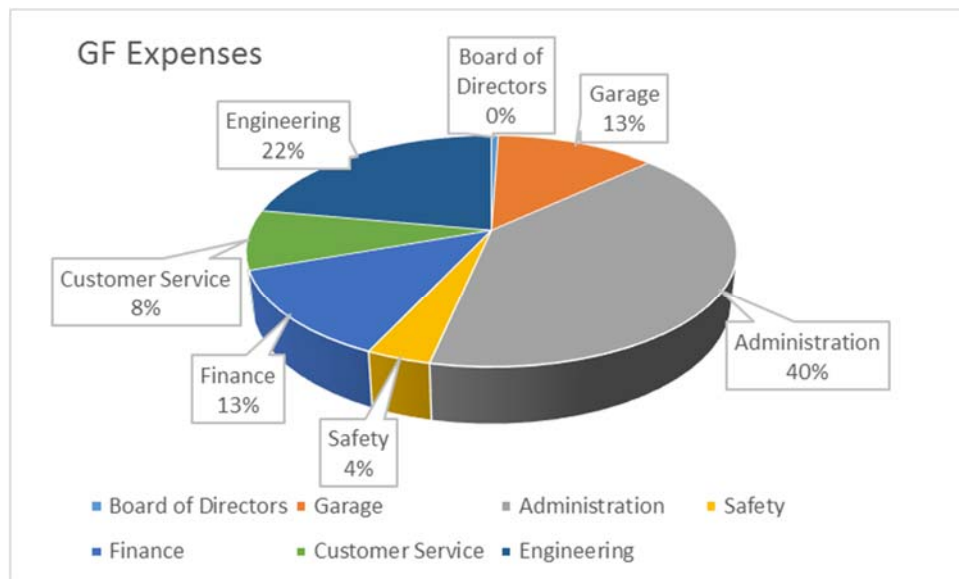
SEWER REVENUES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
02-00-41110	Sewer Charges-Established Acct	\$ 2,522,081	\$ 2,441,448	\$ 2,350,000	-4%
02-00-41210	Sewer Charges-Developing Accts	\$ 149,764	\$ 352,438	\$ 150,000	-57%
02-00-43101	Sewer-Oakcrest Service Charges	\$ 3,327	\$ 7,699	\$ 5,000	-35%
02-00-43106	Operating Inc-Sewer Letter Fee	\$ 450	\$ -	\$ 500	-
02-00-49109	Non Operating Revenue	\$ 1,508	\$ -	\$ -	-
02-00-49201	Interest Revenues-Sewer Fund	\$ (1,656)	\$ 84,675	\$ -	-100%
02-00-49301	Property Tax Rev - Ad Valorem	\$ 45,952	\$ 41,263	\$ 40,000	-3%
	Total Sewer Revenues	\$2,721,426	\$2,927,523	\$2,545,500	-13%



SEWER EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
02-61-56101	Regular Salaries	\$ 320,977	\$ 401,514	\$ 410,215	2%
02-61-56103	Overtime Paid, Comp Time Earn.	\$ 33,760	\$ 60,000	\$ 35,000	-42%
02-61-56501	Employer'S Share Fica Ssi	\$ 24,257	\$ 24,894	\$ 25,433	2%
02-61-56502	Employer'S Share Fica Medicare	\$ 6,264	\$ 5,822	\$ 5,948	2%
02-61-56503	Medical Ins Acwa Health Ben	\$ 70,568	\$ 90,993	\$ 93,310	3%
02-61-56504	Dental Insurance	\$ 7,717	\$ 8,230	\$ 8,433	2%
02-61-56505	Vision Ins Acwa	\$ 1,061	\$ 1,114	\$ 1,141	2%
02-61-56506	Life, S/T,L/T Disability Ins	\$ 5,349	\$ 4,686	\$ 6,145	31%
02-61-56507	Retirement-Calpers	\$ 59,231	\$ 67,053	\$ 68,506	2%
02-61-56509	Employee Holidays	\$ 16,478	\$ -	\$ -	0%
02-61-56512	Employee Training/Tuition Reim	\$ 1,824	\$ 3,000	\$ 3,000	0%
02-61-56515	Worker'S Compensation Ins	\$ 9,818	\$ 18,711	\$ 19,117	2%
02-61-56516	State Unemployment Ins, E.T.T.	\$ 1,331	\$ 1,260	\$ 1,260	0%
02-61-56517	Employee Paid Time Off Exp	\$ 45,580	\$ -	\$ -	0%
02-61-56518	Duty Pay	\$ 12,600	\$ 10,400	\$ 13,000	25%
02-61-56520	Deferred Comp-Employer Contri	\$ 9,056	\$ 13,000	\$ 13,000	0%
02-61-56524	Other Post Employment Benefit	\$ -	\$ 3,481	\$ 3,481	0%
	Total Payroll Expenses	\$ 625,872	\$ 714,159	\$ 706,991	-1%
02-61-60000	Equipment	\$ 6,318	\$ 47,800	\$ 18,300	-62%
02-61-63100	Equipment Maintenance-Sewer	\$ 5,805	\$ 19,000	\$ 22,000	16%
02-61-63401	Building Maintenance	\$ 112	\$ 500	\$ 6,000	1100%
02-61-70300	Legal Services	\$ -	\$ -	\$ 10,000	-
02-61-72000	Supplies And Services-Sewer	\$ 96,530	\$ 74,000	\$ 87,000	18%
02-61-72150	Regulatory Permits	\$ 4,442	\$ 4,600	\$ 5,000	9%
02-61-72200	Books And Resources	\$ 226	\$ 300	\$ 300	0%
02-61-72400	Dues And Subscriptions	\$ 116	\$ 800	\$ 800	0%
02-61-72600	Sewer Line Cleaning	\$ 80,884	\$ 33,000	\$ 35,000	6%
02-61-73000	Small Tools And Equipment	\$ 1,889	\$ 2,000	\$ 3,000	50%
02-61-75300	Travel/Conferences/Training	\$ 864	\$ 2,000	\$ 2,000	0%
02-61-77000	Sewage Treat.-Oceanside Plant	\$ 848,589	\$ 970,000	\$ 900,000	-7%
02-61-77100	Replacement Reserve-Oceansid	\$ -	\$ 331,100	\$ 331,100	0%
02-61-78000	Utilities	\$ 52,161	\$ 50,000	\$ 58,000	16%
02-61-78300	Hazardous Waster Material Disp	\$ 11,070	\$ 12,000	\$ 12,000	0%
02-61-78700	Utilities-Propane	\$ 334	\$ 2,000	\$ 6,000	200%
	Total Maintenance & Supply	\$ 1,109,339	\$ 1,549,100	\$ 1,496,500	-3%
02-61-82000	Shop And Field Equipment	\$ 17,498	\$ 20,000	\$ 20,000	0%
	Total Capital Expenses	\$ 17,498	\$ 20,000	\$ 20,000	0%
02-00-52176	Overhead Trnsfr to Gen Fund	\$ 546,078	\$ 677,426	\$ 640,450	-5%
	Total Transfers	\$ 546,078	\$ 677,426	\$ 640,450	-5%
	TOTAL SEWER EXPENSE	\$ 2,298,787	\$ 2,960,685	\$ 2,863,941	-3%
	NET INCOME	\$ 422,639	\$ (33,162)	\$ (318,441)	860%

GENERAL FUND BUDGETED REVENUES AND EXPENSES

Description	2014-15 Actual	2015-16 Adopted	Proposed 2016-17 Budget	% Change From 15-16 Budget
Operating Revenues				
Overhead Trs From Water, Sewer	\$ 4,045,025	\$ 5,090,260	\$ 4,730,000	-7%
Other General Fund Revenue	\$ 413,099	\$ 263,500	\$ 332,000	26%
Total Operating Revenues	\$ 4,458,123	\$ 5,353,760	\$ 5,062,000	-5%
Operating Expenses				
Board of Directors	\$ 14,298	\$ 21,454	\$ 27,368	28%
Garage	\$ 351,788	\$ 599,174	\$ 636,091	6%
Administration	\$ 2,081,265	\$ 2,279,238	\$ 2,036,696	-11%
Safety	\$ 184,220	\$ 197,580	\$ 181,807	-8%
Finance	\$ 445,556	\$ 637,018	\$ 636,708	0%
Customer Service	\$ 405,723	\$ 424,979	\$ 423,684	0%
Engineering	\$ 685,587	\$ 1,009,533	\$ 1,118,316	11%
Total Operating Expenses	\$ 4,168,437	\$ 5,168,977	\$ 5,060,669	-2%
Net Income	\$ 289,686	\$ 184,783	\$ 1,331	-99%



BOARD OF DIRECTOR EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
03-20-56202	Board Member Expenses	\$ 12,750	\$ 13,500	\$ 13,500	0%
03-20-56501	FICAR	\$ -	\$ -	\$ 837	-
03-20-56502	MEDIR	\$ -	\$ -	\$ 196	-
03-20-56515	Worker's Compensation Ins	\$ -	\$ 80	\$ 80	0%
03-20-72000	Supplies And Services	\$ 11	\$ 300	\$ 300	0%
03-20-75300	Travel/Conferences/Trainin	\$ 1,537	\$ 7,495	\$ 12,375	65%
	Total Payroll Expenses	\$ 14,298	\$ 21,375	\$ 27,288	28%
	TOTAL DIRECTORS' EXPENSE	\$ 14,298	\$ 21,454	\$ 27,368	28%

GARAGE EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
03-36-56101	Regular Salaries	\$ 67,219	\$ 87,632	\$ 87,250	0%
03-36-56103	Overtime Paid, Comp Time Earn.	\$ 262	\$ 1,000	\$ 1,000	0%
03-36-56501	Employer'S Share Fica Ssi	\$ 4,638	\$ 5,433	\$ 5,410	0%
03-36-56502	Employer'S Share Fica Medicare	\$ 1,199	\$ 1,271	\$ 1,265	0%
03-36-56503	Medical Ins Acwa Health Ben	\$ 13,410	\$ 18,553	\$ 18,402	-1%
03-36-56504	Dental Insurance	\$ 1,455	\$ 1,618	\$ 1,687	4%
03-36-56505	Vision Ins Acwa	\$ 202	\$ 214	\$ 228	7%
03-36-56506	Life, S/T,L/T Disability Ins	\$ 1,015	\$ 1,334	\$ 1,323	-1%
03-36-56507	Retirement-Calpers	\$ 11,327	\$ 14,635	\$ 14,571	0%
03-36-56509	Employee Holidays	\$ 3,285	\$ -	\$ -	-
03-36-56512	Employee Training/Tuition Reim	\$ -	\$ 500	\$ -	-100%
03-36-56515	Worker'S Compensation Ins	\$ 1,792	\$ 1,907	\$ 3,603	89%
03-36-56516	State Unemployment Ins, E.T.T.	\$ 257	\$ 243	\$ 252	4%
03-36-56517	Employee Paid Time Off	\$ 10,430	\$ -	\$ -	-
03-36-56520	Deferred Comp-Employer Contri	\$ 1,737	\$ 2,501	\$ 2,600	4%
03-36-56524	Other Post Employment Benefit	\$ -	\$ 760	\$ -	-100%
	Total Payroll Expenses	\$118,228	\$ 137,599	\$137,591	0%
03-36-63000	Equipment	\$ 2,782	\$ 2,000	\$ 2,500	25%
03-36-63100	Equipment Maintenance	\$ 31,866	\$ 20,000	\$ 25,000	25%
03-36-63421	Fuel And Oil	\$ 98,354	\$ 144,375	\$100,000	-31%
03-36-63422	Repair, Supplies, Auto	\$ 87,551	\$ 70,000	\$ 65,000	-7%
03-36-72000	Supplies And Services	\$ 8,178	\$ 5,500	\$ 5,500	0%
03-36-72150	Regulatory Permits	\$ 4,304	\$ 2,700	\$ 3,000	11%
03-36-73000	Small Tools And Equipment	\$ 524	\$ 1,000	\$ 1,500	50%
03-36-75300	Travel/Conferences/Training	\$ -	\$ 1,000	\$ 1,000	0%
	Total Maintenance & Supply	\$233,560	\$ 246,575	\$203,500	-17%
03-36-83000	Vehicles	\$ -	\$ 215,000	\$295,000	37%
	Total Capital Expenses	\$ -	\$ 215,000	\$295,000	37%
	TOTAL GARAGE EXPENSE	\$351,788	\$ 599,174	\$636,091	6%

ADMINISTRATION EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
03-41-56101	Regular Salaries	\$ 482,751	\$ 739,628	\$ 550,985	-26%
03-41-56102	Temporary Help	\$ 7,215	\$ -	\$ -	-
03-41-56103	Overtime Paid, Comp Time Earn.	\$ 7,248	\$ 3,100	\$ 3,100	0%
03-41-56501	Employer'S Share Fica Ssi	\$ 32,821	\$ 45,857	\$ 34,161	-26%
03-41-56502	Employer'S Share Fica Medicare	\$ 8,478	\$ 10,725	\$ 7,989	-26%
03-41-56503	Medical Ins Acwa Health Ben	\$ 94,996	\$ 94,146	\$ 65,844	-30%
03-41-56504	Dental Insurance	\$ 10,390	\$ 13,657	\$ 5,621	-59%
03-41-56505	Vision Ins Acwa	\$ 1,433	\$ 1,808	\$ 913	-50%
03-41-56506	Life, S/T,L/T Disability Ins	\$ 7,235	\$ 11,257	\$ 6,556	-42%
03-41-56507	Retirement-Calpers	\$ 80,122	\$ 123,518	\$ 92,015	-26%
03-41-56509	Employee Holidays	\$ 22,878	\$ -	\$ -	-
03-41-56511	Employee Uniform Allowance	\$ 13,082	\$ 16,000	\$ 16,000	0%
03-41-56512	Employee Training/Tuition Reim	\$ -	\$ 950	\$ 950	0%
03-41-56513	Employee Relations	\$ 5,766	\$ 8,475	\$ 12,675	50%
03-41-56515	Worker'S Compensation Ins	\$ 13,218	\$ 16,093	\$ 22,170	38%
03-41-56516	State Unemployment Ins, E.T.T.	\$ 1,720	\$ 2,047	\$ 1,008	-51%
03-41-56517	Employee Paid Time Off	\$ 32,233	\$ -	\$ -	-
03-41-56520	Deferred Comp-Employer Contrib	\$ 12,222	\$ 21,109	\$ 10,400	-51%
03-41-56524	Other Post Employment Benefits	\$ -	\$ 6,413	\$ 6,413	0%
	Total Payroll Expenses	\$ 833,808	\$ 1,114,782	\$ 836,800	-25%
03-41-60100	Computers	\$ 240,123	\$ 275,160	\$ 225,000	-18%
03-41-63100	Equipment Maintenance	\$ 26	\$ -	\$ -	-
03-41-63102	Equipment Maintenance Contract	\$ (510)	\$ 2,500	\$ 2,500	0%
03-41-63200	Equipment Rental	\$ 28,909	\$ 35,800	\$ 37,000	3%
03-41-63400	Kitchen Supplies	\$ 2,139	\$ 3,000	\$ 3,000	0%
03-41-63401	Building Maintenance	\$ 120,672	\$ 78,680	\$ 91,400	16%
03-41-65000	Property/Liability Insurance	\$ 169,293	\$ 186,000	\$ 200,000	8%
03-41-65100	District Paid Insurance Claims	\$ 9,041	\$ 20,000	\$ 20,000	0%
03-41-70000	Professional Services	\$ 201,584	\$ 160,000	\$ 195,000	22%
03-41-70300	Legal Services	\$ 281,908	\$ 200,000	\$ 200,000	0%
03-41-72000	Supplies And Services	\$ 23,317	\$ 27,050	\$ 27,050	0%
03-41-72200	Books And Resources	\$ -	\$ 250	\$ 250	0%
03-41-72400	Dues And Subscriptions	\$ 34,104	\$ 54,255	\$ 50,000	-8%
03-41-72702	Public Notices/Advertising	\$ 4,995	\$ 1,000	\$ 1,000	0%
03-41-72900	Stationary & Office Supplies	\$ 28,207	\$ 15,000	\$ 25,000	67%
03-41-74000	Communicatons & Phone Bills	\$ 7,153	\$ 7,500	\$ 12,000	60%
03-41-74100	Phone Bill	\$ 28,911	\$ 27,476	\$ 27,476	0%
03-41-75300	Travel/Conferences/Training	\$ 18,377	\$ 23,150	\$ 23,220	0%
03-41-78000	Utilities-Electricity	\$ 42,888	\$ 38,280	\$ 50,000	31%
03-41-78700	Utilities -Propane	\$ 189	\$ 3,715	\$ 4,000	8%
03-41-78900	Trash Pick-Up	\$ 6,129	\$ 5,640	\$ 6,000	6%
	Total Maintenance & Supply	\$ 1,247,457	\$ 1,164,456	\$ 1,199,896	3%
	TOTAL ADMINISTRATION EXPENSE	\$ 2,081,265	\$ 2,279,238	\$ 2,036,696	-11%

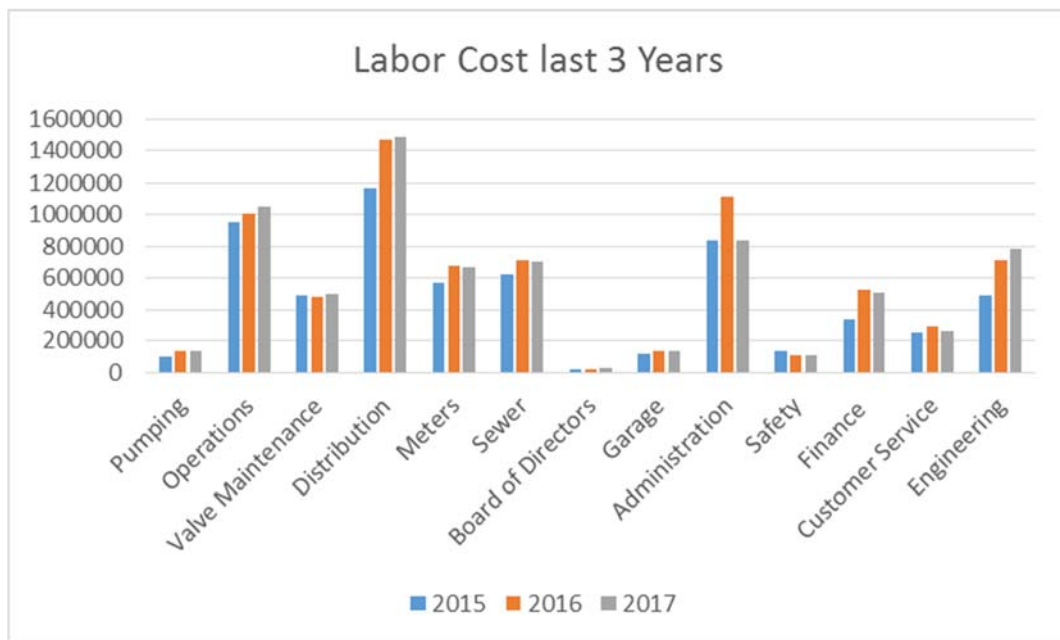
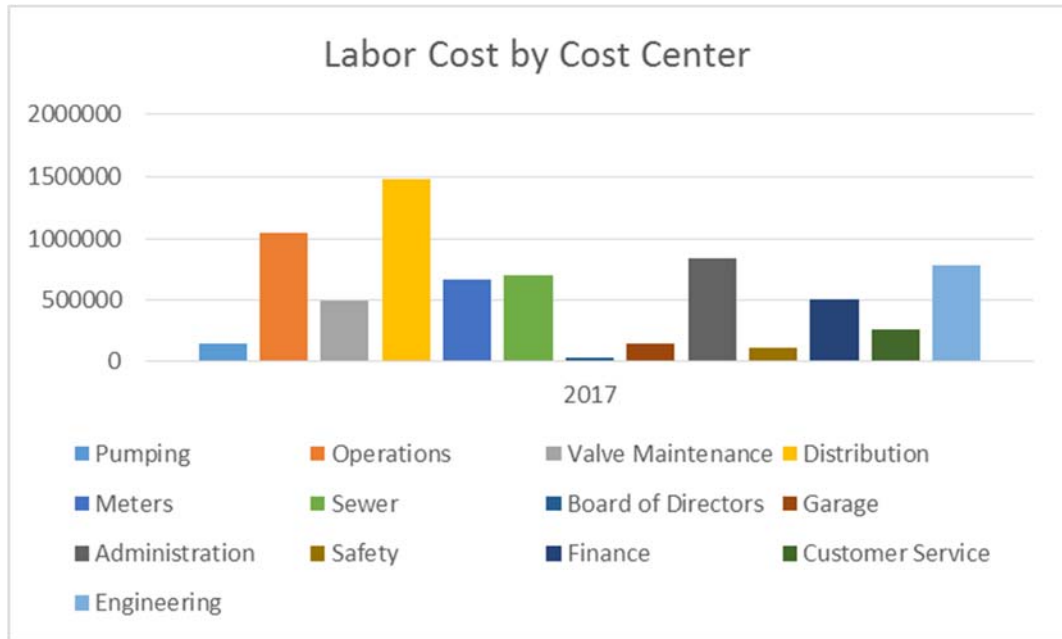
SAFETY EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
03-43-56101	Regular Salaries	\$ 56,273	\$ 71,927	\$ 71,615	0%
03-43-56103	Overtime Paid, Comp Time Earn.	\$ 274	\$ 300	\$ 300	0%
03-43-56501	Employer'S Share Fica Ssi	\$ 3,807	\$ 4,459	\$ 4,440	0%
03-43-56502	Employer'S Share Fica Medicare	\$ 984	\$ 1,043	\$ 1,038	0%
03-43-56503	Medical Ins Acwa Health Ben	\$ 11,022	\$ 8,450	\$ 9,344	11%
03-43-56504	Dental Insurance	\$ 1,169	\$ 1,328	\$ 1,687	27%
03-43-56505	Vision Ins Acwa	\$ 166	\$ 176	\$ 228	30%
03-43-56506	Life, S/T,L/T Disability Ins	\$ 820	\$ 1,095	\$ 1,080	-1%
03-43-56507	Retirement-Calpers	\$ 9,330	\$ 12,012	\$ 11,960	0%
03-43-56509	Employee Holidays	\$ 2,941	\$ -	\$ -	-
03-43-56510	Employee Vacation	\$ 4,369	\$ -	\$ -	-
03-43-56512	Employee Training/Tuition Reim	\$ -	\$ 350	\$ 350	0%
03-43-56513	Employee Relations	\$ -	\$ -	\$ -	-
03-43-56515	Worker'S Compensation Ins	\$ 1,518	\$ 1,565	\$ 2,912	86%
03-43-56516	State Unemployment Ins, E.T.T.	\$ 221	\$ 199	\$ 252	27%
03-43-56517	Employee Paid Time Off	\$ 37,181	\$ -	\$ -	-
03-43-56520	Deferred Comp-Employer Contri	\$ 1,421	\$ 2,053	\$ 2,600	27%
03-43-56524	Other Post Employment Benefit	\$ -	\$ 624	\$ -	-100%
	Total Payroll Expenses	\$ 131,500	\$ 105,580	\$ 107,807	2%
03-43-63100	Equipment Maintenance	\$ 2,456	\$ 8,000	\$ 8,000	0%
03-43-63102	Equipment Maintenance Contra	\$ 10,863	\$ 14,700	\$ 21,200	44%
03-43-72000	Supplies And Services	\$ 13,104	\$ 27,500	\$ 16,500	-40%
03-43-72200	Books And Resources	\$ -	\$ 200	\$ 200	0%
03-43-72400	Dues And Subscriptions	\$ 754	\$ 800	\$ 800	0%
03-43-72500	Safety Supplies	\$ 24,364	\$ 37,500	\$ 25,000	-33%
03-43-73000	Small Tools And Equipment	\$ -	\$ 300	\$ 300	0%
03-43-75300	Travel/Conferences/Training	\$ 1,180	\$ 3,000	\$ 2,000	-33%
	Total Maintenance & Supply	\$ 52,720	\$ 92,000	\$ 74,000	-20%
	TOTAL SAFETY EXPENSE	\$ 184,220	\$ 197,580	\$ 181,807	-8%

FINANCE EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
03-51-56101	Regular Salaries	\$ 202,559	\$ 365,416	\$ 350,641	-4%
03-51-56103	Overtime Paid, Comp Time Earn.	\$ 614	\$ 200	\$ 200	0%
03-51-56501	Employer'S Share Fica Ssi	\$ 13,601	\$ 22,656	\$ 21,740	-4%
03-51-56502	Employer'S Share Fica Medicare	\$ 3,509	\$ 5,299	\$ 5,084	-4%
03-51-56503	Medical Ins Acwa Health Ben	\$ 39,588	\$ 32,890	\$ 33,446	2%
03-51-56504	Dental Insurance	\$ 4,285	\$ 3,287	\$ 4,494	37%
03-51-56505	Vision Ins Acwa	\$ 595	\$ 891	\$ 913	2%
03-51-56506	Life, S/T,L/T Disability Ins	\$ 2,967	\$ 2,073	\$ 5,136	148%
03-51-56507	Retirement-Calpers	\$ 33,382	\$ 61,025	\$ 58,557	-4%
03-51-56509	Employee Holidays	\$ 10,180	\$ -	\$ -	0%
03-51-56512	Employee Training/Tuition Reim	\$ -	\$ 2,400	\$ 2,400	0%
03-51-56515	Worker'S Compensation Ins	\$ 5,554	\$ 13,986	\$ 13,421	-4%
03-51-56516	State Unemployment Ins, E.T.T.	\$ 830	\$ 1,008	\$ 1,008	0%
03-51-56517	Employee Paid Time Off	\$ 16,636	\$ -	\$ -	0%
03-51-56520	Deferred Comp-Employer Contrib	\$ 5,140	\$ 10,400	\$ 10,400	0%
03-51-56524	Other Post Employment Benefits	\$ -	\$ 3,168	\$ 3,168	0%
	Total Payroll Expenses	\$ 339,440	\$ 524,698	\$ 510,608	-3%
03-51-69000	Postage	\$ 44,941	\$ 43,500	\$ 46,500	7%
03-51-70100	Annual Audit Services	\$ 12,081	\$ 14,420	\$ 15,000	4%
03-51-70400	Bank Service Charges	\$ 46,313	\$ 50,000	\$ 60,000	20%
03-51-72000	Supplies And Services	\$ -	\$ 100	\$ 100	0%
03-51-72700	Printing And Reproductions	\$ 1,749	\$ 1,800	\$ 2,000	11%
03-51-75300	Travel/Conferences/Training	\$ 1,032	\$ 2,500	\$ 2,500	0%
	Total Maintenance & Supply	\$ 106,116	\$ 112,320	\$ 126,100	12%
	TOTAL FINANCE EXPENSE	\$ 445,556	\$ 637,018	\$ 636,708	0%

CUSTOMER SERVICE EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
03-52-56101	Regular Salaries	\$ 141,642	\$ 194,114	\$ 155,878	-20%
03-52-56103	Overtime Paid, Comp Time Earn.	\$ 3,279	\$ 3,500	\$ 3,500	0%
03-52-56501	Employer'S Share Fica Ssi	\$ 9,882	\$ 12,035	\$ 9,664	-20%
03-52-56502	Employer'S Share Fica Medicare	\$ 2,535	\$ 2,815	\$ 2,260	-20%
03-52-56503	Medical Ins Acwa Health Ben	\$ 28,054	\$ 34,101	\$ 35,779	5%
03-52-56504	Dental Insurance	\$ 3,151	\$ 3,584	\$ 5,060	41%
03-52-56505	Vision Ins Acwa	\$ 424	\$ 475	\$ 685	44%
03-52-56506	Life, S/T,L/T Disability Ins	\$ 2,197	\$ 2,954	\$ 2,321	-21%
03-52-56507	Retirement-Calpers	\$ 23,823	\$ 32,417	\$ 26,032	-20%
03-52-56509	Employee Holidays	\$ 7,865	\$ -	\$ -	0%
03-52-56512	Employee Training/Tuition Reim	\$ -	\$ 1,000	\$ 1,000	0%
03-52-56515	Worker'S Compensation Ins	\$ 3,391	\$ 4,224	\$ 5,966	41%
03-52-56516	State Unemployment Ins, E.T.T.	\$ 537	\$ 537	\$ 756	41%
03-52-56517	Employee Paid Time Off	\$ 23,786	\$ -	\$ -	0%
03-52-56520	Deferred Comp-Employer Contrib	\$ 3,606	\$ 5,540	\$ 7,800	41%
03-52-56524	Other Post Employment Benefits	\$ -	\$ 1,683	\$ 1,683	0%
	Total Payroll Expenses	\$ 254,173	\$ 298,979	\$ 258,384	-14%
03-52-63100	Equipment Maintenance	\$ -	\$ 300	\$ 300	0%
03-52-69110	Bad Debt Exp/Billing Adjust'S	\$ 19,810	\$ 12,000	\$ 20,000	67%
03-52-72000	Supplies And Services	\$ 129,587	\$ 110,500	\$ 141,000	28%
03-52-72700	Printing And Reproductions	\$ 1,956	\$ 2,200	\$ 3,000	36%
03-52-75300	Travel/Conferences/Training	\$ 198	\$ 1,000	\$ 1,000	0%
	Total Maintenance & Supply	\$ 151,551	\$ 126,000	\$ 165,300	31%
	TOTAL CUSTOMER SERVICE EXPENSE	\$ 405,723	\$ 424,979	\$ 423,684	0%

ENGINEERING EXPENSES		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
03-91-56101	Regular Salaries	\$ 273,992	\$ 465,968	\$ 518,020	11%
03-91-56103	Overtime Paid, Comp Time Earn.	\$ 5,045	\$ 4,000	\$ 4,000	0%
03-91-56501	Employer'S Share Fica Ssi	\$ 18,961	\$ 28,890	\$ 32,117	11%
03-91-56502	Employer'S Share Fica Medicare	\$ 4,905	\$ 6,757	\$ 7,511	11%
03-91-56503	Medical Ins Acwa Health Ben	\$ 55,011	\$ 84,591	\$ 81,688	-3%
03-91-56504	Dental Insurance	\$ 6,131	\$ 8,604	\$ 8,151	-5%
03-91-56505	Vision Ins Acwa	\$ 830	\$ 1,139	\$ 1,027	-10%
03-91-56506	Life, S/T,L/T Disability Ins	\$ 4,247	\$ 7,092	\$ 6,963	-2%
03-91-56507	Retirement-Calpers	\$ 46,403	\$ 77,817	\$ 86,509	11%
03-91-56509	Employee Holidays	\$ 13,898	\$ -	\$ -	-
03-91-56510	Employee Vacation	\$ 7,457	\$ -	\$ -	-
03-91-56512	Employee Training/Tuition Reim	\$ -	\$ 1,200	\$ 1,200	0%
03-91-56515	Worker'S Compensation Ins	\$ 7,804	\$ 10,139	\$ 20,734	105%
03-91-56516	State Unemployment Ins, E.T.T.	\$ 823	\$ 1,290	\$ 1,386	7%
03-91-56517	Employee Paid Time Off	\$ 36,632	\$ -	\$ -	-
03-91-56520	Deferred Comp-Employer Contrib	\$ 6,844	\$ 13,299	\$ 14,300	8%
03-91-56524	Other Post Employment Benefits	\$ -	\$ 4,040	\$ -	-100%
	Total Payroll Expenses	\$ 488,982	\$ 714,824	\$ 783,607	10%
03-91-63000	Equipment	\$ -	\$ 5,000	\$ 5,000	0%
03-91-63102	Equipment Maintenance Contract	\$ (1,938)	\$ 62,310	\$ 102,310	64%
03-91-63401	Building Maintenance	\$ 231	\$ -	\$ -	-
03-91-70000	Professional Services	\$ 180,224	\$ 200,000	\$ 200,000	0%
03-91-72000	Supplies And Services	\$ 15,814	\$ 21,134	\$ 21,134	0%
03-91-72200	Books And Resources	\$ -	\$ 500	\$ 500	0%
03-91-72400	Dues And Subscriptions	\$ 712	\$ 765	\$ 765	0%
03-91-72700	Printing And Reproductions	\$ 16	\$ -	\$ -	-
03-91-72702	Public Notices/Advertising	\$ 96	\$ -	\$ -	-
03-91-75300	Travel/Conferences/Training	\$ 1,448	\$ 5,000	\$ 5,000	0%
	Total Maintenance & Supply	\$ 196,604	\$ 294,709	\$ 334,709	14%
	TOTAL ENGINEERING EXPENSE	\$ 685,587	\$ 1,009,533	\$ 1,118,316	11%

LABOR TREND



WATER CAPITAL FUND BUDGETED REVENUES AND EXPENSES

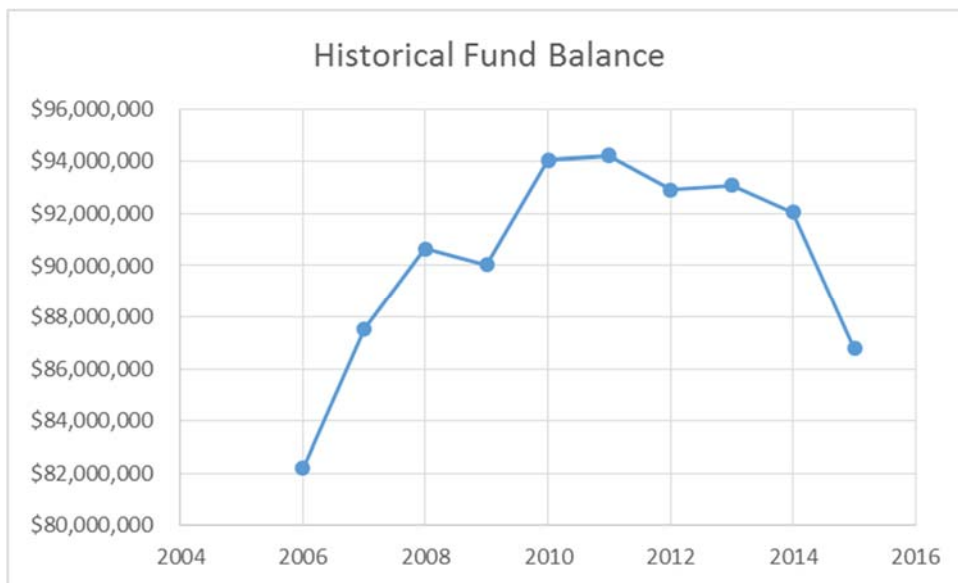
WATER CAPITAL		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
60-00-49201	Interest Revenues - Laif	\$ (4,342)	\$ -	\$ -	-
60-00-49202	Interest Rev Long Term Investm	\$ 19,144	\$ -	\$ 25,000	-
60-00-49920	Capacity Fees	\$ 13,067	\$ -	\$ 1,100,000	-
	Total Water Cap Revenues	\$ 27,868	\$ -	\$ 1,125,000	-
60-00-52176	Overhead Transfer From Wtr	\$ -	\$ -	\$ 500,000	-
60-00-56101	Regular Salaries	\$ 20,860	\$ -	\$ -	-
60-00-56501	Employer'S Share Fica Ssi	\$ -	\$ -	\$ -	-
60-00-56502	Employer'S Share Fica Medicare	\$ -	\$ -	\$ -	-
60-00-56503	Medical Ins Acwa Health Ben	\$ -	\$ -	\$ -	-
60-00-56505	Vision Ins Acwa Serv Corp	\$ -	\$ -	\$ -	-
60-00-56507	Retirement - Calpers	\$ -	\$ -	\$ -	-
60-00-70000	Professional Services	\$ -	\$ -	\$ 75,000	-
60-00-82000	Capital Expenses	\$ 43,497	\$ 50,000	\$ 4,150,000	8200%
	Total Water Cap Expenses	\$ 64,357	\$ 50,000	\$ 4,725,000	9350%

SEWER CAPITAL BUDGETED REVENUES AND EXPENSES

SEWER CAPITAL		FY 2015	FY 2016	FY 2017	% Change
GL Account	Description	Actuals	Adopted	Proposed	From 15-16
53-00-49201	Interest Rev. Laif, Uboc	\$ 8,953	\$ 2,500	\$ -	-100%
53-00-49202	Interest Inc-Long Term Invest	\$150,731	\$ 80,875	\$ 80,000	-1%
53-00-49203	Change In Investment Valuation	\$ -	\$ -	\$ -	-
53-00-49920	Connection Fees-Sew Cap Improv	\$263,900	\$ -	\$ -	-
	Total Sewer Cap Revenues	\$423,584	\$ 83,375	\$ 80,000	-4%
53-00-56101	Regular Salaries	\$ 9,378	\$ -	\$ -	-
53-00-82000	Capital Expenses	\$ -	\$ -	\$2,230,000	-
	Total Sewer Cap Expenses	\$ 9,378	\$ -	\$2,230,000	-

FUND BALANCE HISTORY

Rainbow Municipal Water District			
Consolidated Fund Balance History			
For the Fiscal Year Ending June 30, 2015			
Fiscal Year	Beginning Fund Balance	Change in Net Position	Ending Fund Balance
2006	\$ 80,719,248	\$ 1,464,090	\$ 82,183,338
2007	\$ 82,183,338	\$ 5,351,755	\$ 87,535,093
2008	\$ 87,535,093	\$ 3,114,067	\$ 90,649,160
2009	\$ 90,649,160	\$ (608,122)	\$ 90,041,038
2010	\$ 90,041,038	\$ 4,019,165	\$ 94,060,203
2011	\$ 94,060,203	\$ 155,103	\$ 94,215,306
2012	\$ 94,215,306	\$ (1,296,760)	\$ 92,918,546
2013	\$ 92,918,546	\$ 174,582	\$ 93,093,128
2014	\$ 93,093,128	\$ (1,045,057)	\$ 92,048,071
2015	\$ 92,048,071	\$ (5,275,926)	\$ 86,772,145
***2015 PPA of \$4,168,449			
GASB 68 Recording Net Pension Liability			



CAPITAL PROJECTS

FIVE-YEAR WATER CAPITAL IMPROVEMENT PLAN

	Total Project Cost	Funds Expended in Prior Years	Remaining Budget FY 15/16	Proposed Budget FY 16/17	Projected Budget FY 17/18	Projected Budget FY 18/19	Projected Budget FY 19/20	Projected Budget FY 20/21
Existing Water CIP								
Gird to Monserate Hill Water Line	\$1,320,000	\$115,088	\$834,912	\$1,200,000	---	---	---	---
San Luis Rey Imported Return Flow Recovery	\$900,000	\$473,761	\$26,239	\$150,000	\$750,000	---	---	---
On Going Water Projects								
Isolation Valve Installation Program	\$750,000	\$0		\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Pressure Reducing Station Replacement Program	\$800,000	\$0		\$160,000	\$160,000	\$160,000	\$160,000	\$160,000
Proposed Water Projects								
PS #3 (Vallecitos) Replacement	\$1,030,000	\$71,970		\$0	\$0	\$0	\$0	\$1,030,000
Upsize 12" to 16" along Dentro De Lomas/ Paseo Grande	\$704,000	\$0		\$0	\$0	\$0	\$0	\$704,000
Line NN Transmission Upgrades	\$2,800,000	\$0		\$0	\$0	\$224,000	\$2,576,000	---
Wrightwood to Cottontail PRS	\$100,000	\$0		\$0	\$0	\$100,000	---	---
Knottwood Road Loop and PRS	\$150,000	\$0		\$150,000	---	---	---	---
Northside Zone Supply Redundancy	\$517,000	\$0		\$0	\$0	\$40,000	\$477,000	\$0
PS #1 Upgrades	\$800,000	\$0		\$100,000	\$700,000	---	---	---
Water System Condition Assessment Program	\$1,500,000	\$0		\$150,000	\$300,000	\$300,000	\$300,000	\$300,000
Pressure Reducing Stations	\$510,000	\$0		\$200,000	\$0	\$310,000	---	---
SDCWA Shutdown Pump Stations	\$500,000	\$0		\$500,000	---	---	---	---
Capital Meter Replacement	\$300,000			\$300,000				
Water System Billing Meter- Systemwide AMI Conversion	\$2,700,000	\$0		\$700,000	\$2,000,000	---	---	---
Water System Monitoring Program	\$875,000	\$0		\$0	\$0	\$400,000	\$475,000	---
Upsize 6" to 8" in Via San Alberto	\$155,000	\$0		\$0	\$0	\$0	\$0	\$155,000
Upsize 4" and 6" to 8" and 10" along Sleeping Indian, Conejo and Caroline Roads	\$564,000	\$0		\$0	\$0	\$564,000	---	---
Upsize 6" to 8" on Chica Road	\$202,000	\$0		\$0	\$0	\$202,000	---	---
Weese WTP Permanent Emergency Interconnect and PS	\$1,200,000	\$0		\$240,000	\$960,000	---	---	---
Morro Tank Zone Permanent FPUD Ineterconnection	\$150,000	\$0		\$150,000	---	---	---	---
Total Expenditure (Water):	\$18,527,000	\$660,819	\$861,150	\$4,150,000	\$5,020,000	\$2,450,000	\$4,138,000	\$2,499,000

SIGNIFICANT WATER CAPITAL PROJECTS

Project No.	Water Pressure Zone	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
								Unit Cost	Total Cost
Water System Existing Improvement Projects									
WE1	Canonita	Gird to Monserate Hill Water Line	Loop dead end system and shift demand off of the Canonita Zone		12-inch	2,150 ft	1	--	\$950,000
WE2	South	Wrightwood to Cottontail PRS	Replaced broken pipe. Install PRS to re-constitute previously looped system	Pipeline is complete, need to install PRS to allow connection to operate	8-inch	1	1	--	\$100,000
WE3 200950	South	Lake Vista Estates Loop and PRS	Improve water quality by eliminating dead ends and improve fire flow	Short segment of pipeline and PRS to connect Morro and South Zones	--	--	1	--	\$144,000
WE4 201573	South	Tarek Terrace Water Line	Replace old pipe to have fewer service outages and resources spent on repairs		8-inch	500 ft	1	--	\$143,000
WE5 201359	South	Rancho Amlgos Pressure Station Replacement	Improve maintenance access	Improve safety and lessen staff required for maintenance	8-inch	--	1	\$75,000	\$75,000
Hydraulic Capacity Projects									
WH1	South	Upsize 12" to 16" along Dentro de Lomas/Paseo Grande Rd	Increase system pressures, increase emergency [or permanent] pump performance	Downstream of Dentro De Lomas Emergency Pump Station	16-inch	2,100 ft	1	\$335	\$704,000
WH2	Canonita	Upsize 6" to 10" along Wilt Road	Increase system pressures, improve function of Wilt & Citrus PRV into Pala Mesa Tank	Only first ~2,200 feet fails criteria	10-inch	5,200 ft	3	\$195	\$1,010,000
WH3	Morro	Remove Bottleneck, Upsize 8-inch to 12-inch on Mission Road & North River Road	Reduce headlosses through bottleneck, increase flow capacity during Morro filling		12-inch	3,500 ft	3	\$310	\$1,090,000
Pressure Regulation Projects									
WP1	Pala Mesa	Install PRSs at Intersections of Knottwood Way and Staghorn Lane / Gird Road	Reduce local pressure, reduce risk of pipe and lateral breaks	Install two PRVs on Knottwood Way, close valves GV145 and PV231. 90 psi+ reduction possible	6-inch	1	1	\$75,000	\$75,000
					4-inch	1	1	\$35,000	\$35,000
WP2	Northside	Install PRSs at Brooke Hollow Rd and Ranger Road	Reduce local pressure to large geographical service area, reduce risk of pipe/lateral breaks	95 psi+ reduction possible	8-inch	1	1	\$100,000	\$100,000
					6-inch	1	1	\$75,000	\$75,000

Project No.	Water Pressure Zone	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
								Unit Cost	Total Cost
WP3	Gomez	Install PRS at Alex Road and gate valve at Jeremy Way	Reduce extremely high [400+] local pressures, reduce risk of pipe and lateral breaks	Install PRV after PV25 and install gate valve at Intersection with Jeremy Way. 200 psi+ reduction possible	6-inch	2	1	\$75,000	\$150,000
WP4	North	Install PRS to serve Rice Canyon Road South of Pala Mesa Heights Drive	Reduce extremely high [300+] local pressures, reduce risk of pipe and later breaks	Install PRV after PV23. 175 psi+ reduction possible	6-inch	1	1	\$75,000	\$75,000
WP5	South	Install PRS to serve South Fork Area along Vista Valley Drive	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRVs at Vista Valley Drive intersections with Gopher Canyon Road and Laurel Valley Drive. Close PV35. 100 psi+ reduction possible	8-inch	2	2	\$100,000	\$200,000
WP6	Morro	Install PRS on Baja Mission Road	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRV at intersection of Baja Mission Rd and La Canada Road. Close GV 28. 100 psi+ reduction possible	6-inch	1	2	\$75,000	\$75,000
WP7	Morro	Install PRS on Limber Pine Road	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRV on Limber Pine Road Flowerwood Lane and close valve PV127. 90 psi+ reduction possible	6-inch	2	2	\$75,000	\$150,000
WP8	Morro	Install PRS Club Vista East on Lake Vista Drive	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRV directly east of Ex. Club Vista PRV east of intersection with Club Vista Lane. 90 psi+ reduction possible	6-inch	1	2	\$75,000	\$75,000
WP9	Pala Mesa	Install PRSs at Diego Estates Drive and Sarah Ann Drive	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRVs at Gird Road intersections with Diego Estates Drive and Sarah Ann Drive. Close PV65. 130 psi+ reduction possible	6-inch	2	2	\$75,000	\$150,000
WP10	South	Install PRS at Via Maria Elena	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRV after GV23. 60 psi+ reduction possible	6-inch	1	2	\$75,000	\$75,000
WP11	Morro	Install PRS at Intersection of Mission Road and East Vista Way	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRV after PV51. 140 psi+ reduction possible. Serves very small area	6-inch	1	2	\$75,000	\$75,000
WP12	South	Install PRS to serve Champagne Boulevard	Reduce local pressure, reduce risk of pipe and lateral breaks	Install PRV after PV20. 100 psi+ reduction possible. Serves very small area	6-inch	1	2	\$75,000	\$75,000

Project No.	Water Pressure Zone	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
								Unit Cost	Total Cost
WP13	Morro	Connect and Install PRS to serve Orange Hill, Estate Drive and Rio Vista Drive	Reduce local pressure, provide redundancy and reduce risk of pipe and lateral breaks	Install PRV after PV145. Close valve GV16 and PV42. Install 1,300 ft of 8-inch pipe to connect dead ends. 100 psi+ reduction possible	6-inch 8-inch	1 1,300 ft	2 2	\$75,000 \$145	\$75,000 \$189,000
WP14	Morro	Install PRS on Thoroughbred Lane	Reduce local pressure [~300], reduce risk of pipe and lateral breaks	Install PRV after PV4. 180 psi+ reduction possible. Serves very small area	6-inch	1	2	\$75,000	\$75,000
WP15	Morro	Install PRS to serve River Village	Reduce local pressure [250+] reduce risk of pipe and lateral breaks	Install PRV after GV19. 150 psi+ reduction possible. Serves very small area	6-inch	1	2	\$75,000	\$75,000
WP16	Morro	Install PRS to serve Ascot Park Area	Reduce local pressure [220+] reduce risk of pipe and lateral breaks	Install PRV after PV17 and PV70. 100 psi+ reduction possible. Serves very small area. 6" pipe, cannot reduce pressure too far	6-inch	2	2	\$75,000	\$150,000
WP17	Rainbow Heights	Install PRS at Rainbrook	Reduce local pressure, reduce risk of pipe and lateral breaks		6-inch	1	2	\$75,000	\$75,000
Operations, Redundancy and Reliability Projects									
WR1	Morro	Line NN Transmission Upgrades	Provide transmission flow path to allow better utilization of Dentro de Lomas PRV through new Line NN during Morro Filling		16-inch	9000 ft	1	\$315	\$2,800,000
WR2	Vallecitos	Pump Station #3 [Vallecitos] Replacement	Improved efficiency and reliability to pressure zone	Increase discharge size from 6-inch. Provide at least 2 pumps for redundancy	75 HP	600 gpm	1	--	\$1,030,000
WR3	U-1	U-1 Transmission Pipeline Replacement to Ranchbrook Road	Replace aging pipeline, fewer service outages and resources spent on repairs	Replace aging pipeline that is the sole transmission source into zone	12-inch	3200 ft	1	\$235	\$752,000
WR4	Northside	Northside Zone Supply Redundancy. Upsize Rainbow Hills Road Pipeline to 12-inch and Install New PRS	Provides an emergency supply connection to service large, critical zone	Replace 6-inch pipe on Rainbow Hills Road with 12-inch. Could provide emergency service during a pump station outage. Only ~70' difference between North and Northside zones.	12-inch	2200 ft	1	\$235	\$517,000

Project No.	Water Pressure Zone	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
								Unit Cost	Total Cost
WR5	South/Pala Mesa	Hutton Tank to Pala Mesa Zone Emergency Connection	Provide redundant supply and increased looping for emergency support	PL along Old Highway 395 to Pala Road. Similar zone connection through the Vessels development also possible	16-inch	9,900	2	\$400	\$4,000,000
WR6	South	Moosa Permanent Emergency Pump Station	Permanent Station to provide emergency supply to South Zone	Assumed at existing location. Additional study necessary to confirm pump flow/size	200 HP	2000 gpm	2	--	\$2,500,000
WR7	North	North Feeder and Rainbow Hills Water Line Replacements	Fewer service outages and resources spent on repairs	Replace corroded pipelines which have suffered several breaks	30-inch 27-inch	3788 ft	2	\$515	\$2,000,000
WR8	Pala Mesa	76 & Gird Permanent Emergency Pump Station	Improved zone reliability during outage or transmission main break scenarios	At same site as 76 & Gird PRV Station	100 HP	2000 gpm	2	--	\$1,600,000
WR9	South	Line P Permanent Emergency Pump Station	Permanent Station to provide emergency supply to South Zone	Assumed at existing location. Additional study necessary to confirm pump flow/size	100 HP	2000 gpm	2	--	\$1,600,000
WR10	South	Camino Del Rey Emergency Pump Station	Permanent Station to provide emergency supply to South Zone	Assumed at existing location. Additional study necessary to confirm pump flow/size	100 HP	2000 gpm	2	--	\$1,600,000
WR11	South	Dentro De Lomas Permanent Emergency Pump Station	Permanent Station to provide emergency supply to South Zone	Assumed at existing location. Additional study necessary to confirm pump flow/size	100 HP	2000 gpm	2	--	\$1,600,000
WR12	Northside	Northside Emergency Pump Station Connection and Pipeline at Reche Road	Provide emergency supply to Northside zone in case of transmission failure	Upsize ex pipeline rather than providing a new parallel. Pump station similar to other emergency PSs proposed.	16-inch	3700 ft	2	\$285	\$1,050,000
WR13	Northside	Northside Emergency Pump Station Connection and Pipeline at Reche Road	Provide emergency supply to Northside zone in case of transmission failure	Upsize ex pipeline rather than providing a new parallel. Pump station similar to other emergency PSs proposed.	50 HP	1000 gpm	2	--	\$980,000
WR13	North	Rice Canyon Tank Transmission PL to I-15/SR76 Corridor	Improve cycling of Rice Canyon tank and serve new development	Project will likely be developer funded	12-inch	3000 ft	2	\$150	\$450,000

Project No.	Water Pressure Zone	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
								Unit Cost	Total Cost
WR14	Rainbow Heights	Pump Station #1 [Rainbow Heights] Natural Gas Motor Replacements	Improved efficiency and reliability to pressure zone	Cost provided by District, 196k, exclusive of SDG&E requirements and contingencies.	250 HP	2	1	\$150,000	\$300,000
WR15	South	Loop Pipelines In Via Ararat Drive to West Lilac Road	Provide redundant supply and increased looping	Reliability Connection to provide additional looping for increased system pressures.	8-inch	615 ft	2	\$145	\$89,000
WR16	South	Loop Pipelines in Magee Lane to Disney Lane	Loop lines for redundancy and improved fire flow	Could be combined with FF4	8-inch	300 ft	2	\$100	\$30,000
WR18	Morro	Improve Flow Path to Morro Reservoir, Install Parallel 10-inch pipeline on Karl Lane	Provide additional flow path and reduced resistance during Morro filling	Parallel existing pipeline on Kari Lane	10-Inch	2800 ft	3	\$180	\$504,000
WR19	Pala Mesa	Lake Rancho Viejo Permanent Connection	Provide redundant supply to reduced zone	Not shown on Figure 7-1A	8-Inch	150 ft	3	\$145	\$22,000
WR20	South	Integrity Court, connect dead end lines	Provide redundant supply and increased looping		8-inch	1000 ft	3	\$145	\$145,000
WR21	Districtwide	Water System Condition Assessment Program	Provide the District with an accounting of the characteristics of its water system	Integral part of the implementation of an Asset Management Program	–	–	1	--	\$1,500,000
WR22	Districtwide	Pressure Reducing Station Replacement Program	Replace valves that are aging, under designed and lacking redundancy	Old and small valves and valves with no PR station should be replaced, assumed 20	–	20	1	\$40,000	\$800,000
WR23	Districtwide	Isolation Valve Installation Program	Reduce shutdowns of service to any area serving 50+ persons	Allow District to serve during Isolated emergencies, assume 50 installations	–	50	1	\$15,000	\$750,000
WR24	Districtwide	Water System Billing Meter - Systemwide AMI Conversion	Replace existing meters with AMI technology	Instantaneous sales history access. Identify and control leaks and other water losses. Cost estimate provided by District staff	–	–	1	--	\$3,000,000
WR25	Districtwide	Water System Monitoring Program	Install measuring devices to track flow balance into system and through zones	Identify and control leaks and other water losses, assume 25 installations	–	25	1	\$35,000	\$875,000

Project No.	Water Pressure Zone	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
								Unit Cost	Total Cost
WR26	Districtwide	New District Headquarters	Construct new District Headquarters to appropriately house staff	Replace aging buildings and provide room for new staff as development occurs	–	–	2	--	\$3,000,000
WR27	Districtwide	Install Permanent Emergency Generators at Pump Stations	Provide system reliability in cases of extended power outage	Include update of all stations to include transfer switches and soft start motors	–	7	3	\$125,000	\$875,000

Fire Flow Projects

FF1	Pala Mesa	Upsize 6-inch to 8-inch in Via San Alberto	Increase available fire flow	Available flow less than 500 gpm	8-inch	1,000 ft	1	\$155	\$155,000
FF2	Morro Tank	Upsize 4-inch and 6-inch to 8-inch and 10-inch along Sleeping Indian, Conejo and Caroline Roads	Increase available fire flow	Available fire flow is less than 500 gpm	10-inch 8-inch	1,300 ft 2,000 ft	1 1	\$195 \$155	\$254,000 \$310,000
FF3	North	Upsize 6-inch to 8-inch on Chica Road	Increase available fire flow	Available flow less than 600 gpm	8-inch	1,300 ft	1	\$155	\$202,000
FF4	Canonita	Upsize 4-inch to 8-inch on Lupine Lane	Increase available fire flow	Available flow less than 700 gpm	8-inch	700 ft	2	\$155	\$109,000
FF5	South	Upsize 4-inch and 6-inch to 8-inch at Magee Lane	Increase available fire flow	Available flow less than 700 gpm	8-inch	1,500 ft	2	\$155	\$233,000
FF6	Northside	Upsize 4-inch on Via Chaparral	Increase available fire flow	Available flow less than 700 gpm	8-inch	850 ft	2	\$155	\$132,000

Water Supply Projects

WS1	South	Weese WTP Permanent Emergency Interconnect and Pump Station	Provide permanent connection to emergency supply source to serve South zone during 2nd Aqueduct outage		50	1,000	1	--	\$1,200,000
WS2	Northside	Northside Permanent FPUD Emergency Interconnection	Provide emergency supply to Northside zone in case of transmission failure & additional supply during 2nd Aqueduct outage		–	–	1	--	\$150,000

Project No.	Water Pressure Zone	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
								Unit Cost	Total Cost
WS3	Morro Tank	Morro Tank Zone Permanent FPUD Emergency Interconnection	Provide emergency supply to Morro Tank zone in case of fire as portions of the zone do not meet fire flow criteria without increased HGL		-	-	2	--	\$150,000
Water System CIP Total Cost									\$49,700,000

CAPITAL PROJECTS

FIVE-YEAR SEWER CAPITAL IMPROVEMENT PLAN

Existing Wastewater CIP	Total Project Cost	Funds Expended in Prior Years	Remaining Budget FY 15/16	Proposed Budget FY 16/17	Projected Budget FY 17/18	Projected Budget FY 18/19	Projected Budget FY 19/20	Projected Budget FY 20/21
Hwy 76 Realignment - CalTrans UPSIZE	\$3,200,000	\$2,698,708	\$501,292	\$150,000	\$351,292	---	---	---
Lift Station #1 Replacement, San Luis Rey Interceptor from Mission to LS1, and San Luis Rey Interceptor From LS1 to LS2	\$14,400,000	\$522,284	\$1,877,716	\$800,000	\$6,000,000	\$7,600,000	---	---
On Going Wastewater Projects								
Sewer System Rehabilitation Program	\$2,400,000	\$0	\$0	\$350,000	\$480,000	\$480,000	\$480,000	\$610,000
Proposed Wastewater Projects								
Rancho Viejo LS Wet Well Expansion	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
Almendra Court, I-15 Crossing Sewer Rehabilitation	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$80,000
Fallbrook Oaks LS Rehabilitation and Forcemain Replacement	\$239,000	\$0	\$0	\$0	\$0	\$239,000	---	---
Replace Rancho Monserate LS Emergency Generator	\$125,000	\$0	\$0	\$0	\$0	\$125,000	---	---
Sewer System Condition Assessment Program	\$400,000	\$0	\$0	\$200,000	\$200,000	---	---	---
Sewer System Permanent Flow Monitoring	\$130,000			\$130,000	---	---	---	---
Construct 1.6 MGD Water Reclamation Plant	\$35,000,000	\$0	\$0	\$600,000	\$2,500,000	\$10,000,000	\$10,000,000	---
WRP Conveyance (PS and pipeline) to Beck	\$13,900,000	\$0	\$0	\$0	\$1,390,000	\$6,255,000	\$6,255,000	---
Total Expenditure (Wastewater):	\$70,024,000	\$3,220,992	\$2,379,008	\$2,230,000	\$10,921,292	\$24,699,000	\$16,735,000	\$840,000

SIGNIFICANT SEWER CAPITAL PROJECTS

Project No.	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
							Unit Cost	Total Cost
Sewer Projects Recommended Under All Alternatives								
S1	Plant B List Station [LS3], Forcemain and Horse Creek Sewer Abandonment	Abandon old, low, high infiltration sewer and aging LS with deficient wet well capacity	Replaced by Pankley LS and FM & Horse Creek Ridge sewer. 850 ft of FM and approximately 13,650 ft of gravity sewer abandoned	-	-	1	-	\$350,000
S2	Lake Garden Sewer Rehabilitation	Reduce inflow and infiltration, thereby reducing maintenance and treatment costs	3,475 of pipe and 12 manholes to be rehabilitated	8-inch -	3,475 ft 12	1 1	\$80 \$5,250	\$280,000 \$63,000
S3	Rancho Viejo LS [LS5] Wet Well Expansion	Provide 6 hours PWWF storage at Rancho Viejo LS to protect against sewer spills	New wet well should be at least 1400 gal	-	1,400 gal	1	-	\$150,000
S4	Almendra Court Sewer Rehabilitation, I-15 Crossing, Structural Pipe Lining	Rehabilitate freeway sewer crossing which is corroding	Provide system reliability	8-inch	938 ft	1	\$80	\$80,000
S5	Fallbrook Oaks LS [LS6] Rehabilitation and Forcemain Replacement	Rehabilitate existing LS and FM and extend useful life	Replace 6" forcemain with 8"	- 8-inch	- 252 ft	1 1	- \$155	\$200,000 \$39,000
S6	Replace Rancho Monserate LS Emergency Generator	Prevent sewage spill in the case of a power outage	--	-	1	1	-	\$125,000
S7	Sewer System Condition Assessment Program	Provide the District with an accounting of the characteristics of its sewer system	Integral part of the implementation of an Asset Management Program	-	-	1	-	\$400,000
S8	Sewer System Permanent Flow Monitoring	Allow the District to monitor and predict system flows and performance	Greater understanding of sewer generation and control of system	-	5	1	25000	\$130,000
Sewer Projects – Baseline, District Office Plant Location								
S9	Construct 0.9 MGD Water Reclamation Plant [WRP] at District Office Location	Provide a reliable local water source and water supply offset. Provide sewer outfall within District to avoid exceeding interceptor capacity	Cost per TM #1	0.9 MGD	-	1	-	\$37,000,000
S10 201040	Lift Station 1 Replacement	Replace critical station reaching useful life and wet well with deficient capacity	Cost per TM #1	-	700 ft	2	-	\$3,300,000

Project No.	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
							Unit Cost	Total Cost
S11	WRP Conveyance [Pump Station and Pipeline] and Failsafe Storage [Beck Reservoir Rehab and Raw Water Connection]	Provide conveyance to storage and storage for treated wastewater	Cost per TM #1	0.9 MGD	–	1	–	\$3,200,000
S12	Sewer System Rehabilitation Program	Rehabilitate and repair existing sewer trunk infrastructure	Keep aging pipes and manholes with no capacity deficiencies in good condition	12-inch 15-inch	–	1	–	\$4,500,000
Baseline Sewer CIP Total Cost								\$49,800,000
Sewer Projects – Baseline, District Office Plant Location								
S9A 201040	Lift Station 1 Replacement and Upgrade	Replace and expand critical station reaching useful life	Cost per TM #1	–	1,800 gpm	1	–	\$8,200,000
S10A 201260	San Luis Rey Interceptor Replacement from Mission Road to LS 1	Provide adequate conveyance capacity	Cost per District Budget, Highway 76 Realignment - CalTrans UPSIZE	18-inch	7,100 ft	1	–	\$3,200,000
S11A	San Luis Rey Interceptor Replacement from LS 1 to LS 2	Provide adequate conveyance capacity	Cost per TM #1	18-inch	7,500 ft	1	–	\$3,000,000
S12A 201266	Sewer Outfall Line RMWD Replacement	Provide adequate conveyance capacity	Previously recommended as a 30-inch pipe. Recommended to be reduced to 24-inches. Unit cost for previous project retained	24-inch	16,000 ft	2	\$27/in-ft	\$10,400,000
S13A	Sewer Capacity Purchase	Provide conveyance and treatment capacity to District customers	Unit Cost per TM #1, Additional flow per MP recommendation of maximum ADF of 1.25 MGD and total forecasted flow of 1.39 MGD	–	0.14 MGD	2	\$20/gpd	\$2,800,000
No Project Alternative Sewer CIP Total Cost								\$29,300,000
Sewer Projects – LS 2 Plant Location (Not shown on Figure 7-2)								
S9B	Construct 1.6 MGD Water Reclamation Plant [WRP] at LS 2 Location	Provide reliable local water source & water supply offset. Provide sewer outfall within District to avoid exceeding outfall capacity	Cost per TM #1	0.9 MGD	–	1	–	\$66,000,000
S10B	WRP Conveyance [Pump Station and Pipeline] and Failsafe Storage [Beck Reservoir Rehab and Raw Water Connection]	Provide conveyance to storage and storage for treated wastewater	Cost per TM #1	0.9 MGD	–	1	–	\$13,900,000

Project No.	Description	System Benefit	Notes	Size	Quantity	Phase	Construction Costs	
							Unit Cost	Total Cost
S11B 201040	Lift Station 1 Replacement and Upgrade	Replace and expand critical station reaching useful life	Cost per TM #1	–	1,800 gpm	1	–	\$8,200,000
S12B 201260	San Luis Rey Interceptor Replacement from Mission Road to LS 1	Provide adequate conveyance capacity	Cost per District Budget, Highway 76 Realignment - CalTrans UPSIZE	18-inch	7,100 ft	1	–	\$3,200,000
S13B	San Luis Rey Interceptor Replacement from LS 1 to LS 2	Provide adequate conveyance capacity	Cost per TM #1	18-inch	7,500 ft	1	–	\$3,000,000
S14B	Sewer System Rehabilitation Program	Rehabilitate and repair existing sewer trunk infrastructure	Keep aging pipes and manholes with no capacity deficiencies in good condition	15-inch	–	1	–	\$2,400,000
LS 2 Plant Location Alternative Sewer CIP Total Cost								\$98,400,000
Sewer Projects – Changes to Serve Out of District Developments (Not shown on Figure 7-2)								
S9C	San Luis Rey Interceptor Replacement from LS 1 to LS 2	Provide adequate conveyance capacity	Additional cost per VCMWD Meadowood Memo	21-inch	7,500 ft	1	–	\$280,000
S10C 201260	San Luis Rey Interceptor Replacement from Mission Road to LS 1	Provide adequate conveyance capacity	Additional cost per VCMWD Meadowood Memo	21-inch	7,100 ft	1	–	\$260,000
S11C	Lift Station 1 Replacement	Provide adequate conveyance capacity	Additional cost per VCMWD Meadowood Memo	–	–	1	–	\$177,000
Out of District Sewer CIP Additional Cost								\$700,000

¹¹RMWD Job Number also listed for existing projects

¹²Includes costs for existing sewer projects and projects recommended under all alternatives

¹³New facilities required to serve the developments, such as Pankey SLS, to be paid for by developers. Cost participation in other projects, such as the Sewer Outfall Line Replacement, will be required

CAPITAL PROJECTS

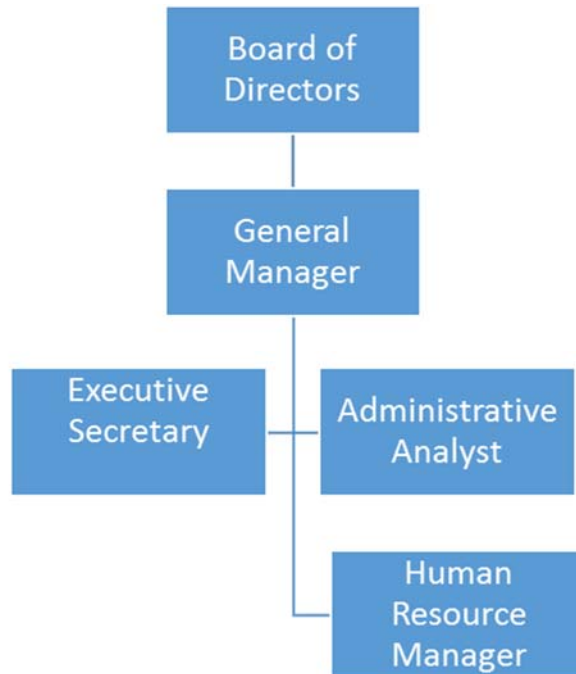
FIVE-YEAR RECYCLE CAPITAL IMPROVEMENT PLAN

Recycled Water Projects	Total Project Cost	Funds Expended in Prior Years	Remaining Budget FY 15/16	Proposed Budget FY 16/17	Projected Budget FY 17/18	Projected Budget FY 18/19	Projected Budget FY 19/20	Projected Budget FY 20/21
Recycled Water Pump Stations	\$4,600,000	\$0	\$0	\$0	\$0	\$0	\$2,300,000	\$2,300,000
Recycled Water Storage	\$3,600,000	\$0	\$0	\$0	\$0	\$0	\$1,800,000	\$1,800,000
Recycled Water Transmission and Distribution System	\$11,000,000	\$0	\$0	\$0	\$0	\$0	\$2,000,000	\$9,000,000
Recycled Water Customer Retrofit Assistance	\$1,000,000	\$0	\$0	\$0	\$0	\$300,000	\$300,000	\$400,000
Total Expenditure (Recycled Water):	\$20,200,000	\$0	\$0	\$0	\$0	\$300,000	\$6,400,000	\$13,500,000

DEPARTMENT SUMMARIES

ADMINISTRATION DEPARTMENT

Personnel Level:			
<u>Position(s)</u>	<u>2013-2014</u>	<u>2015-2016</u>	<u>2016-2017</u>
General Manager	1.00	1.00	1.00
Human Resource Manager	1.00	1.00	1.00
Executive Secretary	1.00	1.00	1.00
Administrative Analyst	0.00	1.00	1.00
Human Resource Tech.	0.00	1.00	0.00
Department Total	3.00	5.00	4.00



Objectives: Fiscal Year 2016-17

- Maintain education and training opportunities to ensure continuous improvement and learning for all staff.
- Promote tuition reimbursement program to employees.
- Conduct performance evaluation training for Superintendents and Managers.
- Develop a cross training program to help build internal capacity.
- Create a succession planning process to identify, assess and develop employees who exhibit potential.
- Implement cost effective employee recognition program to acknowledge performance, encourage development and improve morale.
- Employee Recognition Banquet, Anniversary Award Recognition, Quarterly Birthday Luncheon and Anniversary.
- Create a safety culture for the District workforce and promote safe work practices.
- Ensure continuous Board development and participation in industry-related activities.
- Conduct a salary/compensation survey.
- Meet with bargaining units for open negotiations.
- Implement Asset Management System, initiate use of System on day to day basis.
- Develop long-term asset rehabilitation schedules.
- Expand public outreach, information and education. Complete re-design of monthly customer bills.
- Ensure that District website is a valuable resource that meets the needs of customers.
- Improve FAQ section.
- Improve customer access to information about district activities and shutdowns.
- Enhance education program in local school system.
- Implement district facility tours for interested members of the public.
- Create waiver forms for public attendees.
- Set up quarterly tours.
- Improve communications between Board advisory committees and Board of Directors.

Responsibilities:

The Administration department encompasses the General Manager, Human Resource, Conservation, and the Executive Assistant.

The General Manager, Thomas Kennedy has the overall responsibility for District policy development and activities, including water resources planning, water distribution, wastewater collection, treatment, disposal, fiscal management, administration, engineering, human

resources, and overall operation of District functions and programs. The position is responsible for accomplishing District goals and objectives, advising and providing recommendations to the Board, and for implementing the policies of the Board on an ongoing basis. Develops and implements long and short-range plans to ensure attainment of District objectives. The General Manager works closely with the Board of Directors, organizations, and appropriate federal and state agencies regarding District programs. Coordinates the preparation and presentation of various agendas, reports, and written materials. Reviews and approves all District contracts and may negotiate contract terms.

Mr. Kennedy acts as the District Employee Relations Officer, meets and confers with employees for wages, benefits, and other working conditions. Prescribes the duties of employees; fixes and alters employee's compensation pursuant to Board policy. Holds regular management meetings to communicate expectations, receive feedback, resolve problems, discuss issues, develop trusting relationships, provide motivation and employee recognition, stay abreast of staff's work activities, and provide required resources for work assignments.

Additionally, the GM makes final interpretations of District regulations and ordinances, codes, and applicable laws with direction from legal. Directs the preparation and administration of the annual budget for the District. Ensures that the District is in compliance with all contractual and legal requirements regarding water supply and wastewater treatment. Determines staffing levels for the District. Responds to and resolves difficult citizen inquiries and complaints.

The Human Resource department's primarily responsibility is to provide information and interpretation to employees, other agencies, the public and others concerning District employment opportunities, requirements, benefits, policies, procedures, bargaining agreements, and related information. Understand, interpret and apply Federal, State, and District rules and regulations related to human resources such as the Uniform Guidelines on Employee Selection Procedures, Family Medical Leave Act, Americans with Disabilities Act, Fair Labor Standards Act, Consolidated Omnibus Budget Reconciliation Act, California Family Rights Act, California Pregnancy Disability Act, and California Labor Code. Plan and implement recruitment activities; conduct studies of selection procedures; and assist in the analysis and improvement of employment practices with regard to equal opportunity and job relatedness. Conduct job analyses of various positions to establish job-related qualifications by gathering information through interviews, and through observation and analyses of duties and responsibilities. Conduct classification studies of individual classifications or series of classifications and develop or update classification specifications. Coordinate with the District's Safety and Risk Administrator on Workers' Compensation and safety matters. Conduct investigations into various personnel issues, reach conclusions, and make recommendations.

Conservation administrator researches and analyzes customer's water use records. Answers consumer inquiries in person and by telephone regarding water use and water conservation programs. Participates in a variety of water management and conservation programs, such as conducts interior and exterior water audits for a different types of character of service users.

Prepares and distributes necessary correspondence, reports, and records to District customers and employees. Acts as the liaison between stakeholders and the District when a claim is made by a customer. If necessary will prepare and conduct water conservation presentations for the public.

The Executive Secretary to the General Manager performs a wide variety of secretarial, clerical and administrative duties. Receives and transcribes confidential dictation, acts as Secretary to the Board. Prepares, assembles and distributes agenda materials for regularly scheduled and special Board meetings. Attends Board meetings, takes notes, prepares accurate minutes of such meetings, and after review and approval, maintains official records of such minutes. Follows up after Board meetings to ensure that materials are distributed, actions are taken, and individuals or organizations are notified. Receives and screens visitors and provides factual information which may require the use of judgment or the knowledge and interpretation of the District's rules, regulations, policies and ongoing projects. Assigns resolution and contract numbers as required. Schedules appointments; prepares and keeps meeting calendars. Coordinates Board and management meetings and retreats and makes travel and conference arrangements. Protects the confidentiality of information privy to executive management.

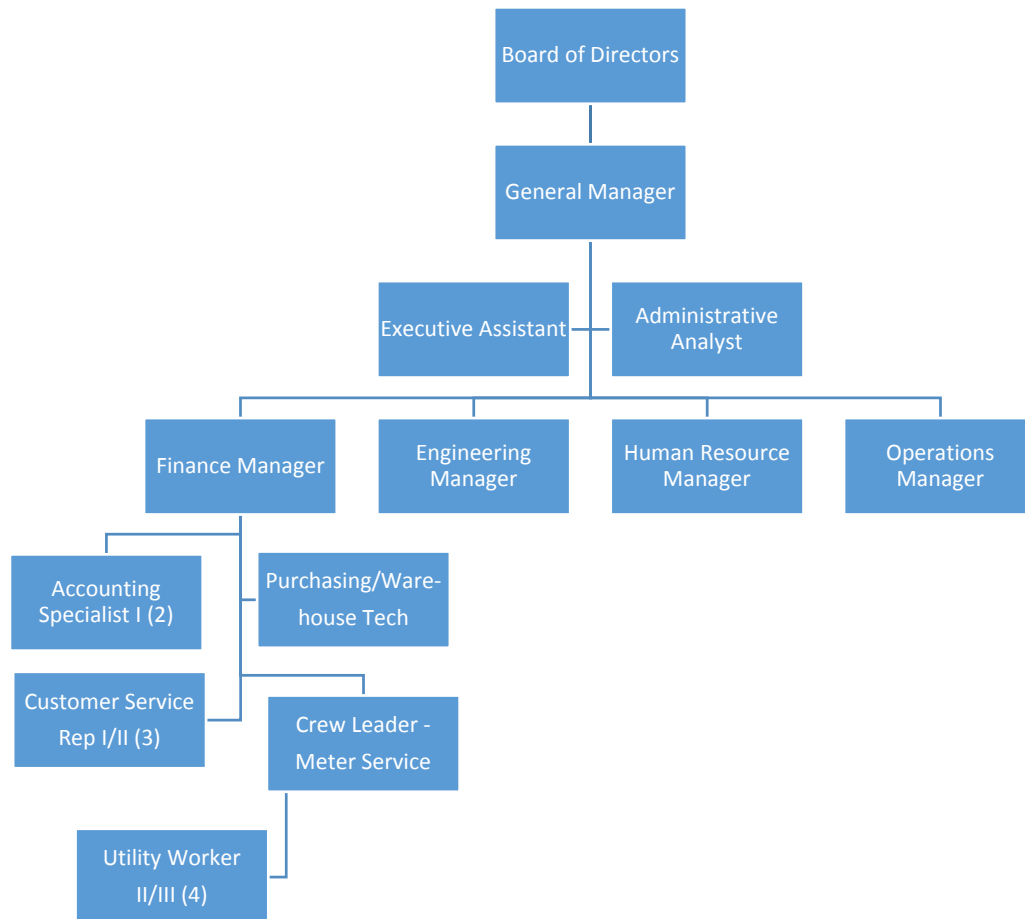
Major Accomplishments: Fiscal Year 2015-16

- Attend various meetings regarding the Fallbrook Public Utility District application with the Local Agency Formation Commission for the possible takeover of Rainbow Municipal Water District.
- Hold informational community meetings educating the public about the possible dissolution of Rainbow by Fallbrook Public Utility District.
- Consider nominations for positions on the LAFCO committee.
- Successfully defeated the dissolution of Rainbow by the Fallbrook Public Utility District by 5-3 vote.
- Applied for the Water Recycling Planning Grant.
- Approved a contract with Atkins for the Water and Wastewater Master Plan.
- Hold several Water Rate Setting Workshops.
- Finalize a Strategic Plan for the District.
- Established a Groundwater Sustainability Agency for the San Luis Rey Groundwater Basin.
- Award Contract for the Construction of the Afton Farms Waterline Extension.
- Update the Sewer System Management Plan.
- Adopted a Rate Stabilization Fund.
- Award Professional Service for Pre-Designed of a Water Reclamation Plant and Recycled Water Distribution System.
- Award contract for Parking Lot Expansion.

- Amended several sections of the Administrative Code to better reflect current processes.
- Appoint New Directors for vacancy of the Board.
- Approve Contract with Willdan Financial Services for the Asset Valuation for the entire District.
- Work cohesively with Finance Department on revising format of the Budget.

FINANCE DEPARTMENT

Personnel Level:			
<u>Position(s)</u>	<u>2013-2014</u>	<u>2015-2016</u>	<u>2016-2017</u>
Finance Manager	1.00	1.00	1.00
Accounting Specialist	1.00	2.00	2.00
Purchase/Warehouse Tech	0.00	1.00	1.00
Customer Service Rep. I/II	3.00	3.00	3.00
Crew Leader – Meter Srv.	1.00	1.00	1.00
Utility Workers II/III	4.00	4.00	4.00
Department Total	10.00	11.00	12.00



Objectives: Fiscal Year 2016-17

- Develop Budgets in compliance with GFOA standards.
- Complete evaluation of budgeting process to identify where improvements are needed to meet GFOA standards.
- Develop a GFOA compliant budget and submit budget for consideration for the GFOA. Distinguished Budget Presentation Award
- Update appropriate reserve and investment policies to protect customers.
- Review current policies with Budget and Finance Committee and develop recommendations for Board consideration.
- Present revised reserve and investment policies to the Board for consideration and implementation.
- Proactively manage and maintain sustainable employee benefits.
- Prepare a comprehensive review of current benefit costs in preparation for the 2017 labor negotiations complete with forecasts of future cost increases based on known variables.
- Implement a Continuous Improvement Process for all district operations.
- Develop and present Management Guidelines for Quality Control Initiative (QCI) and commence management training.
- Create Quality Control Committee consisting of management and employees and kick off detailed departmental QA/QC planning.
- Complete QCI program development and commence implementation of program.
- Complete transition to new Utility Billing Software System.
- Obtain District of Distinction Accreditation.
- Complete feasibility studies for enhancing the delivery of information to customers through technologies such as Advanced Metering Infrastructure.
- Expand options for customer on-line bill pay and timely account information.
- Enhance capabilities of field customer service staff through geographic dispatching and information systems.

Responsibilities:

The Finance department encompasses the responsibility for the day-to-day operations and oversight of Finance, Customer Service, Meter Services, Warehouse, and the District's purchasing functions.

The Finance section of the department is primarily responsible for developing and administering the District's fiscal policies and budget. Provides the General Manager and Board of Directors with periodic reports on the District's financial condition. Prepares monthly financial statements in accordance with generally accepted accounting principles and reporting standards. Manages a centralized function for the purchasing, warehousing, and inventory control of material and supplies. Coordinates the annual audit of the financial records by an independent accounting firm. Prepares invoices for amounts due; prepares correspondence regarding various accounts; classifies and verifies invoice charges to proper ledger and budget accounts. May consult with District personnel concerning accounting records and procedures. Calculates and reviews current and historical cash flow projections, determines excess District funds, and makes recommendations for allocation and investment. Provides technical assistance and guidance for the management related to financial matters; articulate financial concepts to the Board of Directors, staff and members of the public. Submits accounting reports required by the State Controller's Office and to other agencies. Prepares analyses of revenues, expenditures, water usage, CIP costs and other special projects as required. Provides internal control of District financial and accounting and procedures.

The Customer Service section of the department is primarily responsible for performing a variety of direct customer contact and office support activities supporting the servicing of customer accounts for water/sewer service; serves as a front-line customer support working with the public in person and in a call center setting. Responsible for processing requests for service, handling customer complaints, providing information and educating the public about rates and the District overall. Provides factual information regarding beginning or ending service, billing, payments and related matters. Takes required information from the customer to open, close or modify service accounts; verifies information and updates customer profile as necessary. Within specific guidelines, may make payment schedule adjustments and/or authorize standard refunds or adjustments. Prepares appropriate forms and notifies District field staff of the need for field activities such as turning water service on and off, check meter reading and/or the need for meter service.

The Meter Service section of the department is primarily responsible for reads and records readings of water meters. Investigates and resolves meter maintenance and service problems and makes repairs. Monthly read meters on assigned routes according to predetermined schedules using an electronic, hand held meter reading device; repair, replace, and test water meters; clean and replace meter boxes. Applies District procedures when investigating and reviewing with customers a variety of water service problems. Perform flow and pressure tests

as needed on customer services. Interpret and read maps, to locate services utilizing Geoviewer software. Maintain daily records of work performed, time, materials and equipment. Operate water system valves and hydrants as required; reports hazardous field conditions. Verifies and reports service information corrections; respond to service orders issued by the customer service staff update and record findings into Utility Billing software.

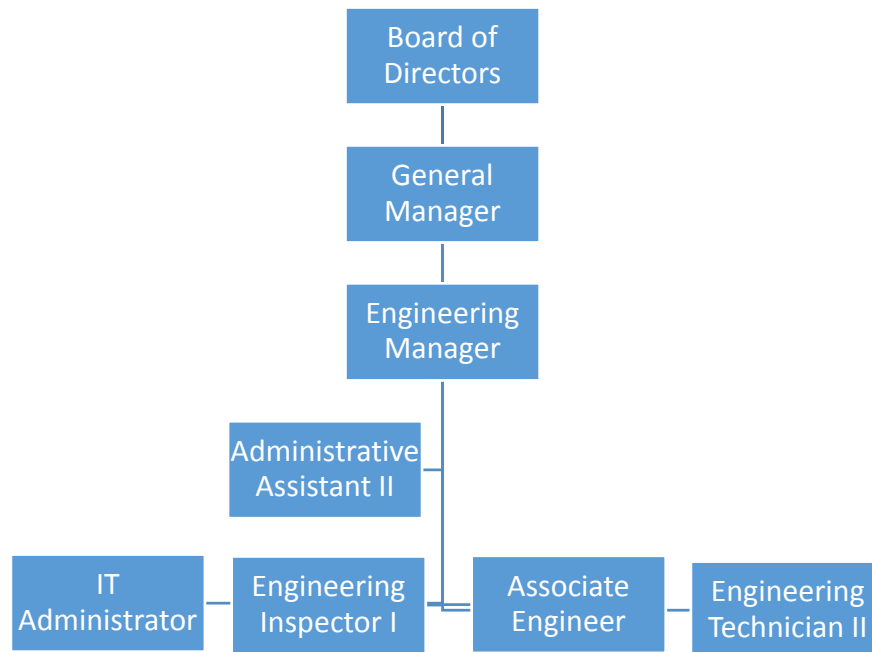
Major Accomplishments: Fiscal Year 2015-16

- Earned the District Transparency Certificate of Excellence from the Special Districts Leadership Foundation (SDLF).
- Provided objectives and goals in the District's strategic plan model for Finance and Customer Service.
- Established a Rate Stabilization Reserve Fund to mitigate rate impacts from changes in water demand.
- Finalize a Cost of Service for Water, resulting in raising rates equitably effective January 2016.
- Restructure the character of class for water customers to better reflect the State Water Resource Board categories.
- Transitioned the accounting and payroll system to Springbrook.
- Updated language in the administrative code to allow different forms of payment for the obligations of the District, such as electronic funds transfer (EFT) to vendors.



ENGINEERING DEPARTMENT

Personnel Level:			
<u>Position(s)</u>	<u>2013-2014</u>	<u>2015-2016</u>	<u>2016-2017</u>
Engineering Manager	1.00	1.00	1.00
Associate Engineer	0.00	1.00	1.00
IT Administrator	0.00	1.00	1.00
Engineering Inspector I	1.00	1.00	1.00
Engineering Technician II	1.00	1.00	1.00
Administrative Technician II	0.50	0.50	0.50
Department Total	3.50	5.50	5.50



Objectives: Fiscal Year 2016-17

- Complete Feasibility Study on Water Reclamation Plant.
- Initiate recommended “next steps” from San Luis Rey Groundwater Supply Study.
- Develop a Condition Assessment program for water and wastewater.
- Develop long-term asset rehabilitation schedules.
- Begin projects on budgeted CIP list, which include permanent facilities for the San Diego County Water Authority shutdowns, system pressure regulation, and facility improvements for redundancy, reliability and expansion for new development.
- Update the Water and Wastewater Standards Manual.
Complete the Asset Valuation and Capacity fee Study. Present findings to the Engineering Committee and Board with close coordination with the Building Industry Association and recommend approval of updated capacity fees.
- Engineering processes reviewed and streamlined to improve management of projects and development – On going
- Review current policies with the Engineering Committee and develop recommendations for Board consideration – On going

Responsibilities:

The Engineering department encompasses the responsibility for the day-to-day operations and oversight of Engineering, Engineering Customer Service and Information Technology (IT) for the District. The Engineering Department also provides technical support to Operations with record inquiries, GIS maps, water shutdown processing, construction coordination and project execution.

Engineering is primarily responsible for the management and execution of the Capital Improvement Program for water and wastewater, the timely completion and sound financial management of such projects and development services and inspection of District infrastructure. Oversees and administers District and developer projects, including design and construction of water and wastewater facilities, construction specifications and engineering plans to assure conformance with District standards and requirements. Prepares monthly report of information regarding department workload, number of customers served, project update, and provides report to Board of Directors. Maintains accurate records, reviews and maintains base maps and construction drawings in support of engineering activities; updates maps, adding new facilities, and verifying and revising accuracy of facilities on maps. In the absence of a GIS technician onsite, contracts with a consultant for the majority of GIS work, which include adding new infrastructure, updating and hosting maps online and providing District records in easy to find geographical references. Develops and prepares complete procurement solicitation and schedules for Notice of Inviting Bids, Request for Proposals and Request for Quotes for Capital Improvement and other projects. Reviews and processes District

contracts and invoices in compliance with District policy, the public contract code and contract terms. Processes improvement plans, grading plans, subdivision maps and engineering's cost estimates; prepares quantity and cost estimates for varied projects; prepares construction agreements, fee letters, contract documents and other related legal documents relating to District improvements and developer projects; acquire and reviews documents for conformance of District requirements. Maintains the District planning documents including water and wastewater master plans, Urban Water Management Plan and any other long range planning documents; capacity fees and engineering fees. Develops and updates policies and procedures and guidelines for the current and future development of District water and wastewater systems.

Engineering Customer service provides a wide variety of services to the public, which include San Diego County (County) Form processing, public inquires on facilities and projects, Geographical Information Systems (GIS), maps and record drawings. Responsible for performing a variety of direct customer contact and office support activities supporting the payment of appropriate capacity fees for water and wastewater and inspection of the installation of new water and sewer laterals; serves as a front-line customer support working with the public in person, over the phone and in response to website inquiries. Responsible for processing new service requests, downsizing or upsizing meters, and providing the public information regarding the process to complete the installation of a new service to District standards. Processes applications, fees and deposits for construction meters in coordination with the Customer Service Department. Reads and interprets improvement plans and facility maps for a variety of information for the public, engineers, consultants and other departments. Processes County documents related to water and sewer availability, agency clearance forms and other documents related to developments. Explains regulations and policies and procedures to interested parties.

The Information Technology Administrator performs information systems support related to user support, desktop and network computer systems, hardware and software installation, troubleshooting and maintain the District's computer systems. Supervises the purchases, inventory, maintenance and disposition of computing and communication devices, hardware and software. Audits invoices and billing statements related to IT purchases. Makes recommendations and performs installation of a variety of equipment and software; upgrades and modifies existing systems in accordance with procedural guidelines. Schedules and completes work to move, connect, change, install, repair, test, or remove equipment such as personal computers, cables, and wires; modifies equipment in accordance with approved user requests. Provides technical assistance and support to users and demonstrates system operations or techniques as needed. Provides training for users in new technology, hardware and software. Maintains records of software licensing agreements and ensures compliance with licensing agreement; supports maintenance of management system. Directs the developing and maintaining of interfaces among District systems such as GIS, online and mobile GIS, Asset

Management software, SCADA, finance software, Automated Metering Infrastructure, and updates District website. Maintains and updates software testing environments. Performs and monitors system backups and monitors server performance and system logs. Participates in researching and evaluating current and new network hardware and software. Prepares and maintains audio and visual equipment and sets up laptop computers in District’s board meeting room and training room. Provides support for SCADA hardware, laptops and VPN. Provides support for mobile devices and management. Establishes network controls to reduce external risks to data and infrastructure.

Major Accomplishments: Fiscal Year 2015-16

- Prepared and submitted the 2015 UWMP per the California Water Code and Department of Water Resources.
- Completed the 2016 Water and Wastewater Master Plan Update.
- Design, bid and construction of the Afton Farms Waterline.
- Processed and coordinated various developer projects through design and or construction phases. Project managed the following development jobs through completion and post construction record documentation: Dai Dang Meditation Center and Olive Hill Estates.
- Provided objectives and goals in the District’s strategic plan model for Engineering.
- Implemented Geoviewer Online and Geoviewer Mobile.
- Updated language in the administrative code regarding the discontinuance of water service.
- Completed the San Luis Rey Groundwater Supply Study.
- Processed and coordinated the installation and inspection of 67 meters
- Processed 17 San Diego County availability letters

Performance Measures:

Activity	Criteria	Target
Administration		
Timely completion of the report packages and minutes for the Engineering Committee and report packages Board of Directors meetings	Completed within monthly scheduled deadlines	100%
Timely review and execution of contracts	Within 10 days	80%
Project Management		
Develop proposed FY Capital Improvement Program	FY CIP budget approval	June 2016
Completion of all assigned projects in a cost effective manner	% of actual cost compared to budgeted cost	Less than 110%

Complete assigned projects	% of assigned projects completed and timing of completion	80%
Timely update of Geoviewer once plans approved and once record drawings received for District CIP and developer projects	Within 2 weeks of receiving sent to consultant to update	100%
Customer Service		
Customer technical inquiries and request for information responded to in a timely manner (phone, maps, fees, new services, policy and procedures)	Within 2 business days	100%
Development Services		
Timely processing of San Diego County forms (water availability, agency clearance, and condition approval letters)	Within 1 week of receiving	100%
Timely completion of standard plan checks	Completed and returned within 2 weeks	100%
Timely review of submittal packages from contractors	Completed and returned within 2 weeks	100%
Detailed inspection reports for facility installations	Completed daily	100%
Percent of problems identified in the field and corrected	Contractors notified immediately to correct	100%
Information Systems		
Reliable and dependable network performance	Hours of network instability and downtime during business hours	Less than 9 hours
Help desk tickets completed in a timely manner	Resolve tickets within 2 days	80%
District functions secure from external malicious threats	% of threats blocked	100%
Website updated with latest Engineering Information and Updates to forms	Within 2 days of receiving information	100%

OPERATIONS DEPARTMENT

Personnel Level:			
<u>Position(s)</u>	<u>2013-2014</u>	<u>2015-2016</u>	<u>2016-2017</u>
Operations Manager	1.00	1.00	1.00
Safety Administrator I	1.00	1.00	1.00
Construction/Maintenance Supt.	1.00	1.00	1.00
Water Operations Supt.	1.00	1.00	1.00
Wastewater Supt.	1.00	1.00	1.00
Mechanic	1.00	1.00	1.00
System Operator III	4.00	4.00	4.00
Crew Leader – Construction	2.00	2.00	2.00
Crew Leader – Valve Maintenance	1.00	1.00	1.00
Water Quality Technician II	1.00	1.00	1.00
Electrical Technician II	1.00	1.00	1.00
Electrical Technician I	1.00	1.00	1.00
Utility Worker III	2.00	2.00	2.00
Utility Worker II (Potable & WW)	6.00	6.00	6.00
Utility Worker I	5.00	5.00	5.00
Department Total	29.00	29.00	29.00

MISSION STATEMENT

To provide our customers reliable, high quality water and water reclamation services in a fiscally sustainable manner.

OUR VALUES

- Integrity
- Professionalism
- Responsibility
- Teamwork
- Innovation

STRATEGIC PLAN FOCUS AREAS

1. Water Resources
2. Asset Management
3. Workforce Development
4. Fiscal Responsibility
5. Customer Service
6. Communication

STRATEGIC PLAN GOALS

Rainbow Municipal Water District (RMWD) has identified the following goals it considers critical to the overall success of the Operations Division for ***FY 2016-2017***:

- A diversified water portfolio, including conservation and alternative sources, to provide a reliable, drought-proof supply;
- Well organized asset management process to plan for, prioritize and fund maintenance, replacement, expansion and rehabilitation of District infrastructure, facilities and equipment;
- Recruit, develop and retain a highly skilled and knowledgeable workforce that is experienced, up-to-date, creative and loyal to the District and its customers;
- Provide top quality customer service by meeting customer needs, being responsive, providing timely communication, and being financially responsible;
- Ensure effective communication and good working relationships within the District and with our customers.

CRITICAL SUCCESS FACTORS

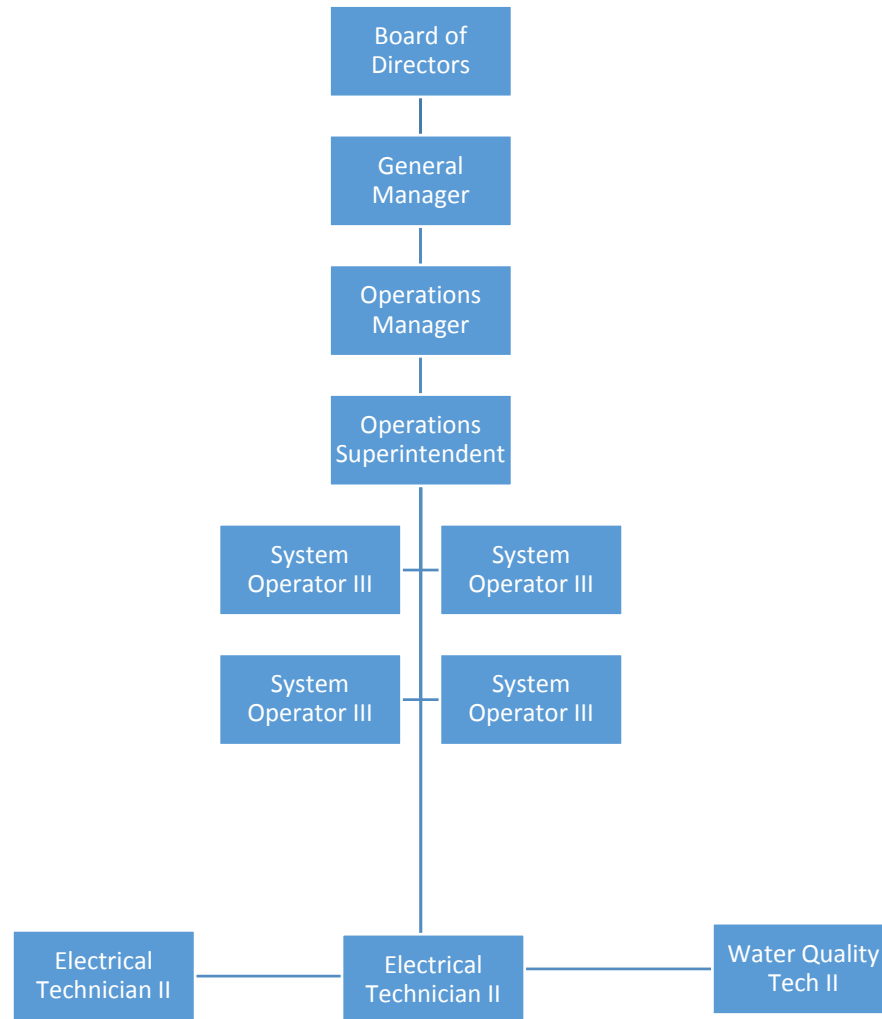
The Operations Division consisting of the following departments: Safety & Security Administration, Water System Operations, Construction & Maintenance, and Wastewater has identified the following objectives it considers vital to the overall success at the District for ***FY 2016-17***:

- Economically provide reliable and sustainable potable drinking water, and sewer services by meeting budgeted imported water production targets while optimizing materials & supplies, and outside services;
- Protect the public health and environment by meeting all Department of Health Services, EPA, and RWQCB-DDW requirements;
- Participation on Enterprise Asset Management (EAM) Project to incorporate new asset management program which is designed to improve operational efficiency and reliability, provide better management reporting with accurate data for better decision making, and have the ability to integrate with software systems in Finance and Engineering;
- Continued extensive training of staff to ensure that employees are the best qualified and trained for their specific job responsibilities. Design an individual personal development plan to maximize each employee's skills;
- Completion of all scheduled maintenance routines on District assets in accordance with specified requirements.

Water Operations Department

Personnel Level:			
<u>Position(s):</u>	<u>2013 - 2014</u>	<u>2015 - 2016</u>	<u>2016 - 2017</u>
Water Operations Superintendent	1.00	1.00	1.00
System Operator III	4.00	4.00	4.00
Water Quality Technician II	1.00	1.00	1.00
Electrical/Electronic Technician II	1.00	1.00	1.00
Electrical/Electronic Technician II	1.00	1.00	1.00
Department Totals:	8.00	8.00	8.00





Responsibilities:

System Operations is responsible for the operating the potable water system in a manner that ensures reliable and sustainable deliveries to District customers. To accomplish this, Water Operations utilizes a Supervisor Control and Data Acquisition (SCADA) system that controls water flow and storage through the District’s distribution system. Additionally this area performs various maintenance, monitoring, and evaluations of the District’s storage reservoirs, tanks, pump stations, and chlorine booster and monitoring stations. Provide routine maintenance and repairs for all pumps in the distribution system. This enhances customer satisfaction by enabling the District to provide reliable and sustainable services to its customers by maintaining the system that keeps the services flowing.

Electrical and SCADA Services primary responsibility is to maintain all electrical, electronic, instrumentation, associated control data networks, and SCADA systems and their networks that

are used to supply water to District customers as well as systems that treat water. This group also provides support to other departments as needed. Additionally, the electrical services group continues to revise operating systems for efficiency and ease of operation. Monitor District facilities for electrical violations and safety hazards to maintain an electrically safe environment.

Water Quality is responsible for protecting the public health while ensuring the District delivers high quality water to its customers. To accomplish this, Water Quality investigates and resolves water quality issues, customer inquiries, and complaints; maintains a system of sampling; completes analysis and regulatory reporting; operates and maintains systems for disinfection; and implements and supports District projects.

Major Accomplishments: Fiscal Year 2015-16

- Serviced all pump control valves at pump stations;
- All District pumps were tested for efficiency;
- Coordinated inspection of the three covered reservoirs by diving contractor;
- Had tank maintenance contractor inspect and/or washout 13 tanks;
- Coordinated the installation of a tank mixer in Magee tank;
- Wash down of all floating covers on the reservoirs;
- Replaced two rain water removal pumps on two of the covered reservoirs;
- Coordinated the removal of a 250HP electric motor to be serviced and repaired;
- Upgraded the radios at connection #9 for better communication;
- Replaced old SCADA Panel at Huntley Pump station with new PLC and radios;
- Installed new radios at the cement tank to replace the phone line;
- Successfully met all regulatory requirements;
- Achieved all compliant regulations and related reporting;
- Completed all required reporting to Regional Water Quality Control Board;
- Completed UCMR3 sampling requirements;
- Completed tri-annual lead and copper sampling;
- Completed first stage of special lead and copper testing per SWRCB;
- Three temporary pumps installed in preparation of annual SDCWA shutdown.

Objectives: Fiscal Year 2016-17

STRATEGIC FOCUS AREA	FISCAL YEAR 2016-17 INITIATIVES
1	<ul style="list-style-type: none"> • Complete feasibility study for the San Luis Rey groundwater development project. Commence full design if project is deemed feasible. • Initiate the formation of the Groundwater Sustainability Agency for the San Luis Rey River Groundwater Basin.

2	<ul style="list-style-type: none"> • Implement a proactive asset management system to include inventory of all assets and establish appropriate maintenance schedules. • Document asset condition through continuous condition assessment. • Develop long-term asset rehabilitation schedules.
4	<ul style="list-style-type: none"> • Implement a Continuous Improvement Process.
5	<ul style="list-style-type: none"> • Complete feasibility studies for enhancing the delivery of information to customers through technologies. • Enhance capabilities of field customer service staff through geographic dispatching and information systems.
6	<ul style="list-style-type: none"> • Facilitate district facility tours for interested members of the public.

Performance Measurement Indicators:

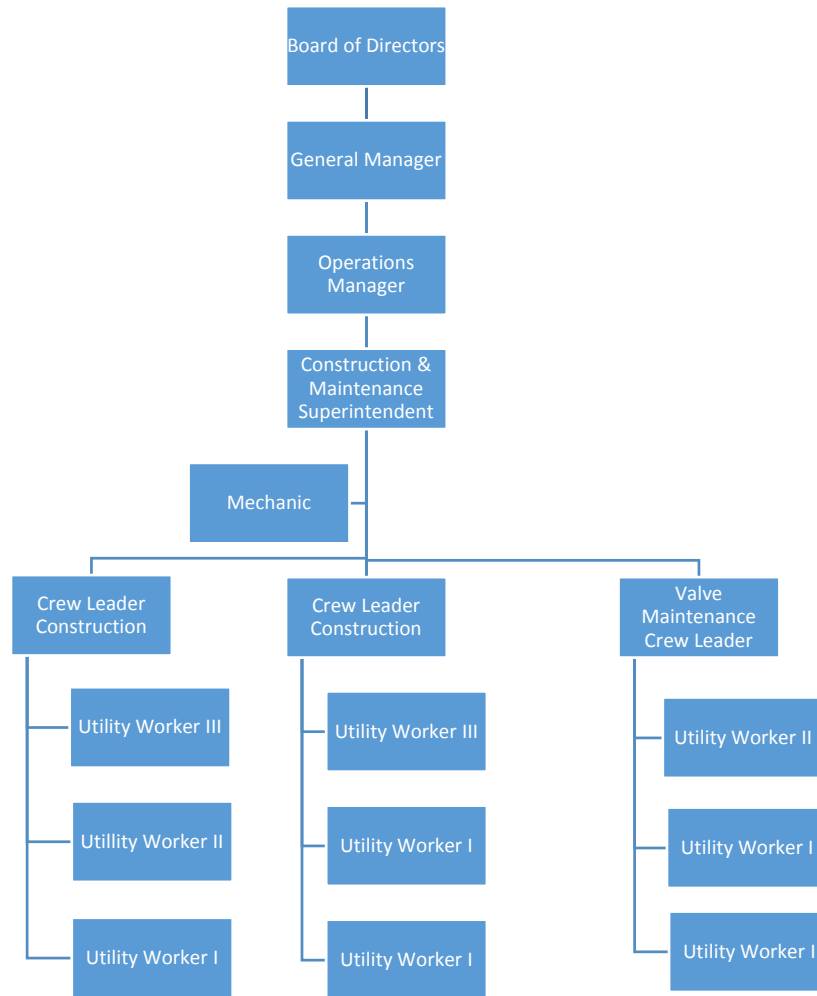
ACTIVITY	CRITERIA	TARGET 2016-17
Respond to system alarms in a timely manner	Check system within 5 minutes of alarm and respond within 30-minute requirement	100%
Prompt reporting to Department of Health Services; Timely completion of SWRCB-DDW Reports and monthly scheduled maintenance	By deadline required under state regulations; Reports submitted by the 10 th day of the following month	100%
Compliance with SWRCB-DDW discharges	Prevent discharge order violations	100%
Prompt collection of water quality samples	By deadline required under state regulations	100%
Timely response to customer calls and cross-connection inspection requests	Return phone call within 24 hrs. or next business day; 5 days for inspection requests	100%
Effectively and efficiently maintain District-owned assets and specialized equipment	Complete 95% of preventative maintenance on schedule	100%
Ensure adequate water supply is maintained to meet the needs of our customers and to satisfy fire requirements	Assure all tanks and reservoirs are maintained at an adequate level in order to meet the demands of the District	100%
Replace SCADA Panel and Communications at RMWD Sites (Huntley P/S, Magee P/S, Pala Mesa Tank)	Remove old SCADA Panels and replace with new PLC and radios to District standard	June 2017
Rollout Enterprise Asset Management System (EAM)	Enter all data for pump stations, tanks, reservoirs, chlorine booster stations into the EAM System	July 2016

Other Water System Improvements	Replace check valve w/ pump control valve (P/S #3); Install two backup chlorine injection pumps (Morro Cl2 Station)	June 2017
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Construction & Maintenance Department

Personnel Level:			
<u>Position(s):</u>	<u>2013 - 2014</u>	<u>2015 - 2016</u>	<u>2016 - 2017</u>
Construction/Maintenance Superintendent	1.00	1.00	1.00
Mechanic	1.00	1.00	1.00
Crew Leader - Construction	2.00	2.00	2.00
Crew Leader – Valve Maintenance	1.00	1.00	1.00
Utility Worker III	2.00	2.00	2.00
Utility Worker II	2.00	2.00	2.00
Utility Worker I	5.00	5.00	5.00
Department Totals:	14.00	14.00	14.00





Responsibilities:

Construction and Valve Maintenance Services is dedicated to accomplishing its mission in a cooperative team-oriented environment that emphasizes quality, safety, and customer service. The most critical function of the Construction & Maintenance is to maintain and repair the infrastructure of the District. This department is responsible for the repair and maintenance of the District’s water distribution system, ensuring the District provides reliable and sustainable services to its customers along with responding to emergency calls 24 hours per day is critical to providing uninterrupted service to our customers.

The Mechanic Maintenance Function falls under the Construction and Maintenance Department, known as the District Garage provides maintenance and recordkeeping of all District vehicles and

heavy equipment, which keeps the fleet running and ready to respond. Additionally, this area also maintains and makes repairs to all other miscellaneous small hand tools and field equipment.

The timely completion of these functions enables responsive customer service and reliable water and sewer services.

Major Accomplishments: Fiscal Year 2015-16

- Worked with Engineering on installing new PRV stations;
- Installed 140 feet of 8” water main and pressure reducing station on Lake Vista Estates Loop;
- Replaced Tarek Terrace 8” waterline and connected severed pipe to meet District standards;
- Completed paving project in front of District Headquarters Office allowing for additional customer parking;
- Assisted and provided input for the 2016 Strategic Plan for the District;
- Provided support for changing and updating from iWater to Geoviewer;
- Averaged 305 valves exercised per month;
- Designed and built new valve exercising truck (Unit #32) with new and improved technologies;
- Maintained vehicles, trailers, and records required for compliance with the CHP BIT Inspection program;
- Met all DOT requirements for truck inspections.

Objectives: Fiscal Year 2016-17

STRATEGIC FOCUS AREA	FISCAL YEAR 2016-17 INITIATIVES
2	<ul style="list-style-type: none"> • Implement a proactive asset management system to include inventory of all assets and establish appropriate maintenance schedules. • Document asset condition through continuous condition assessment. • Develop long-term asset rehabilitation schedules.
3	<ul style="list-style-type: none"> • Maintain education and training opportunities to ensure continuous improvement and learning for all staff. • Develop a cross-training program to help build internal capacity.
4	<ul style="list-style-type: none"> • Implement a Continuous Improvement Process.
	<ul style="list-style-type: none"> • Complete feasibility studies for enhancing the delivery of information to customers through technologies. • Enhance capabilities of field customer service staff through geographic dispatching

5	and information systems.
6	<ul style="list-style-type: none"> Facilitate district facility tours for interested members of the public.

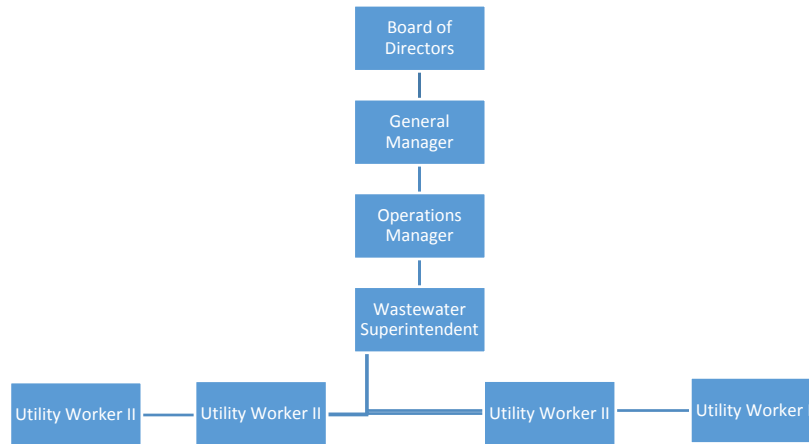
Performance Measurement Indicators:

ACTIVITY	CRITERIA	TARGET 2016-17
Respond to all water distribution system water leaks in a timely manner that meets or exceeds District standards	Repair of water mains and service leaks with minimal water service interruption to customers	100%
Stay consistent with valve exercising/mapping	Exercise and map an average of 300 valves per month	100%
Planned/unplanned water interruptions and shutdowns due to main or service leak repairs, valve installation and/or replacements	Properly, appropriately and efficiently notify affected customers, shutoff water meters prior to de-energizing water main and thoroughly disinfecting/flushing distribution system prior to re-energizing water main and putting back in service	100%
Coordinate with Engineering on the completion of assigned Capital Improvement Projects	Meet completion dates and budget for assigned CIP Projects and assist Engineering as needed	90%
Maintain heavy duty trucks and equipment to DOT standards	Receive a satisfactory rating for the 2016 CHP BIT Inspection	100%
Rollout Enterprise Asset Management System (EAM)	Enter all data for water mains, services, and all other water distribution appurtenances	July 2016

Wastewater Department

Personnel Level:			
<u>Position(s):</u>	<u>2013 - 2014</u>	<u>2015 - 2016</u>	<u>2016 - 2017</u>
Wastewater Superintendent	1.00	1.00	1.00
Utility Worker II	4.00	4.00	4.00
Department Totals:	5.00	5.00	5.00





Responsibilities:

Wastewater Division is responsible for protection of public health and the environment. Providing reliable and sustainable wastewater collection and pumping services to its District’s customers. Additionally, this area is responsible for accomplishing its duties in prudent manner by completing its tasks using effective management practices and ensuring and environmentally responsible operation.

Major Accomplishments: Fiscal Year 2015-16

- Manhole rehabilitation in preparation for El Niño rain event by seal coating/curing in place a total of 18 sewer manholes to avoid inflow and infiltration;
- Cleaned and maintained 20 miles of main line within the district’s sewer system and service area;
- Maintained (6) six sewage lift stations;
- Maintained (1) sewage flow meter (FLO Dar);
- CCTV 20% of sewer lines to reduce and avoid adding high frequency sections;
- Provided objectives and goals in the District’s strategic plan model for Wastewater Division;
- Stallion SCADA upgrade;
- Lift Station # 6 full panel Radio upgrades;
- Upgraded Central HMI Software to inductive automation ignition.

Objectives: Fiscal Year 2016-17

STRATEGIC FOCUS AREA	FISCAL YEAR 2016-17 INITIATIVES
1	<ul style="list-style-type: none"> Complete feasibility study of water reclamation plant and recycled water distribution system. Commence full design if project is deemed feasible.
2	<ul style="list-style-type: none"> Implement a proactive asset management system to include inventory of all assets and establish appropriate maintenance schedules. Document asset condition through continuous condition assessment. Develop long-term asset rehabilitation schedules.
3	<ul style="list-style-type: none"> Maintain education and training opportunities to ensure continuous improvement and learning for all staff. Develop a cross-training program to help build internal capacity.
4	<ul style="list-style-type: none"> Implement a Continuous Improvement Process.
5 5	<ul style="list-style-type: none"> Complete feasibility studies for enhancing the delivery of information to customers through technologies. Enhance capabilities of field customer service staff through geographic dispatching and information systems.
6	<ul style="list-style-type: none"> Facilitate district facility tours for interested members of the public.

Performance Measurement Indicators:

ACTIVITY	CRITERIA	TARGET 2016-17
Timely completion of reports and monthly scheduled maintenance; Compliance with CRWQCB Region 9	Prevent discharge order violations	100%
Eliminate Sewer Overflows	Prevent all Sanitary Sewer Overflows (SSOs) Categories (1 – 3) and Private Lateral Sewer Discharges (PLSDs)	100%
Oakcrest Estates: Order # 93-69	Compliance: Submit Semi Annual and Annual Reports: (Effluent Samples, Sludge, Flows, DO's)	100%

Routine Wastewater Collection System Inspections: (CCTV) Closed Circuit Television	Inspect Wastewater Collection System	Industry Standards
Routine Wastewater Collection System Cleaning	Clean Wastewater Collection System	Industry Standards
Effectively maintain existing equipment	Preventative Maintenance	100%
Rollout Enterprise Asset Management System (EAM)	Enter all data for wastewater system within service area	July 2016



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION ON APPROVAL OF RESOLUTION NO. 16-13, ADOPTING THE DISTRICT'S DRAFT 2015 URBAN WATER MANAGEMENT PLAN

BACKGROUND

The purpose of the Urban Water Management Plan (UWMP) is to establish that "the management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources." To advance that goal, the Act requires that urban water suppliers develop UWMPs to assess current demands and supplies over a 20-year planning horizon, and address methods to ensure reliable and adequate water service to meet the needs of the various categories of customers during normal, dry, and multiple dry years. The plan documents that the water supplies available to RMWD customers are adequate to meet demands over the required 20 year planning period.

The District's Draft 2015 Urban Water Management Plan (UWMP) has been prepared to satisfy Water Code Section 10620 which requires every urban water supplier to prepare and adopt an UWMP. Water Code Section 10617 defines an urban water supplier as any supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually. Furthermore the Codes require the UWMP to be updated at least once every 5 years on or before December 31, in years ending in five and zero. The last UWMP prepared by RMWD was completed in 2010 and adopted in 2011.

The 2015 RMWD UWMP is an update to the 2010 UWMP. Due to changes in State Law the deadline to adopt and submit the 2015 UWMP was extended to July 1, 2016.

On October 27, 2015 The Board of Directors approved the award of the professional services contract to prepare the UWMP to Atkins. The Board held a Public Hearing at the May 24, 2016 meeting for the purpose of soliciting public input regarding the proposed 2015 UWMP. On June 1, 2016 the UWMP was brought to the Engineering Committee and recommended for approval.

DESCRIPTION

Under the Urban Water Management Planning Act, Urban water management plans are to include an assessment of the current and projected water supplies, evaluation of the demand and customer types, evaluation of the reliability of water supplies, description of the conservation measures implemented by the urban water supplier, response plan in the event of a water shortage, and comparison of the demand and supply projections. In November 2009, SBX7-7, part of the Water Conservation Act of 2009, added the requirement for urban water providers to comply with conservation requirements in order to be eligible for State water grants or loans. The additional UWMP information required by SBX7-7 includes baseline per capita water use data, per capita water use targets, and interim per capita water use targets.

General conclusions:

- District supply from the Water Authority is adequate to meet projected Normal and Dry Year Demands over the next 20 years.
- The District met the interim 2015 urban use target and is on track to meet the 20% reduction by 2020 target imposed by SBX7-7.

POLICY

N/A

BOARD OPTIONS/FISCAL IMPACTS

No fiscal impacts. Adopting the UWMP will allow the District to be eligible for State water grants or loans.

- 1) Approve Resolution No. 16-13, adopting the 2015 Urban Water Management Plan as amended.
- 2) Provide other direction to staff

STAFF RECOMMENDATION

Staff recommends Option 1, Approval of Resolution No. 16-13, adopting the District's 2015 Urban Water Management Plan as amended.



Sherry Kirkpatrick
Engineering Manager

June 28, 2016

RESOLUTION NO. 16-13

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE
RAINBOW MUNICIPAL WATER DISTRICT
ADOPTING URBAN WATER MANAGEMENT PLAN**

WHEREAS the Urban Water Management Planning Act (Water Code section 10620 – 10644) requires every urban water supplier as defined in the act to prepare and adopt an urban water management plan and revise this plan at least once every five (5) years (Water Code 10621); and

WHEREAS Rainbow Municipal Water District is an urban water supplier within the meaning of the act; and

WHEREAS the District has prepared its 2015 Urban Water Management Plan, made the plan available for public inspection, and held a public hearing thereon following publication within the jurisdiction of the District of a notice of the time and place of the hearing pursuant to section 6066 of the government Code; and

WHEREAS it is in the interest of the District to adopt a revised water management plan;

NOW THEREFORE BE IT RESOLVED DETERMINED AND ORDERED by the Board of Directors of the Rainbow Municipal Water District as follows:

1. That the URBAN WATER MANAGEMENT PLAN FOR RAINBOW MUNICIPAL WATER DISTRICT, a copy of which is on file with the District be approved and adopted as the plan required by the Urban Water Management Planning Act.
2. That the District shall implement it's updated plan.
3. That the Secretary of the District is authorized and directed to file with the Department of Water Resources of the State of California a copy of the District's updated plan by July 1, 2016.

PASSED AND ADOPTED at an adjourned regular meeting of the Board of Directors of the Rainbow Municipal Water District held on June 28, 2016 by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

Dennis Sanford, Board President

ATTEST:

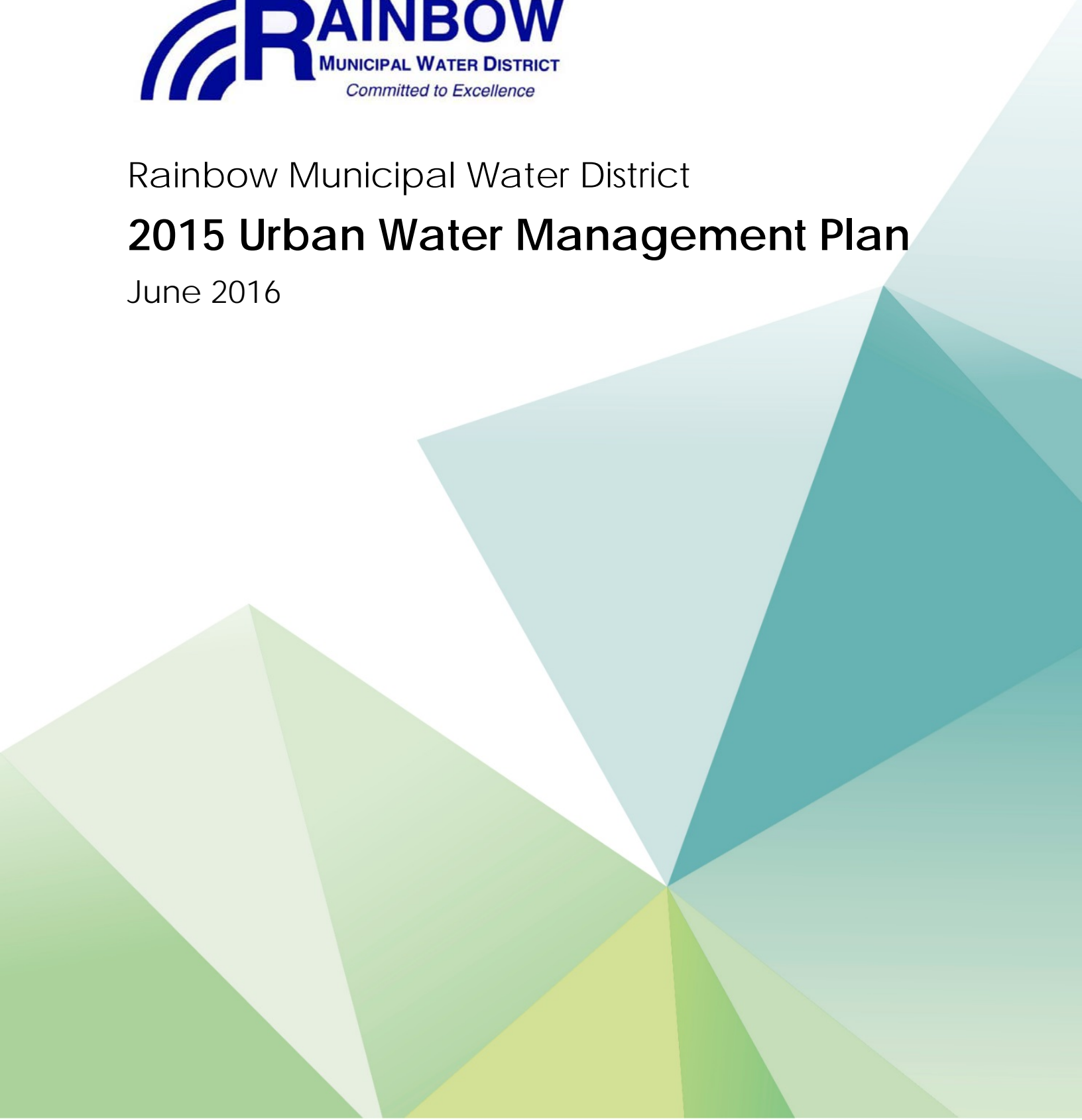
Dawn Washburn, Board Secretary



Rainbow Municipal Water District

2015 Urban Water Management Plan

June 2016



Rainbow Municipal Water District Urban Water Management Plan 2015 Update

June 2016

Prepared for:
Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028

Prepared by:

ATKINS

3570 Carmel Mountain Road, Suite 300
San Diego, California 92130
Atkins Project No.: 100048738

In association with:

GILLINGHAM WATER
Gillingham Water Planning and Engineering, Inc.

DLM
ENGINEERING, INC

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1.0 Introduction

1.1 Overview

This 2015 Urban Water Management Plan (Plan, UWMP) has been prepared by the Rainbow Municipal Water District (District, or RMWD) in accordance with the requirements of California's Urban Water Management Planning Act (Act) and related provisions of the California Water Code, as included in **Appendix A**. The Act establishes as State policy that, "the management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources." To advance that goal, the Act requires that urban water suppliers develop UWMPs to assesses current demands and supplies over a 20-year planning horizon, and addresses methods to ensure reliable and adequate water service to meet the needs of the various categories of customers during normal, dry, and multiple dry years. The plan documents that the water supplies available to RMWD customers are adequate to meet demands over the required 20 year planning period.

The mission of RMWD is to provide its customers reliable, high quality water and water reclamation services in a fiscally sustainable manner. Together with the San Diego County Water Authority (Water Authority, or SDCWA) and Metropolitan Water District (MWD), RMWD works to provide a reliable supply to its customers through water management, conservation and careful planning.

1.2 Urban Water Management Planning and the California Water Code

The Urban Water Management Planning Act (UWMP Act) became part of the California Water Code in 1984 with the passage of Assembly Bill 797. The original legislation has subsequently been modified several times, most notably in 2009 by the provisions of SBX7-7, the "20 percent by 2020" legislation. The Act requires urban water suppliers to prepare and submit to the California Department of Water Resources (DWR) a UWMP every five years, in years ending in 0 and 5. For the 2015 plans, the legislature extended the deadline to allow agencies to report on their compliance with certain 2015 target conservation goals, and the current plans are due to be filed with DWR by July 1, 2016.

UWMPs are to include the following:

- Assessment of current and projected water supplies
- Evaluation of demand and customer types
- Evaluation of the reliability of water supplies
- Description of conservation measures implemented by the urban water supplier
- Response plan, in the event of a water shortage
- Comparison of demand and supply projections

With the passage of SBX7-7 in November 2009 as part of the Water Conservation Act of 2009, retail urban water providers are now required to comply with the conservation requirements of SBX7-7 in order to be eligible for State water grants or loans. The additional UWMP information required by SBX7-7 includes:

- Baseline per capita water use data

-
- Per capita water use targets
- Interim per capita water use targets

1.3 Changes to the Act

Major amendments made to the Act subsequent to preparation of the District's 2010 UWMP Plan include the following:

- **Water Code Section 10631 (f) (1) and (2), Assembly Bill 2067 (2014)** - Requires water suppliers to provide narratives describing their water demand management measures, as provided. Retail water suppliers are required to address the nature and extent of each water demand management measure implemented over the past 5 years and describe the water demand management measures that the supplier plans to implement to achieve its water use targets.
- **Water Code Section 10621 (d), Assembly Bill 2067 (2014)** – Extended the submittal deadline and requires each urban water supplier to submit its 2015 UWMP to DWR by July 1, 2016.
- **Water Code Section 10644 (a) (2), Senate Bill 1420 (2014)** - Requires the plan, or amendments to the plan, to be submitted electronically to DWR.
- **Water Code Section 10644 (a) (2), Senate Bill 1420 (2014)** - Requires the plan, or amendments to the plan, to include any standardized forms, tables, or displays specified by DWR.
- **Water Code Section 10631 (e) (1) (J) and (e) (3) (A) and (B), Senate Bill 1420 (2014)** - Requires the UWMP to quantify and report on distribution system water loss.
- **Water Code Section 10631 (e) (4), Senate Bill 1420 (2014)** - Provides for water use projections to display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans, when that information is available and applicable to an urban water supplier.
- **Water Code Section 10631.2 (a) and (b), Senate Bill 1036 (2014)** - Provides for an urban water supplier to include certain energy-related information, including, but not limited to, an estimate of the amount of energy used to extract or divert water supplies.
- **Water Code Section 10632 (b), Assembly Bill 2409 (2010)** - Requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.

1.4 UWMPs in Relation to Other Planning Efforts

The District's 2015 UWMP integrates with other District planning efforts and with related planning efforts of SDCWA, the County of San Diego, and others. Key related planning efforts are listed below:

- **RMWD Water and Wastewater Master Plan Update:** The UWMP's projections of future demands and local supplies are derived from and are consistent with those described in the District's 2015 Water and Wastewater Master Plan Update (Atkins, 2016).
- **San Diego County Water Authority Regional UWMP:** Information on demands and planned local supplies from RMWD's UWMP has been coordinated with SDCWA for presentation in its 2015 Regional UWMP.

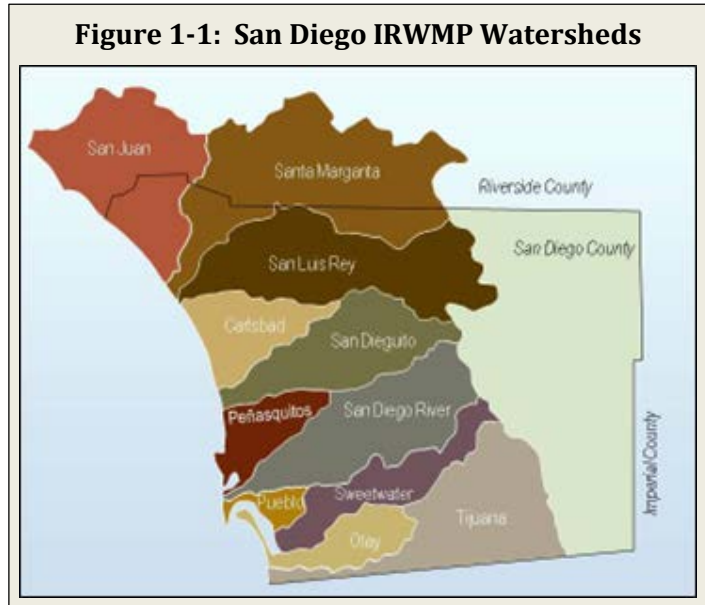
- **San Diego Regional Agricultural Water Management Plan:** The San Diego Regional Agricultural Water Management Plan (RAWMP) is a cooperative effort of the San Diego County Farm Bureau (SDCFB) and fourteen retail water agencies, including the District, that serve agricultural customers in the northern half of San Diego County. The RAWMP documents the efficient water management practices of these agricultural water customers and these agencies as a whole.
- **San Diego Association of Governments Regional Plan:** The District's projections of future water demands are based on demographic projections made by SANDAG as part of its 2015 Regional Plan. The SANDAG projects are fully consistent with the adopted land use plans of the County of San Diego and each of the various municipalities within San Diego county.
- **San Diego County General Plan:** As noted in the SANDAG Regional Plan description above, the District's water demand projections are consistent with the adopted General Plan land uses of the County of San Diego. The County will review the District's UWMP and use the document as needed to provide documentation of available water supplies relative to any land use decisions that come before the County during the five-year life of the current UWMP.
- **San Diego Integrated Regional Water Management Plan:** See description below.

1.4.1 Integrated Regional Water Management Plans

California legislation passed in 2000 promotes the development of Integrated Regional Water Management Plans (IRWMPs). The process involves an integrated approach to water management planning by providing the framework for local agencies to cooperatively manage local and imported water supplies and improve water supply quality, quantity, and reliability. Many of the IRWMP elements are also part of an UWMP and can be addressed cooperatively during the UWMP process.

The San Diego IRWMP supports RMWD's and SDCWA's UWMPs by promoting regional planning and supporting projects that aim to increase water supply reliability and improve surface water and groundwater quality. IRWM planning and funding will help to make possible water supply projects in the areas of seawater desalination, recycled water, local surface water, and groundwater, which are part of the region's projected mix of water resources. The IRWM program also supports water conservation, another key element of RMWD's and SDCWA's UWMPs.

The District participated in the development of the San Diego IRWMP, a copy of which can be found at <http://www.sdirwmp.org/>. The watershed boundaries of the San Diego IRWMP planning region are shown in **Figure 1-1**.



1.5 UWMP Organization

This UWMP is organized consistently with DWR's 2015 Urban Water Management Plans Guidebook, and contains the following chapters:

Chapter 1 – Introduction and Overview

Chapter 2 – Plan Preparation

Chapter 3 – System Description

Chapter 4 – System Water Use

Chapter 5 – Baselines and Targets

Chapter 6 – System Supplies

Chapter 7 – Water Supply Reliability

Chapter 8 – Water Shortage Contingency Planning

Chapter 9 – Demand Management Measures

Chapter 10 – Plan Adoption, Submittal, and Implementation

2.0 Plan Preparation

2.1 Application of UWMP Act to RMWD

The District has prepared this UWMP in accordance with the Urban Water Management Planning Act and the California Water Code. The District is subject to the Act because it satisfies the definition of an “Urban Water Supplier” operating a “Public Water System.”

District identification information required for the plan is summarized in **Table 2-1**.

Table 2-1: Public Water System Identification

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	2015 Volume of Water Supplied (AF)
3710016	Rainbow MWD	7,838	20,062
TOTAL		7,838	20,062

2.2 Regional Planning and Compliance

The Act allows groups of water agencies to form Regional Alliances for reporting on per capita water use targets. The District is not part of a regional alliance. Required plan identification information is presented in **Table 2-2**.

Table 2-2: Plan Identification

Select	Type of Plan		Name of RUWMP or Regional Alliance
X	Individual UWMP		
	No	Water Supplier is also a member of a RUWMP	
	No	Water Supplier is also a member of a Regional Alliance	
No	Regional UWMP		

2.3 Units of Measure

The District reports its data on a fiscal year basis. Water supplies and demands are reported on an acre-foot (AF) volume basis and may sometimes be referred to in acre-feet per year (AF/yr) to represent the total volume of water referenced for a full fiscal year. Both of these units are maintained consistently throughout the plan. Required plan information is summarized in **Table 2-3**.

Table 2-3: Units of Measure

Type of Agency	
X	Agency is a retailer
Fiscal or Calendar Year	
X	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
X	Acre-Feet (AF) (1 AF = 325,851 gallons)

2.4 Coordination and Public Outreach

2.4.1 Wholesale and Retail Coordination

The District currently relies upon SDCWA for 100 percent of its water supply. The District has coordinated the preparation of its UWMP with SDCWA, and has provided SDCWA with projected water demands and local supplies in five-year increments through 2040. SDCWA has used the information provided by the District in preparing its 2015 Regional UWMP.

Required plan information is summarized in **Table 2-4**.

Table 2-4: Water Supplier Information Exchange

Wholesale Water Supplier Name
Potable Water: San Diego County Water Authority

2.4.2 Coordination with Other Agencies and the Community

The District coordinated the preparation of its UWMP with appropriate local agencies, including other water suppliers that share a common source, water management agencies and relevant public agencies, to the extent practical. Notification of the update of the 2015 UWMP was sent out more than 60 days prior to the public hearing to all water management agencies, wastewater agencies, cities in and adjacent to the District’s service area, and the County of San Diego. Coordination efforts are summarized in **Table 2-A**.

The draft UWMP was made available on the District’s website, and in hardcopy form beginning on May 10, 2016. Within 30 days of the adoption, copies of the final UWMP, including information on water service reliability, will be sent to DWR, the California State Library, and the County of San Diego, and will be posted on the District’s website and made available for review in hardcopy form at the District’s offices during normal working hours.

Table 2-A: Coordination with Stakeholder Agencies

Coordinating Agencies	Participated in Plan Development	Commented on Draft	Attended Public Meetings	RMWD Contacted For Assistance	Was Offered Draft Plan	Was sent Notice of Intention to Adopt
Relevant public agencies						
• County of San Diego					X	X
• City of Oceanside					X	X
• City of Vista					X	X
General public						
• General Public			X		X	X
Wastewater agencies						
• City of Oceanside					X	X
Water management agencies						
• San Diego County Water Authority	X			X	X	X
Other water suppliers						
• Fallbrook Public Utilities District					X	X

2.4.3 Notice to Cities and Counties

The District notified the County of San Diego, the City of Oceanside, and the City of Vista at the start of the UWMP process, well in advance of the required 60 days prior to the UWMP public hearing.

3.0 Rainbow Service Area

3.1 Service Area Boundaries

RMWD serves the San Diego County unincorporated communities of Rainbow and Bonsall, a portion of the unincorporated community of Fallbrook, and small portions of the cities of Vista and Oceanside. The District's boundaries cover approximately 78 square miles. The northern part of the District is located north of the San Luis Rey River and straddles Interstate 15 (I-15) while the southern part of the District is located west of I-15 and straddles the San Luis Rey River. The District's service area boundaries are shown in **Figure 3-1** on the next page.

The District provides water service to all of the area within its boundaries, and sewer service to a smaller area within the San Luis Rey river valley. The District currently owns, through contract, capacity to treat 1.5 million gallons of sewage per day at the San Luis Ray Wastewater Treatment Plant in Oceanside. The District's sewer service area includes over 2,150 connections mainly along the State Route 76 (SR-76) corridor.

The service area of RMWD is heavily agricultural, and water for agriculture accounts for approximately three-quarters of District water sales. Agricultural crops include avocados, citrus, commercial nurseries, strawberries, tomatoes, corn and livestock.

3.2 Governance

RMWD was formed in 1953 under the Municipal Water District Act of 1911 (Section 7100 et. seq. of the CWC). RMWD joined the Water Authority and MWD the same year, acquiring the right to purchase and distribute imported water throughout its service area.

The District is governed by a five member elected Board of Directors which sets ordinances, policies, taxes, and rates for providing sewer and potable water services within the District service area. The District is revenue neutral: each end user pays their fair share of the District's costs of capital improvements, water acquisition, and the operation and maintenance of its facilities.

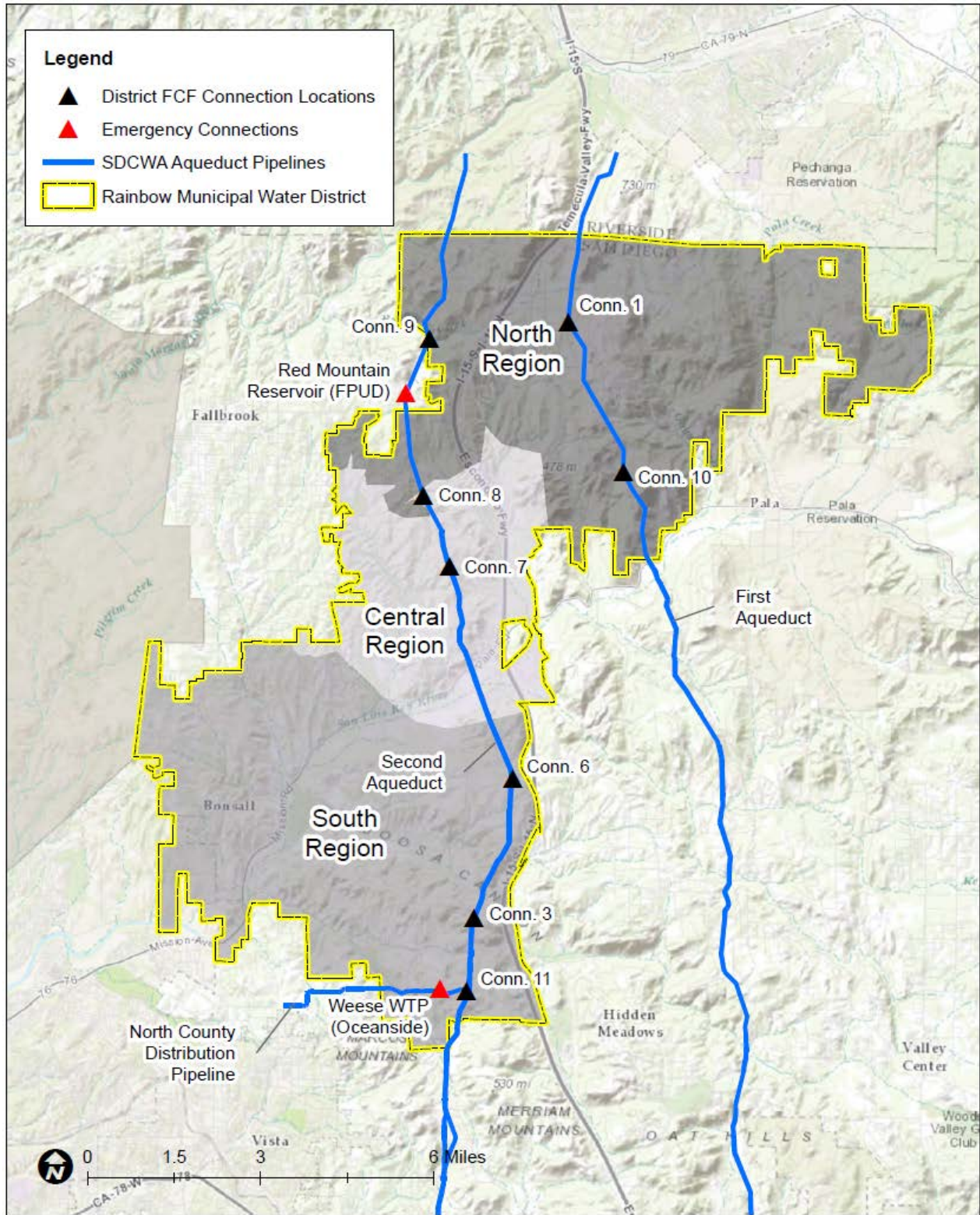
3.3 Climate and Terrain

The District's climate is mild, varying from a low mean daytime temperature of 69 degrees in the winter to a high mean daytime temperature of 86 degrees in the summer. The average annual rainfall of approximately 16 inches occurs primarily from December through March.

Most of the District is mountainous and consists of hills and valleys with a mix of primarily intermittent streams and some perennial streams and rivers. The topography ranges from 150 to 2,200 feet mean sea level. The San Luis Rey River crosses diagonally through the District from the northeast to the southwest, and several smaller creeks divide the area, including Gopher Canyon, Moosa Canyon, and Tamarack Creeks. Much of the area still remains in its natural state of chaparral, oak, and coastal sage vegetation.

Per SDCWA's most recent climate change analysis, the median predicted climate change will increase average ETo in the District service area by 1.8% by 2035. The District projects that other factors being equal, the increase in ETo will result in a like increase in irrigation unit demand factors.

Figure 3-1: Rainbow Service Area



3.4 Population

To facilitate the projection of the District’s future water demands, it is important to have well supported estimates of future population totals. The District consulted with the San Diego Association of Governments (SANDAG), which collects and analyzes land use, population and economic information within the County of San Diego in order to develop a number of useful projections, among them population. DWR has consulted with SANDAG regarding their population projection methods and has approved SANDAG projections for use in the UWMP process for its member agencies. Upon receiving confirmation of DWR approval of the SANDAG methodology, the District has proceeded with the use of SANDAG population projections as the basis for this UWMP.

The District has grown very little subsequent to its previous UWMP of 2010, but now anticipates increasing levels of development over the current UWMP planning horizon. The projected increase in population reflects planned residential development approved in the last update to the San Diego County General Plan. Current and projected future District population counts are summarized in **Table 3-1**.

Table 3-1: Current and Projected Service Area Population

Population Served	2015	2020	2025	2030	2035	2040
	20,279	23,789	24,967	26,145	28,219	28,336

Source: SANDAG Series 13, custom data sort to District service area boundary

4.0 Water Use

4.1 Existing Use by Customer Class

Total water use in the District during FY 2015 is summarized in **Table 4-1**.

Table 4-1: Demands for Potable and Raw Water - Actual FY 2015

Use Type	FY 2015 Actual		
Use Category	Additional Description	Level of Treatment When Delivered	Volume (AF)
Single Family		Drinking Water	4,236
Multi-Family		Drinking Water	332
Commercial		Drinking Water	2,068
Agricultural		Drinking Water	12,312
Losses	Non-Revenue Water, including apparent and real losses	Drinking Water	1,114
TOTAL			20,062

Notes: Volumes reported for individual customer classes are metered sales, exclusive of non-revenue water (real and apparent losses). Non-Revenue water calculated as difference of SDCWA FY 2015 deliveries and District FY 2015 sales, exclusive of minor change in storage and minor effect of billing period time lag.

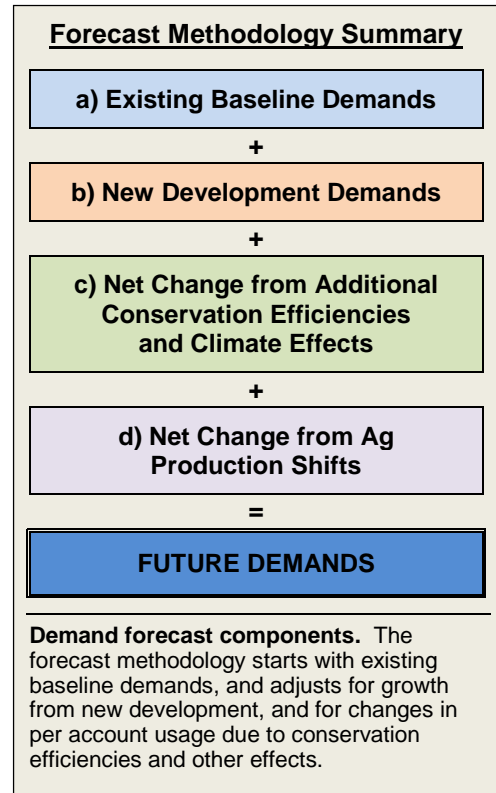
Water demands in the District service area have declined significantly in recent years, down from down from a peak of 33,940 AF in FY 1981, and 33,300 AF as recently as FY 2004. This drop in demands has occurred in response to increasing water prices, periods of drought-induced water use restrictions, agricultural market conditions, increased customer adoption of a conservation ethic, and other factors. Agricultural demands in particular have been steadily declining through the years as a response to increasing water costs which make it more difficult to profitably run agricultural businesses, and increasing property values which make selling the underlying land more attractive. Some agricultural sectors, such as nurseries, have seen growth in business and increases in water demands, but the overall trend for agricultural water use has been a decline.

4.2 Projected Future Water Use

4.2.1 Approach / Methodology

The Master Plan forecasts future water demands using existing unit demands as a baseline, and scales these based on the net effects of growth, conservation, agricultural outlook, and other factors. The forecast methodology is outlined below.

- a) **Existing baseline unit demands.** The Master Plan uses actual unit use factors for calendar year 2013 as the baseline normal condition demands for the forecast period. 2013 demands are sufficiently distant from the water use restrictions in effect during 2009-10. 2013 was moderately dryer than normal, which would tend to increase use, but this increase is offset by below-normal economic activity as the economy continued to recover.
- b) **New development.** New residential development demands are generated using the baseline unit use factors, and the SANDAG Draft Series 13 projections for the District at the pressure zone level of spatial resolution.
- c) **Reduced demands due to additional conservation efficiencies and other factors.** The Master Plan projects unit use rates will continue to decline over time in response to increased water rates, conservation education, and shifting landscape preferences. These factors are summarized in **Table 4-A**.



- d) **Change in Agricultural demands.** Agricultural demands are forecast based on District estimates, and on price-elasticity of demand response to projected increased water prices.

Table 4-A: Summary of Unit Use Adjustment Factors

FACTORS DRIVING UNIT USE REDUCTIONS	
Landscape Ordinances	As required by State law from 2010 and as amended by the State Water Resources Control Board in 2015, all land use jurisdictions have adopted landscape ordinances limiting new landscape construction water use to 55% ET for residential construction, and 45% for non-residential construction. The state requirements also limit turf utilization in all types of construction and in and streetscape uses. As a result, new construction in the District will feature less grass, and be lower water using in comparison to pre-2010 construction.
Weather-Based Irrigation Controllers	Newer landscape irrigation controllers can automatically adjust irrigation schedules consistent with actual climate conditions and plant water needs, reducing unnecessary use due to over-irrigation. The use of these controllers will become increasingly common during the planning horizon.
Turf Retirement	Up until late-2015 MWD and SDCWA were providing financial incentives to customers who replaced grass with low water use landscapes, helping drive a transition of customer landscape preferences away from turf. In the District service area, this transition will likely continue gradually over the course of the planning horizon.
High-efficiency clothes washers	Newer clothes washing machines, in particular front-loading versions, are more water efficient than older traditional-style washers.
High-efficiency toilets	California regulations enacted in 2011 require new toilets to operate with a maximum of 1.28 gallons per flush, compared to 1.6 gpf per the previous 1992 requirements. This will reduce water use at new SFR and MFR construction. Rebate programs funded by MWD and others will support a gradual transition to the newer toilets.
MFR Submetering	Future MFR construction will be subject to requirements that individual units be submetered and billed by usage. The direct price signal to the consumer results in reduced water use.
Increasing Real Prices / Behavioral Changes	Retail water rates may continue to increase at a rate faster than inflation, driven by increases in wholesale rates. Customers respond by reducing use.
FACTORS DRIVING UNIT USE INCREASES	
Climate Change	Per SDCWA’s most recent climate change analysis (2013 Water Facilities Master Plan, Appendix E), the median predicted climate change will increase average ETo in the District service area 1.9% by 2035, and approximately 3% by 2050.
OTHER FACTORS	
Agricultural Practice	With agriculture representing approximately three-quarters of total District demands, the District demand forecast is sensitive to changes in agricultural practices and changes in agricultural customer’s response to water price increases. The District’s median forecast assumes that overall agricultural water usage will remain flat at approximately current levels over the UWMP planning horizon.

4.2.2 Projected Potable Water Demands

The Master Plan projects that future demands will remain approximately at current demand levels, despite underlying growth in population, housing, and employment. Water use per account and per capita will continue to decline in response to the conservation and other factors outlined above.

The District’s projected potable water use is summarized in **Table 4-2**.

Table 4-2: Projected Water Demands

Use Type	Additional Description (as needed)	Projected Water Use				
		2020	2025	2030	2035	2040
Residential		3,990	4,150	4,200	4,470	4,450
Commercial		580	580	580	580	580
Agricultural		14,370	14,220	14,180	13,930	13,780
Other	Temporary Construction Meters	60	60	60	60	60
Losses	Non-Revenue Water, including real losses	1,810	1,810	1,810	1,810	1,790
TOTAL (rounded)		20,400	20,800	20,800	20,900	20,700

Notes: Volumes reported for individual customer classes are metered sales, exclusive of non-revenue water and losses. Non-Revenue water estimates as difference of total system deliveries and metered sales.

4.2.3 Projected Recycled Water Demands

The District is studying a possible Water Reclamation Facility to develop a supply of recycled water for use within the District service area. The project remains at the "Planned" level and the District does not yet classify potential yield of the project as a "Verifiable" supply for purposes of water supply documentation in this UWMP. Additional discussion on the District’s local supply development plans, inclusive of recycled water, is presented in **Section 6**.

4.2.4 Projected Near-Term Annexation Demands

The District anticipates that additional lands will annex to its service area during the planning horizon for this UWMP. These Near-Term Annexations may include those developments listed below:

- Warner Ranch: The owners of this 210 acre property located north of Pala have proposed construction of up to 780 residential units, which inclusive of parks, slope landscaping, and other development components could generate water demands on the District of approximately 519 AF/yr. The property has on-site wells which could be used to serve non-potable irrigation demands.

Because this Near-Term Annexation project is not currently within the District service area, the District’s Master Plan and this UWMP do not include the prospective project demands in the District totals. However, the potential demands of this and other Near-Term Annexations throughout San Diego county are accounted for in SDCWA’s Regional UWMP, which documents the availability of supplies as needed to serve these demands subject to approval of their annexations by the retail water district, SDCWA, MWD, and the San Diego Local Area Formation Commission.

4.2.5 Projected Total Water Demands

The District’s total projected demands are summarized in **Table 4-3**.

Table 4-3: Total Water Demands

	2015	2020	2025	2030	2035	2040
Potable and Raw Water <i>from Tables 4-1 and 4-2</i>	20,062	20,810	20,820	20,830	20,850	20,660
Recycled Water Demand <i>from Table 6-4</i>	0	0	0	0	0	0
TOTAL WATER DEMAND	20,062	20,810	20,820	20,830	20,850	20,660

Notes:

Volumes reported for individual customer classes are metered sales, exclusive of non-revenue water and actual losses. Non-Revenue water estimates as difference of total system deliveries and metered sales.

Demands associated with possible Near-Term Annexation projects are not included, but are addressed in SDCWA’s Regional UWMP.

4.3 Distribution System Water Loss

Distribution system water losses result from leaks from pipelines and storage facilities. The District has calculated losses using the American Water Works Association Manual M36, *Water Audits and Loss Control Programs*, and the corresponding AWWA calculation worksheet documented in Appendix L of DWR’s 2015 UWMP Guidebook. The analysis distinguishes between Real Losses, which are actual losses due to leaks from pipelines, storage reservoirs, and service connections; and Apparent Losses, which consist of water that is put to beneficial use but which is not recorded as metered water sales due primarily to under-registering customer meters. The worksheet is provided as **Appendix D** and will be submitted electronically to DWR.

The audit results are summarized in **Table 4-4**.

Table 4-4: Water Loss Audit Reporting for CY 2015

	Water Losses		
	Real ⁽¹⁾	Apparent ⁽²⁾	Total
Volume (AF)	204 AF	949 AF	1,153 AF
% of Total Deliveries	1.0%	4.7%	5.7%

(1) Real losses are actual losses due to leaks.

(2) Apparent losses consist of water that is beneficially used but not recorded as metered sales.

4.4 Estimating Future Water Savings

The District's water demand forecasting methodology, as summarized in Section 4.2.1, specifically accounts for future water savings resulting from conservation and other factors. Related information required for the UWMP is summarized in **Table 4-5**.

Table 4-5: Inclusion in Water Use Projections

Are Future Water Savings Included in Projections?	Yes
Page Numbers Where Described	12, 13
Are Lower Income Residential Demands Included In Projections?	Yes

4.5 Water Use for Lower Income Households

The District's water demand forecasting methodology, as summarized in Section 4.2.1, incorporates all of the existing and planned housing of the County of San Diego, the only land use jurisdictions within the District service area. These housing elements, inclusive of low-income housing, are included in the demographic summaries and forecasts of SANDAG on which the District water demand forecasts are based. The District water demand forecast therefore incorporates all of the existing and planned low-income housing of each of its land use jurisdictions. Related information required for the UWMP is summarized in **Table 4-5** above.

4.6 Climate Change – Influence on Water Demands

The District's water demand forecast incorporates predicted effects of climate change on irrigation demands. Using data assembled by the Water Authority in its 2013 Water Facilities Master Plan¹, the District has adjusted irrigation unit use factors to account for a 1.9 percent increase in reference evapotranspiration by 2035, and a 3.0 percent increase by 2050. Additional details on the District's water demand forecast are included in Section 4.2. Additional review of climate change issues for the San Diego country area are presented in the Water Authority's 2015 Regional UWMP.

¹ SDCWA 2013 Water Facilities Master Plan, Appendix E: "Analysis of Potential Climate Effects on Water Authority Demands." The ETo percentage increase for 2050 is derived from Table 2, which shows a 1.8% increase for the District service area by 2035.

5.0 Baselines and Targets

5.1 Water Conservation Act of 2009 (SB X7-7)

In 2009 the legislature approved and the Governor signed Senate Bill X7-7, the Water Conservation Act of 2009 . The Act required urban water agencies achieve a reduction in per capita water use of 20 percent by 2020, relative to certain specified baseline conditions.

As a part of BS X7-7, urban water suppliers are required to develop a 2020 urban water use target, and also a 2015 interim target, that meets the plan's water conservation intent. In 2010, DWR released a manual titled Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, which provided retail water agencies with specific requirements and methodologies for setting water use efficiency goal and compliance standards for 2020. The manual provided four alternative methods for calculating targets. The District selected Method 1 for use in its 2010 UWMP, and identified a baseline period of 1999 through 2008.

5.2 Updating Calculations from 2010 UWMP

For the 2015 UWMP, the District has updated the calculations presented in the 2010 UWMP to utilize refined annual population estimates developed by SANDAG and referenced to 2000 and 2010 census data at the census block level. These revised population counts result in minor changes to the District's 2015 and 2020 per capita use targets, reducing the target values by approximately four percent in comparison to the target values reported in the District's 2010 UWMP. The complete set of SB X7-7 calculation tables are included in **Appendix E**.

5.3 Baseline Periods and Targets

SB X7-7 requires agencies to develop baseline per capita water use and to develop reduced per capita consumption targets in order to comply with the conservation goals of the 20 x 2020 plan. The baseline periods can be 10- or 15-years and must end between December 31, 2004 and December 31, 2010. In its 2010 UWMP, the District used a 10-year baseline spanning the years 1999 and 2008. Water suppliers must also calculate a 5-year baseline to confirm that the selected 2020 target meets the minimum water use reduction requirements and is a continuous 5-year period that ends no earlier than December 31, 2007 and no later than December 31, 2010. The District selected a baseline between 2003 and 2007. These same baselines are used for the 2015 UWMP.

In 2010 the District used Method 1 to calculate its 2020 target. Method 1 is also used for the 2015 UWMP. Method 1 is summarized below:

Method 1 – 80 Percent of Baseline Water Use

This method sets a target at 80 percent of the 10-year baseline. This value must be less than 95 percent of the 5-year baseline.

The resulting per capita use target levels of 2015 and 2020 are summarized in **Table 5-1**. The complete set of SB X7-7 calculation tables are included in **Appendix E**.

Table 5-1: Per Capita Use Baselines and Targets Summary

Baseline Period	Start Year	End Year	Average Baseline GPCD	2015 Interim Target	Confirmed 2020 Target
10 year	1999	2008	1503	1,352	1,202
5 Year	2003	2007	1515		

Notes: All values are in Gallons per Capita per Day (GPCD). Target GPCDs from SBx7-7 Table 8.

5.4 2015 Compliance Daily per Capita Water Use

Actual per capita water use in the District for FY 2015 was 246 GPCD, less than the SB 7X-7 2015 target level of 316 GPCD. This indicates the District is in compliance with the SB 7X-7 2015 interim target. SB X7-7 2015 compliance information is summarized in **Table 5-2**.

Table 5-2: Per Capita Use 2015 Compliance

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments		2015 GPCD* (Adjusted if applicable)	Did Supplier Achieve Targeted Reduction for 2015?
		Total Adjustments	Adjusted 2015 GPCD		
883	1352	0	883	883	Yes

Notes: All values are in Gallons per Capita per Day (GPCD)

5.5 2015 Residential Daily per Capita Water Use

The per capita use information contained in Tables 5-1 and 5-2 is based on total District water use, of which a large majority is for agricultural uses. When considering Residential per capita use, exclusive of agriculture, the average usage is considerably lower than for total District use. The data in **Table 5-A** summarizes residential per capita use, and provides a more level comparison of urban water use in the District to that of other urban water retailers. The usage rate is calculated following reporting methodology adopted by the State Water Resources Control Board as part of the 2015 emergency conservation actions.

Table 5-A: Residential GPCD

Reporting Period	Residential GPCD
FY 2015	285

Notes: Gallons per Capita per Day (GPCD)

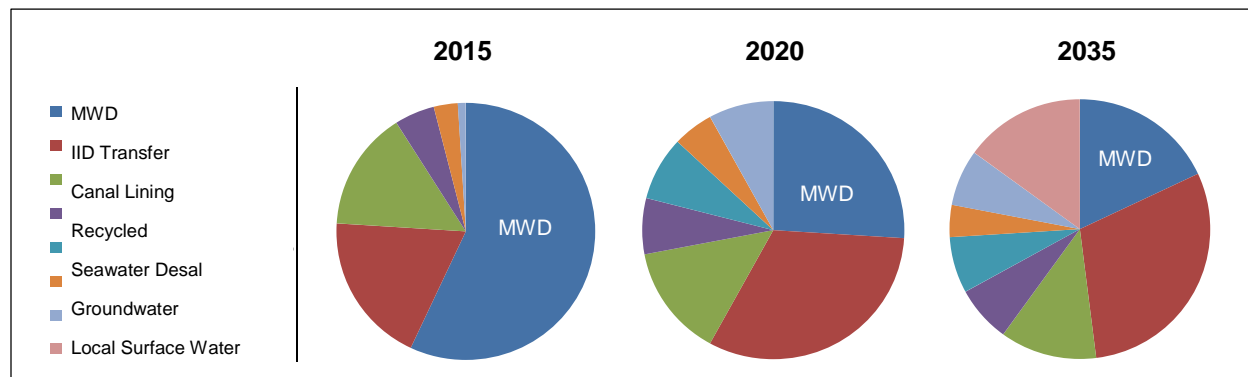
6.0 System Supplies

This chapter describes the existing and planned supplies of water available to the District, including the District’s current supply of water purchased from the Water Authority, as well as the District’s plans for the development of local recycled water and groundwater supply projects. Supply reliability relative to projected demands is discussed in Chapter 7.

6.1 Purchased or Imported Water

The District currently relies on the Water Authority for 100 percent of its supply. A complete description of the Water Authority and its supplies can be found in its 2015 Regional UWMP (www.sdcwa.org/uwmp). The Water Authority has greatly diversified its supply from 1990, when in average years approximately 85 to 90 percent of San Diego County’s water supply was provided by MWD. In comparison, in 2015 the portion of the Water Authority’s supply obtained from MWD was approximately 57 percent, with the reduced reliance a result of Water Authority projects like the Imperial Irrigation District Transfer, conserved water from the All American and Coachella Canal lining projects, and seawater desalination. The Carlsbad Seawater Desalination project started production in December 2015 and is expected to provide approximately 8 percent of the County’s supply. By 2035, the Water Authority projects that only 18 percent of the County’s supply will come from MWD. The changing composition of the Water Authority’s supplies over time is shown below in **Figure 6-1**.

Figure 6-1: SDCWA Supply Portfolio Current and Projected



MWD has two main sources of supply, the California State Water Project and the Colorado River. A complete description of all of MWD and its supplies can be found in MWD’s Regional UWMP (available on MWD’s website at www.mwdh2o.com). RMWD has relied upon the water supply information provided by the Water Authority and MWD in preparing the RMWD 2015 UWMP and for purposes of fulfilling the informational requirements of the Act.

6.2 Existing and Verifiable Local Supplies

The District does not currently obtain any of its supply from local sources. The District is studying opportunities to develop new local recycled water and groundwater supplies, but these projects are in evaluation and have not yet advanced to a level of certainty sufficient to include as verifiable components of the District’s future supply portfolio.

The remainder of this section includes information required for the UWMP. Future local supply opportunities are addressed in **Section 6.3**.

6.2.1 Groundwater

The District does not currently utilize groundwater as an existing source of supply. The District is continuing to evaluate opportunities for development of groundwater supplies from the Bonsall Basin, as further described in Section 6.3.

Required information for the UWMP is summarized in **Table 6-1**.

Table 6-1: Groundwater Volume Pumped

<input checked="" type="checkbox"/> Supplier does not pump groundwater.						
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
	None	--	--	--	--	--
TOTAL		0	0	0	0	0

6.2.2 Surface Water

The District does not currently utilize surface water as an existing source of supply. Several small surface water bodies, most notably the San Luis Rey River, run through the District. However, river flows are insufficient for diversion for consideration of use as a water supply. The District has no plans to develop surface water within its service area as a water supply.

6.2.3 Stormwater

The District does not currently utilize stormwater as an existing source of supply. The district is rural and is largely undeveloped and in an undisturbed state, and its terrain is dominated by mountains and valleys. The District has no plans to develop stormwater within its service area as a water supply.

6.2.4 Recycled Water

The District does not currently utilize recycled as an existing source of supply. The District is continuing to evaluate opportunities for development of its own recycled water project, as further described in Section 6.3. Additional information required for the UWMP on wastewater generation and treatment, agency coordination, and RMWD actions to encourage the use of recycled water, is addressed below.

Wastewater Collection, Treatment and Disposal

The District operated a sewer collection system within the San Luis Rey River corridor portion of its overall service area. The remainder of the service area is more rural in character and is unsewered.

The District conveys all of the wastewater collected by its sewer system to the City of Oceanside, via an outfall sewer line located in the San Luis Rey river valley. The District has a contract in place with the City of Oceanside which allows the District to convey and have treated up to 1.5 MGD of sewage at the City of Oceanside’s San Luis Rey Water Reclamation Plant (SLRWRP). Although that capacity is available, the District does not currently produce that volume of wastewater, and in 2015 conveyed an average of only 0.54 mgd (606 AF for the year) of wastewater to the Oceanside plant.

In addition to its main sewer collection system, the District is the co-permittee for the small Oak Crest WWTP. Wastewater collection estimates are shown in **Table 6-2**.

Table 6-2: Wastewater Collection Within RMWD Service Area

Wastewater Collection			Recipient of Collected Wastewater			
Wastewater Collection Agency	Volume Metered or Estimated?	Volume (AF) from Service Area 2015	Receiving Entity	Treatment Plant Name	WWTP Located in RMWD?	Operation Contracted to Third Party?
RMWD	Metered	606	City of Oceanside	San Luis Rey WWTP	No	No
RMWD / Oak Crest Estates	Metered	13	Spray Field	Oak Crest Estates WWTP	Yes	Yes
TOTAL		619				

The only wastewater treatment or discharge within the District service area is the small Oak Crest Estates WWTP operation. Required plan information presented in **Table 6-3**.

Table 6-3: Wastewater Treatment and Discharge Within RMWD Service Area

Wastewater Treatment Plant Name	Discharge Location	Disposal Method	Treats Flows From Outside Service Area?	Treatment Level	2015 Volumes (AF)		
					Volume Treated	Recycled Within Service Area	Recycled Outside of Service Area
Oak Crest Estates	4747 Oakcrest Road, Fallbrook	Spray irrigation	No	Secondary	13	0	0
TOTAL					13	0	0

Recycled Water Coordination

As part of its Water Master Plan Update completed in 2016, the District completed a concept study which detailed how a wastewater treatment plant could be constructed within the District, the potential benefits of such a system, the potential recycled water demand available and the system that would be needed to serve recycled water to that demand. This potential project is further described in Section 6.3. As part of the concept study, the District coordinated with the City of Oceanside to explore wastewater treatment and recycled water opportunities.

Recycled Water System

Currently the District does not own or operate any recycled water distribution facilities.

Recycled Water Beneficial Uses

Recycled water has a host of potential uses, primarily exterior uses such as agricultural or landscape irrigation, wildlife habitat enhancement, wetlands maintenance, industrial reuse, groundwater recharge, indirect potable reuse and others. As mentioned previously, the District has an abundance of agriculture within its service area which would be the primary beneficiary of recycled water. Additionally, the District could potentially serve some landscape irrigation and wildlife habitat demands, but the majority of customers would likely be agricultural. In order to serve those users the District needs a supply of recycled water and needs a distribution system. The feasibility of those items is currently being investigated by the District, as further reviewed in Section 6.3.

Projected Verifiable Recycled Water Use

As of this writing the District does not have any plans for the development of recycled water which would qualify under the UWMP process as verifiable. Therefore, in the official UWMP tables reported with this document the District will show no projected recycled water beneficial uses.

Required plan information pertaining to recycled water use is presented below in **Tables 6-4 and 6-5.**

Table 6-4: Current and Projected Recycled Water Uses Within Service Area

Beneficial Use Type	General Description	Level of Treatment	2015	2020	2025	2030	2035	2040
Agricultural irrigation			--	--	--	--	--	--
Landscape irrigation			--	--	--	--	--	--
Golf course irrigation			--	--	--	--	--	--
Commercial use			--	--	--	--	--	--
Industrial use			--	--	--	--	--	--
Geothermal /other energy			--	--	--	--	--	--
Recreational impoundment			--	--	--	--	--	--
Wetlands or wildlife habitat			--	--	--	--	--	--
Groundwater recharge (IPR)*			--	--	--	--	--	--
Indirect Potable Reuse			--	--	--	--	--	--
Direct potable reuse			--	--	--	--	--	--
TOTAL:			0	0	0	0	0	0

NOTES: The District is studying a possible Water Reclamation Facility to develop a supply of recycled water for use within the District service area. The project remains at the "Planned" level and the District does not yet classify potential yield of the project as a "Verifiable" supply.

Table 6-5: Projected vs. Actual 2015 Recycled Water Use (AF/yr)

Use Type	2015 Projection from 2010 UWMP	Actual 2015 Use
Agricultural irrigation	--	--
Landscape irrigation (excludes golf courses)	--	--
Golf course irrigation	--	--
Commercial use	--	--
Industrial use	--	--
Geothermal and other energy production	--	--
Seawater intrusion barrier	--	--
Recreational impoundment	--	--
Wetlands or wildlife habitat	--	--
Groundwater recharge (IPR)	--	--
Surface water augmentation (IPR)	--	--
Direct potable reuse	--	--
TOTAL	0	0

Actions to Encourage and Optimize Future Recycled Water Use

California’s Recycling Law (CWC § 13500, et seq.) establishes a policy to encourage the use of recycled water and provides that the use of potable domestic water for the irrigation of green belt areas, cemeteries, golf courses, parks, and highway landscaped areas constitutes an unreasonable use of water where recycled water is available for such uses, as further set forth by statute. Among other provisions, CWC §§ 71610 and 71611 authorize RMWD to provide and sell recycled and non-potable water within the District’s service area.

District actions to encourage and optimize the future use of recycled water within the District service area are summarized in **Table 6-6**.

Table 6-6: Projects to Expand Future Recycled Water Use

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Use (AF/YR)
WRF Feasibility Study	The District is studying a possible Water Reclamation Facility to develop a supply of recycled water for use within the District service area. The project remains at the "Planned" level and the District does not yet classify potential yield of the project as a "Verifiable" supply.	TBD	TBD
TOTAL			TBD

6.2.5 Desalinated Water Opportunities

The District does not currently use any desalinated water supply sources. Within San Diego County, desalination has recently become a significant source of supply with the completion and operation of the Poseidon Carlsbad Desalination Project in Carlsbad, which adds 50 MGD of desalinated water to the SDCWA supply portfolio.

The District’s plans for possible development of a brackish groundwater desalting project are described in Section 6.3.

6.2.6 Exchanges or Transfers

The District relies entirely upon water purchased from the Water Authority, but does participate in emergency transfers with neighboring agencies in order to improve reliability. The District has interconnections with the City of Oceanside at the City’s Weese Water Treatment Plant and with the Fallbrook Public Utility District (FPUD). The UWMP Act encourages transfers and exchanges of water between agencies in order to improve the reliability and quality of agency water supplies. In addition to the existing interconnections, RMWD has in its CIP from its most recent Water Master Plan Update to add additional interconnections to the FPUD system. The proposed new interconnections will provide additional reliability to some of the District’s water pressure zones which need additional fire flow capacity or supply redundancy.

Regional exchanges and transfers being pursued by the MWD and SDCWA are documented in those agencies Regional UWMPs.

6.3 Possible Future Local Supplies

The District is currently conducting and reviewing studies of two possible local supply projects, as described below.

6.3.1 Recycled Water Project

In September 2015 the District completed a preliminary study (Atkins, 2015) examining the feasibility of constructing a District-owned wastewater reclamation facility and recycled water distribution system. These facilities would be capable of delivering up to approximately 1,500 AF/YR of recycled water to District customers, reducing potable water demands by a like amount. The District is currently embarked on more detailed preliminary design studies to confirm the feasibility of the project.

At present, the District conveys the entirety of the wastewater collected within its sewer service area to the City of Oceanside for treatment and disposal. In light of recent and ongoing drought conditions within southern California, the District has contemplated whether construction of its own water recycling project would be more cost effective and resource-efficient than continued conveyance of wastewater flows to the City. The 2015 preliminary study considered several options of plant siting, sizing, and other factors, and compared the overall costs and benefits of these to the No Project alternative of continued wastewater conveyance to Oceanside.

6.3.2 Groundwater Desalter

In January 2016 the District completed a preliminary study (West Yost Associates, 2016) examining the feasibility of developing local San Luis Rey River basin groundwater resources² for District use. The project would include a well field, and either the construction of a Rainbow groundwater desalting plant, or the conveyance to an expansion of the City of Oceanside's existing groundwater desalting plant for treatment and exchange of supply back to the District. The preliminary study examines a project developing up to 4,000 AF/YR of new treated supply. The groundwater to be developed originates as District-supplied imported water to the basin, and percolates to the groundwater as a result of agricultural irrigation and soil salinity management practices. As such, the District classifies the project as an Imported Water Return Flow Reclamation project.

The District is evaluating the findings of the preliminary study prior to committing to further action on the project. Although the preliminary results of the study appear promising, the District recognizes that additional engineering and environmental evaluations will be necessary to confirm project feasibility and sizing. For purposes of this UWMP, the District anticipates that a Phase I groundwater project would be sized for production of approximately 2,000 AF/yr, and that future expansions to higher capacities may be possible but are subject to various planning uncertainties.

6.3.3 Summary of Possible Local Supply Volumes

For purposes of supply planning, the Water Authority in its Regional UWMP distinguishes between local supply projects that are Verifiable, Planned, or Conceptual. Verifiable projects are those projects that have a high level of certainty of being completed, such that they can be relied on as an assured component

² Groundwater in the Bonsall basin is classified by the State Water Resources Control Board as an underground stream, and as such is governed by surface water right doctrines.

of the region’s future supply portfolio. Planned projects are those that have been subject to affirmative feasibility investigations, but which have additional permitting, environmental, and/or financial approval hurdles remaining before they are implemented. Conceptual projects are, as the name implies, project concepts that have not been subject to formal study or that have significant uncertainties or obstacles to implementation.

For formal UWMP reporting, the District has included only verifiable projects in its official projections of future supply availability, as summarized in **Table 6-7** below. The table reflects that the District does not have any future local supplies that have yet advanced to the level of Verifiable.

Table 6-7: Verifiable Future Water Supply Projects

Name of Future Projects or Programs	Joint Project with other agencies?	Description	Planned Implementation Year	Planned for Use in Year Type	Expected Supply (AF/yr)
None					0

NOTES: Only "Verifiable" projects are included. Verifiable = CEQA satisfied, permits in hand, or contracts have been executed. The District is studying possible Water Recycling and Groundwater projects, but these remain at the "Planned" and "Conceptual" levels of development and the District does not yet classify potential yields of these projects as "Verifiable" supplies.

The District’s projections of Planned and Conceptual future local supplies are summarized in **Tables 6-7P and 6-7C** below. These tables are not part of the official UWMP table set and are provided for supplemental information only.

Table 6-7P: Additional Planned Future Water Supply Projects

Name of Future Projects or Programs	Joint Project w/ other agencies?	Description	Possible Implementation Year	Planned for Use in Year Type	Possible Supply (AF/yr)
Rainbow Recycled Water Project – Initial Phase	No	The project would produce recycled water for irrigation uses within the District service area.	2020 to 2025	All (baseline supply)	1,000
Bonsall Groundwater Desalter – Initial Phase	No	The project would treat brackish groundwater for potable use within the District service area	2020 to 2025	All (baseline supply)	2,000
TOTAL:					3,000

NOTES: Only "Planned" projects are included. Planned projects are those that have been subject to affirmative feasibility investigations, but which have additional permitting, environmental, and/or financial approval hurdles remaining before they are implemented. This table is not part of the official DWR UWMP table set and is presented as supplemental information only.

Table 6-7C: Additional Conceptual Future Water Supply Projects

Name of Future Projects or Programs	Joint Project with other agencies?	Description	Conceptual Implementation Year	Planned for Use in Year Type	Conceptual Supply (AF/yr)
Rainbow Recycled Water Project Expansion	No	Possible expansion of Planned project	2025 to 2030	All (baseline supply)	500
Bonsall Groundwater Desalter Expansion	No	Possible expansion of Planned project	2025 to 2035	All (baseline supply)	2,000
TOTAL:					2,500

NOTES: Only "Conceptual" projects are included. Conceptual projects are those project concepts that have not been subject to formal study or that have significant uncertainties or obstacles to implementation. This table is not part of the official DWR UWMP table set and is presented as supplemental information only.

6.4 Summary of Existing and Planned Sources of Water

Chapter 6 has served to identify all of the District’s existing, planned and potential water supply sources available to meet the District’s anticipated demands. As discussed, the District is studying possible future local supply projects, but these have not yet advanced to the level of Verifiable and are therefore not available to include as assured components of the District’s future supply portfolio.

Required plan information is summarized below. Table 6-8 lists the District’s sources of supply for fiscal year 2015, and **Table 6-9** lists the District’s projected source and volume of verifiable supply for the UWMP’s planning horizon.

Table 6-8: FY 2015 Water Supplies – Actual

Water Supply	Additional Detail on Water Supply	FY 2015	
		Volume (AF)	Water Quality
Purchased or Imported Water	San Diego County Water Authority	20,062	Drinking Water
TOTAL		20,062	

Table 6-9: Water Supplies – Projected

Water Supply	Description	Projected Water Supply				
		2020	2025	2030	2035	2040
Purchased or Imported Water	San Diego County Water Authority	20,810	20,820	20,830	20,850	20,660
Groundwater		0	0	0	0	0
Recycled Water		0	0	0	0	0
TOTAL		20,810	20,820	20,830	20,850	20,660

NOTES: Only "Verifiable" projects are included in this table. Verifiable = CEQA satisfied, permits in hand, or contracts have been executed.

6.5 Climate Change – Influence on Water Supply

CWA has evaluated the potential influence of climate change on its supply, on which OMWD is reliant for its potable supply. The following summarizes CWA's analysis and is excerpted from the April 2016 draft of their Regional UWMP.

[Excerpt from CWA Draft Regional UWMP, April 2016]

The term climate change refers to changes in long-term averages of daily weather. Changes to climate will be gradual, providing water supply agencies the ability to adapt planning strategies to manage for the supply uncertainties. The effect on supply would be gradual and captured in each five-year update to the UWMP.

Researchers have concluded that increasing atmospheric concentrations of greenhouse gases, such as carbon dioxide, are causing the Earth's air temperature to rise. While uncertainties remain regarding the exact timing, magnitude, and regional impacts of the temperature and potential precipitation changes due to climate change, researchers have identified several areas of concern that could influence long-term water supply reliability. These potential areas are listed below:

- **Loss of Natural Snowpack Storage.** Rising temperatures reduce snowpack in the Sierra Nevada because more precipitation falls as rain, and snowmelt occurs sooner. Snowpack in the Sierra Nevada is the primary source of supply for the State Water Project. Snowpack is often considered a large surface "reservoir," where water is slowly released between April and July each year. Much of the state's water infrastructure was designed to capture the slow spring runoff and deliver it during the drier summer and fall months. The California Department of Water Resources projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050.
- **Sea Level Rise.** Rising sea levels could increase the risk of damage to water and water recycling facilities from storms, high-tide events, and erosion of levees. A potential catastrophic levee failure in the Delta could interrupt supplies from the State Water Project, potentially reducing supply deliveries to the San Diego region from Metropolitan. In addition, rising sea levels could cause saltwater intrusion into the Delta, degrading drinking water quality. More freshwater releases from upstream reservoirs would be required to repel the sea to maintain salinity levels for municipal, industrial, and agricultural uses.
- **Changes in Average Precipitation and Runoff Volume.** The effect of climate change on overall precipitation and runoff volumes is still unclear and highly uncertain. For example, a number of studies conclude that the flow of the Colorado River may be reduced by climate change, but a wide disparity exists on the predicted volume. The yield from local surface water resources could potentially be reduced, if annual runoff volumes are reduced due to a decline in precipitation or there is an increase in evapotranspiration in reservoirs. It must be highlighted that research is still highly unclear on how precipitation levels may be impacted by climate change.
- **Change in Frequency and Intensity of Droughts.** Warming temperatures, combined with potential changes in rainfall and runoff patterns, could exacerbate the frequency and intensity of droughts.

7.0 Water Supply Reliability

The District is currently 100 percent reliant on SDCWA for its potable water supply and therefore, the water supply reliability assessment in this chapter is based upon the SDCWA assessment from its 2015 Regional UWMP (www.sdcwa.org/uwmp). SDCWA has a number of sources of water including MWD, the recently completed Carlsbad Seawater Desalination Project, and water conserved from the Imperial Irrigation District and the lining of the All American and Coachella Canals and other sources as described in their UWMP. The District is investigating several water resource projects that would reduce dependence on SDCWA, as described in section 6. These projects are in the feasibility stage of analysis and are not yet considered in the reliability assessment.

7.1 Constraints on Water Sources

Except for dry years, the supply from SDCWA is very consistent in quantity and quality, and with sufficient capacity to meet summer peak demands without any delivery constraints. SDCWA's and MWD's main sources of supply are the State Water Project and the Colorado River and both sources face legal, environmental, and climatic challenges. To address these challenges to the State Water Project supply, DWR is going through a permitting process known as California WaterFix and EcoRestore. It has been documented that the Colorado River supply is oversubscribed, and to address this SDCWA and MWD have implemented a number of conservation, land fallowing, transfer, and storage projects. The seven Colorado River Basin states are working cooperatively to develop strategies to better match supply and demand. Both the State Water Project and the Colorado River are described in the SDCWA and MWD 2015 Regional UWMPs.

The RMWD potable water supply is produced by the SDCWA Carlsbad Seawater Desalination Project, the SDCWA Twin Oaks Valley Water Treatment Plant in San Marcos, or the MWD Skinner Water Treatment Plant in Riverside County.

RMWD meets or exceeds all state and federal water quality standards for drinking water. RMWD publishes an annual water quality report, the Consumer Confidence Report, which is mailed to all its customers, posted on its web page, and displayed in its lobby. The most recent report is available at: www.rainbowmwd.com/2016-table-d-water-reports). RMWD does not anticipate any shortage or impact to availability of supply due to water quality issues. SDCWA's Regional UWMP Section 7 provides additional information on the quality of water provided to RMWD.

7.2 Reliability by Type of Year

Historically, the SDCWA supply has been very reliable with only occasional reductions during droughts in California or the Colorado River Watershed. **Table 7-1** shows the basis of water year data and is based on SDCWA's UWMP. SDCWA supplies of conserved water from its Imperial Irrigation District transfer and the All American and Coachella Canal Lining projects are considered to be "drought-resilient." For dry-year analysis, SDCWA assumes that the MWD supplies will be allocated according to its preferential right formula. Additional shortages are handled through the use of SDCWA's carryover storage and management actions such that there are no shortages to member agencies for the single and multiple dry-year scenarios. SDCWA's dry-year supplies are described in Section 11.2.4 of its Regional UWMP. The carryover storage capacity is nearly 100,000 AF in the San Vicente Reservoir, the Semitropic-Rosamond Water Bank Authority and the Semitropic Water Bank. SDCWA may also consider securing transfer

supplies during dry years and in 2009 acquired 20,000 AF from Placer County Water Agency in northern California.

Table 7-1: Basis of Water Year Data

Year Type	Base Year	% of Average Supply
Average Year	2013	100%
Single-Dry Year	1989	100%
Multiple-Dry Years 1st Year	2015	100%
Multiple-Dry Years 2nd Year	2015	98%
Multiple-Dry Years 3rd Year	2015	92%

NOTES: SDCWA supplies from its Imperial Irrigation District transfer, the All American and Coachella Canal Lining projects, and the Carlsbad Seawater Desalination project are considered "drought- resilient." SDCWA assumes that MWD supplies will be allocated according to its preferential right formula. In the second dry year in 2035, a shortage of 2 percent is forecast after using carryover storage supplies and will be handled with management actions. In the third dry year starting in 2025, shortages of from 1 to 8 percent are forecast after using carryover storage supplies and will be handled with management actions.

7.3 Supply and Demand Assessment

7.3.1 SDCWA Demand Forecast

Since the mid-1990s, SDCWA has utilized an econometric model to develop its long-range municipal and industrial (M&I) demand forecasts. This computer model is based on the U.S. Army Corps of Engineers Municipal And Industrial Needs (MAIN) model, which has over a quarter of a century of practical application and is used by many cities and water agencies throughout the United States. SDCWA’s version of the model, known as CWA-MAIN, was modified by a consultant to reflect the San Diego region’s unique parameters. The CWA-MAIN model relates historic water demand patterns to variables such as household income, consumer response to the price of water, and weather, to predict future M&I water demands. These datasets are compiled from various sources, including SANDAG, SDCWA member agencies, and the National Aeronautics and Space Administration. Under the terms of a 1992 memorandum of agreement between SDCWA and SANDAG, SDCWA utilizes SANDAG’s official forecast, which is based on local land use jurisdiction’s general plans and policies, to project consumptive water demands for the region. This coordination ensures linkage between local jurisdictions’ general plans and SDCWA’s projected water demands.

7.3.2 Normal Year Supply and Demand Assessment

If MWD, SDCWA, and RMWD supplies are developed as planned, along with achievement of the Water Conservation Bill of 2009 retail conservation target, no shortages are anticipated within RMWD’s service area in a normal year through 2040. As part of preparation of its UWMP, SDCWA identified RMWD’s demands and in turn, MWD identified SDCWA’s demands in MWD’s UWMP, which are shown to be adequate to cover the demands for the entire San Diego region.

7.3.3 Dry Year Supply and Demand Assessment

SDCWA identified 1989 as the representative single dry-year and its weather patterns were substituted into the CWA-MAIN model to estimate demands. The CWA-MAIN model could not be applied for multiple dry-year forecasts because it was constructed to forecast in discreet 12-month periods. Instead, SDCWA correlated trends in historical deliveries with multi-year trends in observed precipitation to construct a set of consecutive dry year forecasts. RMWD calculated ratios of SDCWA dry year to normal year demands and applied the ratios to RMWD normal year demands to estimate dry year demands. More information on the forecasts can be found in the SDCWA UWMP.

The procedure to allocate SDCWA’s supplies to its member agencies is defined in the SDCWA Water Shortage and Drought Response Plan dated May 2006 and updated in April 2010 and November 2014. RMWD has utilized this methodology to estimate its dry year allocation. The basic steps include:

1. Forecast RMWD normal demands.
2. Subtract water that is in the Transitional Special Agricultural Rate program to obtain net demands.
3. Adjust the demands for growth by adding the population increase times the 2020 urban water use target.
4. Add 30 percent of the average future verifiable local supplies to obtain the adjusted base period demands.
5. Divide the adjusted base period demands by the total SDCWA normal demands to get the RMWD percentage. SDCWA demands were increased by 30 percent to account for all member agencies implementing step 4.
6. Apply this percentage to SDCWA dry-year supplies.

Tables 7-2, 7-3, and 7-4 provide normal, single dry year, and multiple dry years supply and demand comparisons.

Table 7-2: Normal Year Supply and Demand Comparison

	2020	2025	2030	2035	2040
Supply totals (AF)	20,810	20,820	20,830	20,850	20,660
Demand totals (AF)	20,810	20,820	20,830	20,850	20,660
Deficit (AF)	0	0	0	0	0
% of Demands	0%	0%	0%	0%	0%

Table 7-3: Single Dry Year Supply and Demand Comparison

	2020	2025	2030	2035	2040
Demand totals	22,188	22,296	22,321	22,459	22,188
Supply totals	21,362	20,849	20,753	20,915	21,362
Deficit (AF)	826	1,447	1,568	1,544	826
% of Demands	4%	6%	7%	7%	4%

Notes: Same as first year of Multiple Dry Year analysis from Table 7-4, per Water Authority supply allocation policy. Assumes dry-year increase in demands. Assumes minimum 15 percent reduction in TSAWR program deliveries.

Table 7-4: Multiple Dry Years Supply and Demand Comparison

		2020-22	2025-27	2030-32	2035-37
First year	Demand totals (AF)	22,188	22,296	22,321	22,459
	Supply totals (AF)	21,362	20,849	20,753	20,915
	Deficit (AF)	826	1,447	1,568	1,544
	% of Demands	4%	6%	7%	7%
Second year	Demand totals	22,051	22,372	22,418	22,516
	Supply totals	21,105	20,476	20,894	21,224
	Deficit (AF)	946	1,896	1,524	1,292
	% of Demands	4%	8%	7%	6%
Third year	Demand totals	21,922	22,449	22,516	22,573
	Supply totals	20,868	20,745	20,724	20,670
	Deficit (AF)	1,054	1,704	1,792	1,903
	% of Demands	5%	8%	8%	8%

Notes: Per Water Authority supply allocation policy. Assumes dry-year increase in demands. Assumes minimum 15 percent reduction in TSAWR program deliveries.

7.4 Regional Supply Reliability

SDCWA and its member agencies are considering many options to maximize the use of local water resources and minimize the need to import water from other regions including groundwater, water recycling, potable reuse, and seawater desalination. San Diego County has limited surface water resources and these are currently being managed to the fullest yield possible. The Water Authority’s projections of verifiable supplies of local groundwater, recycled water, and potable reuse projects are summarized in **Table 7-A**.

Table 7-A: Regional Options to Maximize the Use of Local Water

Option	2015	2020	2025	2030	2035	2040
Groundwater	23,773	31,240	32,430	33,470	37,470	33,470
Recycled Water	32,595	47,460	48,825	48,959	49,159	49,459
Potable Reuse	0	3,360	5,000	5,000	5,000	5,000

Groundwater

The local groundwater projects include the City of Oceanside and Sweetwater Authority brackish groundwater recovery projects known as the Mission Basin Desalter and the Richard A. Reynolds Desalination Facility. Other future projects not included in the table are the Otay Water District Rancho del Rey Well, and the Fallbrook Public Utilities District – Marine Corps Base (MCB) Camp Pendleton Conjunctive Use Project.

Recycled Water

The recycled water projects that contribute to the growth in supplies shown in Table 7-A are the City of Oceanside San Luis Rey WRF expansion, the Carlsbad Water Recycling Facility expansion and the City of Escondido Advanced Water Treatment for Agriculture Project. Additional projects are planned by Padre Dam MWD, MCB Camp Pendleton, and Santa Fe Irrigation District.

Potable Reuse

The potable reuse volumes shown in Table 7-A are for the City of Oceanside Indirect Potable Reuse Project. A very significant planned project not included in the table is the City of San Diego Pure Water San Diego project with a goal of 83 million gallons per day (93,000 AF/YR) by 2035. The East County Potable Reuse Program is planned for a minimum of 2 mgd (2,240 AF/YR).

Seawater Desalination

SDCWA has contracted for the purchase of 56,000 AF/YR from the Carlsbad Seawater Desalination Project and operation began in December 2015. Otay Water District is in discussions with Consolidated Water Company, Ltd. to purchase up to 56,000 acre-feet of desalinated seawater from a plant proposed for Rosarito Beach, Baja California, Mexico. The Otay Water District has completed an Environmental Impact Report/ Environmental Impact Statement and is working with the Department of State to obtain a Presidential Permit to convey the water across the international border. SDCWA along with other U.S. and Mexican agencies have developed a conceptual level project known as the Rosarito Beach Binational Desalination Project which could produce up to 56,000 AF/YR. The partners have completed a feasibility analysis of the site, an assessment of demands, and a review of environmental permitting. There are no continuing studies currently underway.

An additional planned project is the SDCWA MCB Camp Pendleton Seawater Desalination Project with a planned capacity of between 56,000 and 168,000 AF/YR. The feasibility of this project is being evaluated as a long-term resources strategy to manage future supply uncertainties. SDCWA and MCB Camp Pendleton have signed a memorandum of understanding to provide a framework for cooperation during the performance of additional technical and environmental studies. Seawater intake technologies are currently being tested at MCB Camp Pendleton.

A more complete description of these options can be found in the SDCWA Regional UWMP, Sections 4 and 5.

7.5 Managing Supply Uncertainties and Vulnerabilities

To address the various uncertainties and vulnerabilities of its water supply, the Water Authority has identified a range of adaptive strategies as described in Section 10 of its 2015 Regional UWMP. These strategies address uncertainties relative to legal and environmental issues on the State Water Project and Colorado River Aqueduct supplies, climate change, and other factors. As the District is dependent on CWA for its potable supply, the Water Authority strategies address the water supply planning needs of the District. As noted in Section 7.1, the District’s supply is not subject to any seasonal constraints or vulnerabilities.

The following summarizes CWA’s strategies for addressing supply uncertainties and vulnerabilities, and is excerpted from Section 10 the April 2016 draft of the Water Authority’s Regional UWMP. (The Table numbering is from the CWA document and does not follow the chapter numbering used in the RWMD UWMP.)

[Excerpt from CWA Draft Regional UWMP, April 2016]

Table 10-3 contains strategies the Water Authority can employ to aid in the implementation of the supplies identified in the projected resource mix and manage uncertainty scenarios. The strategies focus on programs, many of which are already being implemented consistent with Water Authority Board policy.

Table 10-3. Potential Common Strategies to Strengthen Implementation of Projected Resource Mix and Manage Uncertainty Scenarios

Potential Water Authority Policies/Programs
<p>Foundational Strategy</p> <ul style="list-style-type: none"> • Reduce reliance on Metropolitan supply sources to ensure the existing and projected water resource mix is reliable and drought-resilient
<p>Member Agency Local Projects</p> <ul style="list-style-type: none"> • Provide technical assistance to member agencies in the planning, design, and construction of local projects • Advocate at local, state, and federal level for minimizing regulatory constraints and enacting acceptable and practicable regulatory standards that allow member agencies to maximize local supply project development. • Advocate for state and federal funding for local projects and work with agencies to ensure projects qualify for funding.
<p>Water Conservation</p> <ul style="list-style-type: none"> • Advocate at local, state, and federal level for minimizing regulatory constraints and enacting acceptable and practicable regulatory standards that allow member agencies to maximize local supply project development. • Advocate for state and federal funding for local projects and work with agencies to ensure projects qualify for funding.
<p>Climate Change</p> <ul style="list-style-type: none"> • Encourage focused scientific research on climate change to identify the impacts on the San Diego region’s imported and local water supplies.

In addition to the policies and programs identified in Table 10-3, Table 10-4 provides a list of the potential management strategies that the Water Authority and member agencies can take in regard to managing the uncertainty scenarios and filling potential gaps. As discussed in Section 9.5, development of additional planned projects is critical in order to continue reducing the region’s

reliance on Metropolitan supply sources and increase the region’s self-reliance. In addition, member agency projects, such as potable reuse, not only provide the agency a supply reliability benefit, but can also provide other benefits, such as reducing wastewater flows to a downstream treatment plant and ultimately the ocean.

Table 10-4. Potential Strategies to Manage Uncertainty Scenarios (2035)

Potential Strategy	Estimated Yield (AF)
Member Agency Potential Additional Planned Local Projects¹	
• Additional Planned Recycled Water and Brackish Groundwater	3,296
• Potable Reuse	106,099
• Fallbrook PUD/Camp Pendleton Groundwater Recharge and Recovery Project	3,100
• Otay WD Rosarito Beach Desalination Project	16,100
Total Additional Planned Local Projects (Member Agencies):	128,595
Water Authority Potential Strategies	
• Potential Regional Seawater Desalination Facility (Camp Pendleton Phase I) ² :	56,000
• Regional Shortage Management Actions (Dry-year transfers and potential extraordinary conservation savings)	--3
Total Minimum Estimated Yield from Potential Strategies:	184,595
<ol style="list-style-type: none"> 1. The estimated yields from the additional planned local supply projects are from the member agencies and the development and implementation of these supplies rests with the member agencies. 2. Ultimate decision to move forward on construction of the proposed Pendleton desalination project would be considered in context of the development of member agency local supplies, such as potable reuse, changes in imported supply reliability, and regional water demand levels. 3. Availability of dry-year supplies is described in Section 11.2.4. 	

In regard to Scenario 6: Climate Change, the strategies outlined in Tables 10-3 and 10-4 can also be utilized to manage the supply uncertainties associated with a changing climate. For example, the foundational strategy to diversify the region’s resource mix through development of local projects, such as recycled water and seawater desalination, reduces reliance on imported and local surface supplies, whose yields could potentially decrease as a result of climate change. The strategies identified in this section provide supply reliability benefits within the planning horizon, while increasing the ability to manage potential climate change impacts in the future

8.0 Water Shortage Contingency Planning

RMWD has prepared for periods of water supply shortage by adopting on June 23, 2015 its Drought Response Conservation Program Ordinance (No. 15-08), which may be considered a water shortage contingency ordinance. The ordinance provides for progressively severe stages of water use restrictions as necessary to accomplish service area-wide water use reductions of up to and over 40 percent. The ordinance is summarized below and a copy of the ordinance can be found in **Appendix G**. The ordinance describes the effects that a drought or water supply shortage may have on RMWD's water supply, its water conservation stages, and the implementation, violation, and penalties of the stages.

RMWD participated in the cooperative effort between the San Diego County water agencies general managers and SDCWA in the creation of the Regional Drought Response Plan and then incorporated it in developing its own plan. Additional discussion regarding SDCWA's Drought Response Plan can be found in Section 11 of their 2015 UWMP.

8.1 Stages of Action

The RMWD Water Supply Shortage Ordinance contains four (4) levels (stages) of action as shown in **Table 8-1** below. Level 1 is voluntary while Levels 2 through 4 are mandatory and include options for assessing penalties for violations.

Table 8-1: Stages of Water Shortage Contingency Plan

Stage	Percent Supply Reduction	Water Supply Condition
1	10%	Reasonable probability that there will be supply shortages and that a consumer demand reduction is required in order to ensure that sufficient supplies will be available to meet anticipated demands, or due to drought and/or other water supply reductions.
2	20%	Due to cutbacks caused by a drought or other reduction in supplies, a consumer reduction is required to have sufficient supplies available to meet anticipated demands. Required to comply with emergency regulations imposed on the District by state or federal agencies.
3	40%	When the SDCWA notifies its member agencies that, due to increasing cutbacks caused by a drought or reduction of supplies, a consumer demand reduction is required in order to have sufficient supplies available to meet anticipated demands. If required to comply with emergency regulations imposed upon the District by state or federal agencies.
4	40+%	When the SDCWA Board of Directors declares a water shortage emergency pursuant to California Water Code Section 350 and notifies its member agencies that Level 4 requires a demand reduction in order for the RMWD to have maximum supplies available to meet anticipated demands. If required to comply with emergency regulations imposed upon the District by state or federal agencies.

NOTES: Based on RMWD Water Supply Shortage Ordinance No. 15-08 dated June 23, 2015. Level (Stage) 4 addresses a water shortage of 50%.

8.2 Prohibitions on End Uses

The RMWD Water Supply Shortage Ordinance contains restrictions and prohibitions on end uses, associated with Levels 1 through 4, as shown in **Table 8-2**.

Table 8-2: Restrictions and Prohibitions on End Uses

Restrictions and Prohibitions on End Users	Stage	Additional Explanation or Reference	Penalty?
1. Other - Prohibit use of potable water for washing hard surfaces	1,2,3,4		No
2. Landscape - Restrict or prohibit runoff from landscape irrigation	1,2,3,4		No
3. Landscape - Limit landscape irrigation to specific times	1,2,3,4	Before 10 AM and after 6 PM Residential and Commercial	No
4. Other - Require automatic shut-off hoses	1,2,3,4	Includes vehicle washing.	No
5. Other - Customers must repair leaks, breaks, and malfunctions in a timely manner.	1,2,3,4	Time to repair is dictated by Level	No
6. Water Features – Use re-circulated water to operate ornamental fountains	1,2,3,4		No
7. CII - Restaurants may only serve water upon request	1,2,3,4		No
8. CII - Lodging establishment must offer opt out of linen service	1,2,3,4		No
9. Other – Use recycled or non-potable water for construction purposes, when available.	1,2,3,4		No
10. Landscape - Limit landscape irrigation to specific days	2, 3, 4	Number of days depends on Level	Yes
11. Landscape - Other landscape restriction or prohibition	2, 3, 4	Limit time per irrigation system station	Yes
12. Landscape - Other landscape restriction or prohibition	2,3,4	Discontinue landscape irrigation during and within 48 hours of measureable rain	Yes
13. Water Features - Restrict water use for pools, spas, decorative water features, such as fountains, or other water features	3, 4		Yes
14. Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	3, 4		Yes
15. Other - No new potable water service and no statements of immediate ability to serve or provide water service.	3,4		
16. Other - Suspend considerations of annexations.	3,4		
17. Other – Water allocation	3, 4	Option to establish a water allocation for property served by the District.	Yes
18. Landscape - Prohibit all landscape irrigation	4	Certain uses are exempt.	Yes

NOTES: Based on RMWD Water Supply Shortage Ordinance No. 15-08 dated June 23, 2015. Penalties may be imposed at Levels (Stages) 2, 3, and 4.

8.3 Penalties, Charges, Other Enforcement of Prohibitions

Each stage of the District’s water shortage ordinance has specific prohibitions, penalties and consumption reduction methods. The violation of the ordinance is a misdemeanor pursuant to sections 350-358, 375-377 and 71640-71644 of California Water Code and punishable by imprisonment in the county jail for not more than 30 days or a fine not to exceed \$1000 or both. The complete text of the ordinance is included in **Appendix G**.

8.4 Consumption Reduction Methods

The RMWD consumption reduction methods, along with the Level at which they are implemented, are listed in **Table 8-3**.

Table 8-3: Water Shortage Contingency Plan Consumption Reduction Methods

Reduction Methods	Stage	Notes
1. Expand Public Information	1	RMWD, SDCWA, and MWD efforts
2. Increase Meter Read Frequency	1	The District has included funds to implement Advanced Metering Infrastructure (AMI) throughout its service area.
3. Offer Water Use Surveys	1	By SDCWA and Mission Resource Conservation District (MRCD)
4. Provide Rebates on Plumbing Fixtures and Devices	1	MWD provided rebates.
5. Provide Rebates for Landscape Irrigation Efficiency	1	MWD provided rebates.
6. Provide Rebates for Turf Replacement	1	MWD provided rebates for turf replacement in the District until funding exhausted.
7. Reduce System Water Loss	1	Ongoing process
8. Provide Rebates on Plumbing Fixtures and Devices	1	SDCWA and MWD provide water saving devices including buckets, soil moisture sensors, rain gauges, hose shut off nozzles, toilet leak detecting dye, low-flow faucet aerators, and reusable water bottles.
9. Increase Water Waste Patrols	2	RMWD has an online form and also a hotline to report waste.
10. Moratorium or Net Zero on New Connections	3	Optional
11. Implement or Modify Drought Rate Structure or Surcharge	2	Level 2 Drought Rates have been in effect since the Governor's conservation order.

8.5 Determining Actual Water Use Reductions

To measure effectiveness of the water use reduction methods imposed, the District monitors customer sales and daily delivery system deliveries. All District customers are metered.

8.6 Revenue and Expenditure Impacts

The District's rate structure includes a combination of fixed meter charges and variable tiered volumetric rates. In addition, the rate structure includes automatic adjustments tied to implementation of the progressive stages of the District's drought response ordinance. In this manner, water rates and District revenues automatically adjust during drought restrictions to maintain revenues approximately equal to operating costs, such that the District suffers no adverse financial effects.

8.7 Catastrophic Supply Interruption

A catastrophic water shortage occurs when a disaster such as an earthquake results in insufficient available water to meet the region's needs or eliminates access to imported water supplies. The Water Authority's Emergency Response Plan (ERP) and the Emergency Storage Project (ESP) are designed to protect public health and safety and to prevent or limit economic damage that could occur from a severe shortage of water supplies.

Emergency Response Plan

The ERP covers concepts such as the authorities, policies, and procedures associated with emergency response activities, emergency staffing, management, and organization required to assist in mitigating any significant emergency or disaster, mutual aid agreements and covenants that outline the terms and conditions under which mutual aid assistance will be provided and Pre-emergency planning and emergency operations procedures. The ESP identifies and implements plans to acquire additional storage facilities. The ERP includes:

- Authorities, policies, and procedures associated with emergency response activities;
- Emergency Operations Center activities, including activation and deactivation guidelines;
- Multi-agency and multi-jurisdictional coordination, particularly between the Water Authority, its member agencies (including the District), and Metropolitan;
- Emergency staff, management, and organization required to assist in mitigating any significant emergency or disaster;
- Mutual Aid agreements and covenants that outline the terms and conditions under which mutual aid assistance will be provided; and
- Pre-emergency planning and emergency operations procedures.

Emergency Storage Project

The ESP is a system of reservoirs, pipelines, and other facilities that work together to store and move water around the county in the event of a natural disaster. The last phase of the project, which includes facilities necessary to serve the northern portions of RMWD, is expected to be completed by 2019. When completed, the ESP will provide the capacity to delivery at least 75% of normal peak summer demands throughout the Water Authority service area for a duration of two months, until repairs to the supply system can be implemented.

Additional information on the ESP is available for review on the Water Authority's website, at www.sdcwa.org/emergency-storage-project.

8.8 Minimum Supply Next Three Years

Agencies are required to estimate the minimum water supply available during each of the next three years, based on the driest three-year historic sequence, compared with a normal water year. To determine the minimum supplies potentially available to the region, SDCWA made the same assumptions contained in their multi dry-year analysis. **Table 8-4** presents the District minimum supply for the next three years and was estimated based on the SDCWA minimum supply for the next three years and the Water Shortage and Drought Response Plan allocation methodology. Based on current supply and storage conditions statewide, SDCWA is not currently forecasting this supply scenario.

Table 8-4: Minimum Supply Next Three Years

	2017	2018	2019
Available Supply (AF)	17,803	18,560	19,408

Notes: Based on Table 11-5 SDCWA 2015 UWMP and CWA Water Shortage and Drought Response Plan. Assumes minimum 15 percent reduction in TSAWR program deliveries.

9.0 Demand Management Measures

9.1 Overview – Conservation Best Management Practices

Demand Management Measures are programs and policies to conserve water. In the District service area, the District, SDCWA, and MWD together provide a comprehensive package of demand management programs and policies tailored to the needs of the District.

In California, urban water conservation has been studied, refined, and structured into Best Management Practices (BMPs) by the California Urban Water Conservation Council (CUWCC). As a member of CUWCC, the district has signed the CUWCC *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU). Under the terms of the MOU, the District has agreed to follow the BMPs defined by CUWCC, and to report biannually to CUWCC on the District’s compliance. The District’s most recent BMP report, for the two-year period ending 2014, is included in **Appendix H**. The report documents that the District, either individually or in cooperation with SDCWA and MWD, has implemented each of the BMPs in its service area and is in compliance with MOU.

The CUWCC Conservation BMPs, and the District’s compliance status, are summarized in **Table 9-1**.

Table 9-1. Water Conservation BMPs and District Compliance

Type	Category	BMP	Description	Conservation Programs	Compliance
Foundation	Operations Practices	1.1.1	Conservation Coordinator	Full-time Coordinator	Yes
		1.1.2	Water Waste Prevention	By Ordinance	Yes
		1.1.3	Wholesale Agency Assistance Programs	Education Programs (Public and School) (SDCWA and MWD)	Yes
		1.2	Water Loss Control (System Water Audits, Leak Detection and Repair)	Distribution System Auditing Program	Yes
		1.3	Metering with Commodity rates	Metered By Type	Yes
		1.4	Retail Conservation Pricing	By Ordinance	Yes
	Education Programs	2.1	Public Information Programs	Water Conservation Garden Newsletters , Website, Events	Yes
		2.2	School Education Programs	Classroom Kits Video Library Awards Programs	Yes
Programmatic	Residential	3.1	Residential Assistance Program (Plumbing Retrofit)	Showerhead Distribution	Yes
		3.2	Landscape Water Survey	Residential Survey Program Residential Weather-Based Irrigation Controller Program	Yes
		3.3	High-Efficiency Washing Machine Rebate Programs	Residential High-Efficiency Clothes Washer (HEW) Program	Yes
		3.4	WaterSense Spec. Toilets	Residential Voucher Program	Yes
	Commercial Industrial	4	Commercial, Industrial, Institutional (CII)	CII Voucher Program	Yes
	Landscape	5	Landscape	SDCWA program	Yes

10.0 Plan Adoption, Submittal, Implementation

This section contains information required by the Act documenting compliance with plan adoption, submittal, and implementation requirements.

Inclusion of all 2015 Data

The District’s 2015 UWMP includes water use and planning data for fiscal year 2015, July 1, 2014 through June 30, 2015.

Notice of Public Hearing

The District provided notice to each of the land use jurisdictions within its service area that is was updating its UWMP, and that it would hold a public hearing on May 24 to receive public comment on a draft of the plan. Notified entities are listed in **Table 10-1**.

Table 10-1: Notification to Cities and Counties

Entity	60 Day Notice of Preparation	Notice of Public Hearing
San Diego County	X	X
Vista	X	X
Oceanside	X	X

In addition, the District provided legal public notice of the May 24 public hearing via advertisement in the Village News and Daily Transcript newspapers beginning two weeks prior to the hearing. The notice indicated the time and place of the hearing as well as the location where the plan is available for public inspection. A copy of the notice is included in **Appendix C**.

Public Hearing and Adoption

The District held a public hearing to receive comment on the Draft 2015 UWMP. The hearing was held on May 24, 2016, at 1:00 p.m. at the District’s offices. Subsequently, on June 28 the District’s Board of Directors adopted the 2015 UWMP at its regular meeting of June 28, 2016. A copy of the adoption resolution is included in **Appendix C**.

Plan Submittal

The RMWD 2015 UWMP was submitted to DWR on June 30, 2016, in advance of the July 1 due date. The plan and associated data files were submitted using the DWR WUEdata online plan submittal tool. Plan copies will also be submitted to the County of San Diego, the City of Oceanside, the City of Vista, and to the California State Library³ within 30 days of plan adoption.

Public Availability

The adopted RMWD 2015 UWMP is available at <http://www.rainbowmwd.com/>.

³ California State Library / Government Publications Section
Attention: Coordinator, Urban Water Management Plans
P.O. Box 942837 / Sacramento, CA 94237-0001

Appendix A
Urban Water Management Plan Act Text

California Water Code Division 6, Part 2.6.

Chapter 1. General Declaration and Policy §10610-10610.4

Chapter 2. Definitions §10611-10617

Chapter 3. Urban Water Management Plans

Article 1. General Provisions §10620-10621

Article 2. Contents of Plans §10630-10634

Article 2.5. Water Service Reliability §10635

Article 3. Adoption And Implementation of Plans §10640-10645

Chapter 4. Miscellaneous Provisions §10650-10656

Chapter 1. General Declaration and Policy

SECTION 10610-10610.4

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

Chapter 2. Definitions

SECTION 10611-10617

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses,

reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

Chapter 3. Urban Water Management Plans

Article 1. General Provisions

SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).
- (b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.
- (2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that

share a common source, water management agencies, and relevant public agencies, to the extent practicable.

- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
 - (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.
10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero, except as provided in subdivision (d).
- (b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).
- (d) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

Article 2. Contents of Plan

SECTION 10630-10634

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.
10631. A plan shall be adopted in accordance with this chapter that shall do all of the following:
- (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.
 - (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of

water available to the supplier, all of the following information shall be included in the plan:

- (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.
 - (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.
 - (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
 - (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:
- (A) An average water year.
 - (B) A single-dry water year.
 - (C) Multiple-dry water years.
- (2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

- (d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.
- (e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:
 - (A) Single-family residential.
 - (B) Multifamily.
 - (C) Commercial.
 - (D) Industrial.
 - (E) Institutional and governmental.
 - (F) Landscape.
 - (G) Sales to other agencies.
 - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
 - (I) Agricultural.
 - (J) Distribution system water loss.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (3) (A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.
 - (B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.
- (4) (A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

- (B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:
 - (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.
 - (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.
- (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
 - (1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.
 - (B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:
 - (i) Water waste prevention ordinances.
 - (ii) Metering.
 - (iii) Conservation pricing.
 - (iv) Public education and outreach.
 - (v) Programs to assess and manage distribution system real loss.
 - (vi) Water conservation program coordination and staffing support.
 - (vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.
 - (2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.
- (g) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water

use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

- (h) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- (i) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.
- (j) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

- (b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan may, but is not required to, include any of the following information:

- (1) An estimate of the amount of energy used to extract or divert water supplies.
- (2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.
- (3) An estimate of the amount of energy used to treat water supplies.
- (4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.
- (5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.
- (6) An estimate of the amount of energy used to place water into or withdraw from storage.
- (7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has

submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

- (i) Compliance on an individual basis.
 - (ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.
- (B) The department may require additional information for any determination pursuant to this section.
- (3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.
- (c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).
 - (d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.
 - (e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

- (f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:
- (1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.
 - (2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
 - (3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
 - (4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
 - (5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are

appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

- (6) Penalties or charges for excessive use, where applicable.
 - (7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
 - (8) A draft water shortage contingency resolution or ordinance.
 - (9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.
- (b) Commencing with the urban water management plan update due July 1, 2016, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- (c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

- (e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- (f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Article 2.5. Water Service Reliability

SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.
- (b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.
- (c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

- (d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Article 3. Adoption and Implementation of Plans

SECTION 10640-10645

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.

After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644. (a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

- (b) (1) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part.

The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

- (2) A report to be submitted pursuant to paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

- (c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section 10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

- (2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

- (3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

Chapter 4. Miscellaneous Provisions

SECTION 10650-10656

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

- (a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

- (b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.
10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.
10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.
10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.
10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.
10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.
10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26

(commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

Appendix B
Sustainable Water Use and Demand Reduction (SB X7-7)

California Water Code Division 6, Part 2.55.

- Chapter 1. General Declarations and Policy §10608-10608.8**
- Chapter 2. Definitions §10608.12**
- Chapter 3. Urban Retail Water Suppliers §10608.16-10608.44**
- Chapter 4. Agricultural Water Suppliers §10608.48**
- Chapter 5. Sustainable Water Management §10608.50**
- Chapter 6 Standardized Data Collection §10608.52**
- Chapter 7 Funding Provisions §10608.56-10608.60**
- Chapter 8 Quantifying Agricultural Water Use Efficiency §10608.64**

Chapter 1. General Declarations and Policy

SECTION 10608-10608.8

10608. The Legislature finds and declares all of the following:

- (a) Water is a public resource that the California Constitution protects against waste and unreasonable use.
- (b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.
- (c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.
- (d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.
- (e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.
- (f) 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.
- (g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.
- (h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

- (i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

- (a) Require all water suppliers to increase the efficiency of use of this essential resource.
- (b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.
- (c) Measure increased efficiency of urban water use on a per capita basis.
- (d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.
- (e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.
- (f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.
- (g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.
- (h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.
- (i) Require implementation of specified efficient water management practices for agricultural water suppliers.
- (j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.
- (k) Advance regional water resources management.

- 10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.
- (2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to

January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

- (3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.
- (b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.
- (c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.
- (d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

Chapter 2 Definitions

SECTION 10608.12

10608.12. Unless the context otherwise requires, the following definitions govern the construction of this part:

- (a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.
- (b) "Base daily per capita water use" means any of the following:
 - (1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

- (2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
- (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.
- (c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.
- (d) "Commercial water user" means a water user that provides or distributes a product or service.
- (e) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.
- (f) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.
- (g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:
 - (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.
 - (2) The net volume of water that the urban retail water supplier places into long-term storage.
 - (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.
 - (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.
- (h) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.
- (i) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

- (j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.
- (k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.
- (l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.
- (m) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:
 - (1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:
 - (A) Metered.
 - (B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.
 - (C) Treated to a minimum tertiary level.
 - (D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.
 - (2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.
- (n) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:
 - (1) The capture and reuse of stormwater or rainwater.
 - (2) The use of recycled water.
 - (3) The desalination of brackish groundwater.

- (4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.
- (o) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.
- (p) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.
- (q) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.
- (r) "Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

Chapter 3 Urban Retail Water Suppliers

SECTION 10608.16-10608.44

10608.16.(a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

- (b) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

10608.20.(a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

- (2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

- (b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

- (1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

- (2) The per capita daily water use that is estimated using the sum of the following performance standards:

- (A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.
 - (B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.
 - (C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.
- (3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.
- (4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:
- (A) Consider climatic differences within the state.
 - (B) Consider population density differences within the state.
 - (C) Provide flexibility to communities and regions in meeting the targets.
 - (D) Consider different levels of per capita water use according to plant water needs in different regions.
 - (E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.
 - (F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.
- (c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method

described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

- (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
- (e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.
- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
- (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
 - (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.
 - (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
- (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.
- (i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with subdivision (l) of Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the

Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

- (j) (1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.
- (2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water supplier and urban retail water suppliers.

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph(3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

10608.24.(a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

(b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

(c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.

(d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in

paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

- (e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.
- (f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.
- (2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

10608.26.(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

- (1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.
 - (2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.
 - (3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.
- (b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.
 - (c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.
 - (d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit

an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

- (2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

10608.28.(a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

- (1) Through an urban wholesale water supplier.
- (2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).
- (3) Through a regional water management group as defined in Section 10537.
- (4) By an integrated regional water management funding area.
- (5) By hydrologic region.
- (6) Through other appropriate geographic scales for which computation methods have been developed by the department.

- (b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

10608.32. All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans

submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

10608.42.(a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.

(b) A report to be submitted pursuant to subdivision (a) shall be submitted in compliance with Section 9795 of the Government Code.

10608.43. The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

(a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.

(b) Evaluation of water demands for manufacturing processes, goods, and cooling.

(c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.

(d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.

(e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

10608.44. Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

Chapter 4 Agricultural Water Suppliers

SECTION 10608.48

10608.48.(a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

(b) Agricultural water suppliers shall implement all of the following critical efficient management practices:

(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

- (6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.
 - (7) Construct and operate supplier spill and tailwater recovery systems.
 - (8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.
 - (9) Automate canal control structures.
 - (10) Facilitate or promote customer pump testing and evaluation.
 - (11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.
 - (12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:
 - (A) On-farm irrigation and drainage system evaluations.
 - (B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.
 - (C) Surface water, groundwater, and drainage water quantity and quality data.
 - (D) Agricultural water management educational programs and materials for farmers, staff, and the public.
 - (13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.
 - (14) Evaluate and improve the efficiencies of the supplier's pumps.
- (d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.
 - (e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.
 - (f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.

- (g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.
- (h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.
- (i) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).
 - (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

Chapter 5 Sustainable Water Management

Section 10608.50

- 10608.50.(a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:
- (1) Revisions to the requirements for urban and agricultural water management plans.
 - (2) Revisions to the requirements for integrated regional water management plans.
 - (3) Revisions to the eligibility for state water management grants and loans.

- (4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.
 - (5) Increased funding for research, feasibility studies, and project construction.
 - (6) Expanding technical and educational support for local land use and water management agencies.
- (b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

Chapter 6 Standardized Data Collection

SECTION 10608.52

- 10608.52.(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.
- (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

Chapter 7 Funding Provisions

Section 10608.56-10608.60

- 10608.56.(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.
- (b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

- (c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.
- (d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.
- (e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.
- (f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

10608.60.(a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

- (b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

Chapter 8 Quantifying Agricultural Water Use Efficiency

SECTION 10608.64

10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

Appendix C
Adoption Resolution and Related Documentation

RESOLUTION NO 16-13

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE
RAINBOW MUNICIPAL WATER DISTRICT
ADOPTING URBAN WATER MANAGEMENT PLAN**

WHEREAS the Urban Water Management Planning Act (Water Code section 10620 – 10644) requires every urban water supplier as defined in the act to prepare and adopt an urban water management plan and revise this plan at least once every five (5) years (Water Code 10621); and

WHEREAS Rainbow Municipal Water District is an urban water supplier within the meaning of the act; and

WHEREAS the District has prepared its 2015 Urban Water Management Plan, made the plan available for public inspection, and held a public hearing thereon following publication within the jurisdiction of the District of a notice of the time and place of the hearing pursuant to section 6066 of the government Code; and

WHEREAS it is in the interest of the District to adopt a revised water management plan;

NOW THEREFORE BE IT RESOLVED DETERMINED AND ORDERED by the Board of Directors of the Rainbow Municipal Water District as follows:

1. That the URBAN WATER MANAGEMENT PLAN FOR RAINBOW MUNICIPAL WATER DISTRICT, a copy of which is on file with the District be approved and adopted as the plan required by the Urban Water Management Planning Act.
2. That the District shall implement it's updated plan.
3. That the Secretary of the District is authorized and directed to file with the Department of Water Resources of the State of California a copy of the District's updated plan by July 1, 2016.

PASSED AND ADOPTED at an adjourned regular meeting of the Board of Directors of the Rainbow Municipal Water District held on June 28, 2016 by the following votes, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary

RAINBOW MUNICIPAL WATER DISTRICT
NOTICE OF PUBLIC HEARING
Tuesday, May 24, 2016

The Board of Directors of Rainbow Municipal Water District will hold a Public Hearing on Tuesday, May 24, 2016, at 1:00 p.m. at the office of the District, 3707 Old Highway 395, Fallbrook, California 92028 for the purpose of considering the adoption and implementation of RMWD's 2015 Urban Water Management Plan, as required by the California Water Code.

Copies of the plan shall be available for public review at the office of the District during normal business hours or on the website at www.rainbowmwd.com.

Any person may present oral or written comments in connection with the proposed action at the Public Hearing. Written comments may also be filed with the Secretary of the Board at 3707 Old Highway 395, Fallbrook, CA 92028. All comments must be received before the close of the Public Hearing.

/s/Dawn Washburn
Secretary of the Board
Rainbow Municipal Water District

THE DAILY TRANSCRIPT

This space for filing stamp only

2652 4TH AVE 2ND FL, SAN DIEGO, CA 92103
Telephone (619) 232-3486 / Fax (619) 270-2503

DELIA A. RUBIO
RAINBOW MUNICIPAL WATER DISTRICT
3707 OLD HIGHWAY 395
FALLBROOK, CA - 92028

SD#: 2878235

RAINBOW MUNICIPAL WATER DISTRICT

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/s/ Dawn Washburn, Secretary of the Board Rainbow Municipal Water District
5/10, 5/17/16

SD-2878235#

PROOF OF PUBLICATION

(2015.5 C.C.P.)

State of California)
County of SAN DIEGO) ss

Notice Type: HRG - NOTICE OF HEARING

Ad Description:

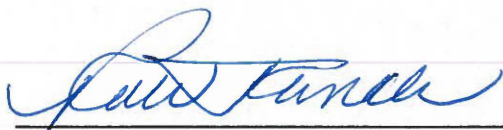
NOTICE OF PUBLIC HEARING Tuesday, May 24, 2016

I am a citizen of the United States and a resident of the State of California; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer and publisher of THE DAILY TRANSCRIPT, a newspaper published in the English language in the city of SAN DIEGO, and adjudged a newspaper of general circulation as defined by the laws of the State of California by the Superior Court of the County of SAN DIEGO, State of California, under date of 05/13/2003, Case No. GIC808715. That the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

05/10/2016, 05/17/2016

Executed on: 05/17/2016
At Los Angeles, California

I certify (or declare) under penalty of perjury that the foregoing is true and correct.



Signature



Appendix D
AWWA Water Audit Worksheet



AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: **Rainbow Municipal Water District**
Reporting Year: **2015** / 1/2015 - 12/2015

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Volume from own sources: + ? n/a [] acre-ft/yr
Water imported: + ? 10 [17,867.800] acre-ft/yr
Water exported: + ? n/a [] acre-ft/yr

Master Meter and Supply Error Adjustments

Pcnt: [+ ?] Value: [] acre-ft/yr
[+ ? 9] [0.50%] [● ○] [] acre-ft/yr
[+ ?] [] [● ○] [] acre-ft/yr

WATER SUPPLIED: [?] **17,778.905** acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Billed metered: + ? 7 [16,402.810] acre-ft/yr
Billed unmetered: + ? [] acre-ft/yr
Unbilled metered: + ? 4 [1.000] acre-ft/yr
Unbilled unmetered: + ? [222.236] acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: [?] **16,626.046** acre-ft/yr

Click here: [?]
for help using option buttons below

Pcnt: [1.25%] [● ○] Value: [] acre-ft/yr

Use buttons to select percentage of water supplied OR value

Pcnt: [0.25%] [● ○] Value: [] acre-ft/yr

[5.00%] [● ○] Value: [] acre-ft/yr
[0.25%] [● ○] Value: [] acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

1,152.859 acre-ft/yr

Apparent Losses

Unauthorized consumption: + ? [44.447] acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: + ? 6 [863.358] acre-ft/yr
Systematic data handling errors: + ? [41.007] acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: [?] **948.813** acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: [?] **204.046** acre-ft/yr

WATER LOSSES: **1,152.859** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: [?] **1,376.095** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: + ? 7 [315.0] miles
Number of active AND inactive service connections: + ? 9 [7,839]
Service connection density: [?] [25] conn./mile main

Are customer meters typically located at the curbside or property line? [Yes]

Average length of customer service line: + ? [] (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 3 [175.0] psi

COST DATA

Total annual cost of operating water system: + ? 9 [\$38,367,342] \$/Year
Customer retail unit cost (applied to Apparent Losses): + ? 10 [\$3.41] \$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses): + ? 10 [\$1,450.00] \$/acre-ft Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 81 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

- 1: Unbilled metered
- 2: Billed metered
- 3: Customer metering inaccuracies

AWWA Free Water Audit Software:
System Attributes and Performance Indicators

WAS v5.0

American Water Works Association.
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Water Audit Report for: Rainbow Municipal Water District
Reporting Year: 2015 1/2015 - 12/2015

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 81 out of 100 ***

System Attributes:

Table with 3 columns: Metric, Value, Unit. Rows include Apparent Losses (948.813 acre-ft/yr), Real Losses (204.046 acre-ft/yr), Water Losses (1,152.859 acre-ft/yr), Unavoidable Annual Real Losses (UARL) (564.55 acre-ft/yr), Annual cost of Apparent Losses (\$1,409,363), and Annual cost of Real Losses (\$303,090).

Valued at Customer Retail Unit Cost
Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial indicators table with 3 columns: Metric, Value, Unit. Rows include Non-revenue water as percent by volume of Water Supplied (7.7%) and Non-revenue water as percent by cost of operating system (5.3%).

Operational Efficiency indicators table with 3 columns: Metric, Value, Unit. Rows include Apparent Losses per service connection per day (108.06 gallons/connection/day), Real Losses per service connection per day (N/A), Real Losses per length of main per day* (578.29 gallons/mile/day), and Real Losses per service connection per day per psi pressure (N/A).

Summary indicators table with 3 columns: Metric, Value, Unit. Rows include From Above, Real Losses = Current Annual Real Losses (CARL) (204.05 acre-feet/year) and Infrastructure Leakage Index (ILI) [CARL/UARL] (0.36).

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline

AWWA Free Water Audit Software: Water Balance

WAS v5.0

American Water Works Association.

Water Audit Report for:	Rainbow Municipal Water District	
Reporting Year:	2015	1/2015 - 12/2015
Data Validity Score:	81	

Own Sources (Adjusted for known errors)	System Input	Water Exported	Billed Water Exported				Revenue Water
		0.000	Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption (water exported is removed)	Billed Unmetered Consumption	0.000
0.000	17,778.905	Water Supplied 17,778.905	16,626.046	16,402.810	16,402.810	0.000	16,402.810
			Water Losses	Unbilled Authorized Consumption	Unbilled Metered Consumption	Unbilled Unmetered Consumption	Non-Revenue Water (NRW)
			1,152.859	223.236	1.000	222.236	1,376.095
				Apparent Losses	Unauthorized Consumption	44.447	
				948.813	Customer Metering Inaccuracies	863.358	
					Systematic Data Handling Errors	41.007	
Water Imported				Real Losses	Leakage on Transmission and/or Distribution Mains	Not broken down	
17,778.905				204.046	Leakage and Overflows at Utility's Storage Tanks	Not broken down	
					Leakage on Service Connections	Not broken down	



AWWA Free Water Audit Software:
Dashboard

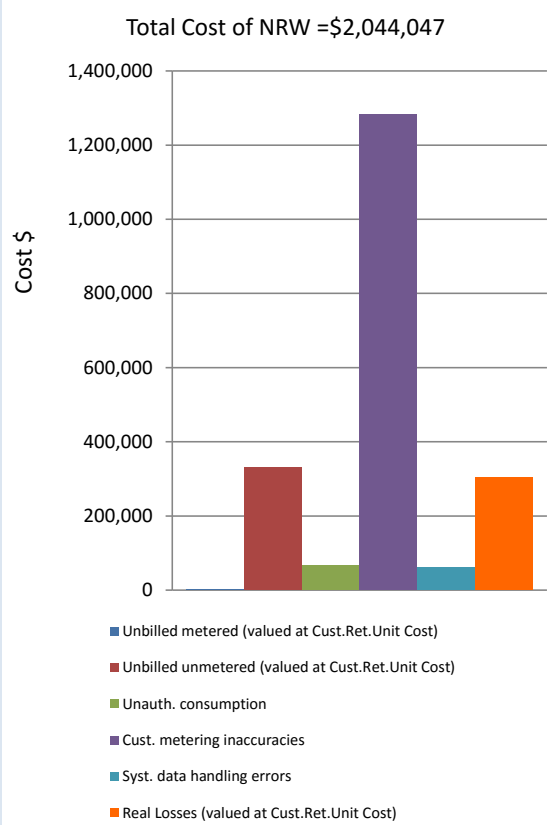
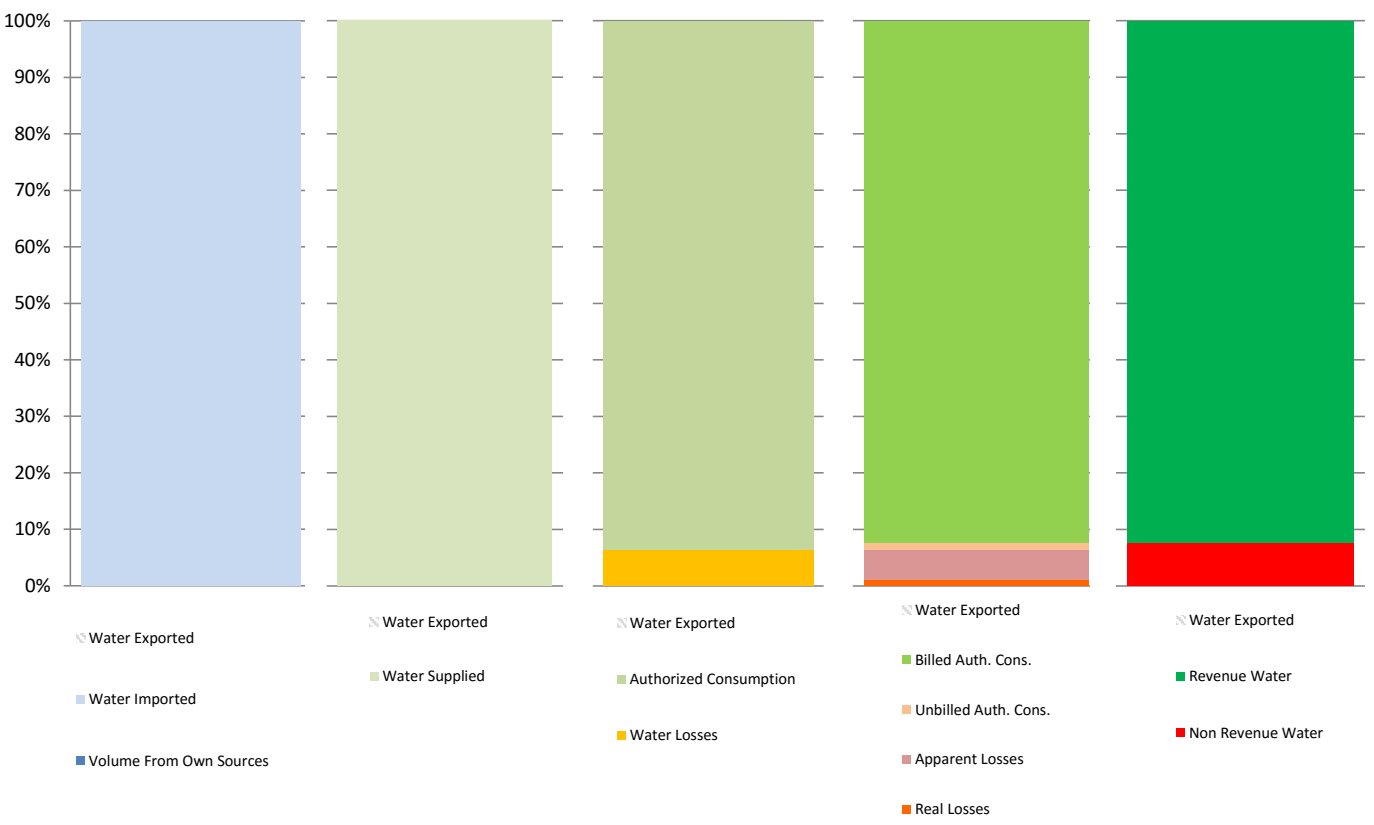
WAS v5.0
American Water Works Association.
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The graphic below is a visual representation of the Water Balance with bar heights proportional to the volume of the audit components

Water Audit Report for: **Rainbow Municipal Water District**

Reporting Year:	2015	1/2015 - 12/2015
Data Validity Score:	81	

- Show me the VOLUME of Non-Revenue Water
- Show me the COST of Non-Revenue Water



AWWA Free Water Audit Software: Grading Matrix

WAS 5.0

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The grading assigned to each audit component and the corresponding recommended improvements and actions are highlighted in yellow. Audit accuracy is likely to be improved by prioritizing those items shown in red

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
WATER SUPPLIED											
Volume from own sources:	Select this grading only if the water utility purchases/imports all of its water resources (i.e. has no sources of its own)	Less than 25% of water production sources are metered, remaining sources are estimated. No regular meter accuracy testing or electronic calibration conducted.	25% - 50% of treated water production sources are metered; other sources estimated. No regular meter accuracy testing or electronic calibration conducted.	Conditions between 2 and 4	50% - 75% of treated water production sources are metered, other sources estimated. Occasional meter accuracy testing or electronic calibration conducted.	Conditions between 4 and 6	At least 75% of treated water production sources are metered, or at least 90% of the source flow is derived from metered sources. Meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually, with less than 10% found outside of +/- 3% accuracy. Procedures are reviewed by a third party knowledgeable in the M36 methodology.
Improvements to attain higher data grading for "Volume from own Sources" component:		<u>to qualify for 2:</u> Organize and launch efforts to collect data for determining volume from own sources	<u>to qualify for 4:</u> Locate all water production sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered water production sources and replace any obsolete/defective meters.		<u>to qualify for 6:</u> Formalize annual meter accuracy testing for all source meters; specify the frequency of testing. Complete installation of meters on unmetered water production sources and complete replacement of all obsolete/defective meters.		<u>to qualify for 8:</u> Conduct annual meter accuracy testing and calibration of related instrumentation on all meter installations on a regular basis. Complete project to install new, or replace defective existing, meters so that entire production meter population is metered. Repair or replace meters outside of +/- 6% accuracy.		<u>to qualify for 10:</u> Maintain annual meter accuracy testing and calibration of related instrumentation for all meter installations. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to further improve meter accuracy.		<u>to maintain 10:</u> Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/plot improving metering technology.
Volume from own sources master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its sources of supply	Inventory information on meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined	No automatic datalogging of production volumes; daily readings are scribed on paper records without any accountability controls. Flows are not balanced across the water distribution system; tank/storage elevation changes are not employed in calculating the "Volume from own sources" component and archived flow data is adjusted only when grossly evident data error occurs.	Conditions between 2 and 4	Production meter data is logged automatically in electronic format and reviewed on at least a monthly basis with necessary corrections implemented. "Volume from own sources" tabulations include estimate of daily changes in tanks/storage facilities. Meter data is adjusted when gross data errors occur, or occasional meter testing deems this necessary.	Conditions between 4 and 6	Hourly production meter data logged automatically & reviewed on at least a weekly basis. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected, and/or error is confirmed by meter accuracy testing. Tank/storage facility elevation changes are automatically used in calculating a balanced "Volume from own sources" component, and data gaps in the archived data are corrected on at least a weekly basis.	Conditions between 6 and 8	Continuous production meter data is logged automatically & reviewed each business day. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Tank/storage facility elevation changes are automatically used in "Volume from own sources" tabulations and data gaps in the archived data are corrected on a daily basis.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically balances flows from all sources and storages; results are reviewed each business day. Tight accountability controls ensure that all data gaps that occur in the archived flow data are quickly detected and corrected. Regular calibrations between SCADA and sources meters ensures minimal data transfer error.
Improvements to attain higher data grading for "Master meter and supply error adjustment" component:		<u>to qualify for 2:</u> Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature.	<u>to qualify for 4:</u> Install automatic datalogging equipment on production meters. Complete installation of level instrumentation at all tanks/storage facilities and include tank level data in automatic calculation routine in a computerized system. Construct a computerized listing or spreadsheet to archive input volumes, tank/storage volume changes and import/export flows in order to determine the composite "Water Supplied" volume for the distribution system. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps.		<u>to qualify for 6:</u> Refine computerized data collection and archive to include hourly production meter data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Use daily net storage change to balance flows in calculating "Water Supplied" volume. Necessary corrections to data errors are implemented on a weekly basis.		<u>to qualify for 8:</u> Ensure that all flow data is collected and archived on at least an hourly basis. All data is reviewed and detected errors corrected each business day. Tank/storage levels variations are employed in calculating balanced "Water Supplied" component. Adjust production meter data for gross error and inaccuracy confirmed by testing.		<u>to qualify for 10:</u> Link all production and tank/storage facility elevation change data to a Supervisory Control & Data Acquisition (SCADA) System, or similar computerized monitoring/control system, and establish automatic flow balancing algorithm and regularly calibrate between SCADA and source meters. Data is reviewed and corrected each business day.		<u>to maintain 10:</u> Monitor meter innovations for development of more accurate and less expensive flowmeters. Continue to replace or repair meters as they perform outside of desired accuracy limits. Stay abreast of new and more accurate water level instruments to better record tank/storage levels and archive the variations in storage volume. Keep current with SCADA and data management systems to ensure that archived data is well-managed and error free.
Water Imported:	Select n/a if the water utility's supply is exclusively from its own water resources (no bulk purchased/imported water)	Less than 25% of imported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of imported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of imported water sources are metered, other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of imported water sources are metered, meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually for all meter installations. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
<p>Improvements to attain higher data grading for "Water Imported Volume" component:</p> <p><i>(Note: usually the water supplier selling the water - "the Exporter" - to the utility being audited is responsible to maintain the metering installation measuring the imported volume. The utility should coordinate carefully with the Exporter to ensure that adequate meter upkeep takes place and an accurate measure of the Water Imported volume is quantified.)</i></p>		<p><u>to qualify for 2:</u> Review bulk water purchase agreements with partner suppliers; confirm requirements for use and maintenance of accurate metering. Identify needs for new or replacement meters with goal to meter all imported water sources.</p>	<p><u>To qualify for 4:</u> Locate all imported water sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered imported water interconnections and replace obsolete/defective meters.</p>		<p><u>to qualify for 6:</u> Formalize annual meter accuracy testing for all imported water meters, planning for both regular meter accuracy testing and calibration of the related instrumentation. Continue installation of meters on unmetered imported water interconnections and replacement of obsolete/defective meters.</p>		<p><u>to qualify for 8:</u> Complete project to install new, or replace defective, meters on all imported water interconnections. Maintain annual meter accuracy testing for all imported water meters and conduct calibration of related instrumentation at least annually. Repair or replace meters outside of +/- 6% accuracy.</p>		<p><u>to qualify for 10:</u> Conduct meter accuracy testing for all meters on a semi-annual basis, along with calibration of all related instrumentation. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.</p>		<p><u>to maintain 10:</u> Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Continue to conduct calibration of related instrumentation on a semi-annual basis. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.</p>
Water imported master meter and supply error adjustment:	Select n/a if the Imported water supply is unmetered, with Imported water quantities estimated on the billing invoices sent by the Exporter to the purchasing Utility.	Inventory information on imported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined. Written agreement(s) with water Exporter(s) are missing or written in vague language concerning meter management and testing.	No automatic datalogging of imported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Imported supply metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis by the Exporter with necessary corrections implemented. Meter data is adjusted by the Exporter when gross data errors are detected. A coherent data trail exists for this process to protect both the selling and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly imported supply metered data is logged automatically & reviewed on at least a weekly basis by the Exporter. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error confirmed by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling and the purchasing Utility.	Conditions between 6 and 8	Continuous Imported supply metered flow data is logged automatically & reviewed each business day by the Exporter. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the Exporter. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling and purchasing Utility at least once every five years.
Improvements to attain higher data grading for "Water imported master meter and supply error adjustment" component:		<p><u>to qualify for 2:</u> Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the selling and purchasing Utility.</p>	<p><u>to qualify for 4:</u> Install automatic datalogging equipment on Imported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the Exporters to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.</p>		<p><u>to qualify for 6:</u> Refine computerized data collection and archive to include hourly Imported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.</p>		<p><u>to qualify for 8:</u> Ensure that all Imported supply metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.</p>		<p><u>to qualify for 10:</u> Conduct accountability checks to confirm that all Imported supply metered data is reviewed and corrected each business day by the Exporter. Results of all meter accuracy tests and data corrections should be available for sharing between the Exporter and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreement between the selling and the purchasing Utility; at least every five years.</p>		<p><u>to maintain 10:</u> Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the Exporter to help identify meter replacement needs. Keep communication lines with Exporters open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.</p>
Water Exported:	Select n/a if the water utility sells no bulk water to neighboring water utilities (no exported water sales)	Less than 25% of exported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of exported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of exported water sources are metered, other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of exported water sources are metered, meter accuracy testing and/or electronic calibration conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.
<p>Improvements to attain higher data grading for "Water Exported Volume" component:</p> <p><i>(Note: usually, if the water utility being audited sells (Exports) water to a neighboring purchasing Utility, it is the responsibility of the utility exporting the water to maintain the metering installation measuring the Exported volume. The utility exporting the water should ensure that adequate meter upkeep takes place and an accurate measure of the Water Exported volume is quantified.)</i></p>		<p><u>to qualify for 2:</u> Review bulk water sales agreements with purchasing utilities; confirm requirements for use & upkeep of accurate metering. Identify needs to install new, or replace defective meters as needed.</p>	<p><u>To qualify for 4:</u> Locate all exported water sources on maps and in field, launch meter accuracy testing for existing meters, begin to install meters on unmetered exported water interconnections and replace obsolete/defective meters</p>		<p><u>to qualify for 6:</u> Formalize annual meter accuracy testing for all exported water meters. Continue installation of meters on unmetered exported water interconnections and replacement of obsolete/defective meters.</p>		<p><u>to qualify for 8:</u> Complete project to install new, or replace defective, meters on all exported water interconnections. Maintain annual meter accuracy testing for all exported water meters. Repair or replace meters outside of +/- 6% accuracy.</p>		<p><u>to qualify for 10:</u> Maintain annual meter accuracy testing for all meters. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.</p>		<p><u>to maintain 10:</u> Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.</p>

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Water exported master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its exported supply interconnections.	Inventory information on exported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined. Written agreement(s) with the utility purchasing the water are missing or written in vague language concerning meter management and testing.	No automatic datalogging of exported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Exported metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis, with necessary corrections implemented. Meter data is adjusted by the utility selling (exporting) the water when gross data errors are detected. A coherent data trail exists for this process to protect both the utility exporting the water and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly exported supply metered data is logged automatically & reviewed on at least a weekly basis by the utility selling the water. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error found by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling (exporting) utility and the purchasing Utility.	Conditions between 6 and 8	Continuous exported supply metered flow data is logged automatically & reviewed each business day by the utility selling (exporting) the water. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and any error confirmed by meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling (exporting) Utility and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the utility selling (exporting) the water. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling Utility and purchasing Utility at least once every five years.
Improvements to attain higher data grading for "Water exported master meter and supply error adjustment" component:		<u>to qualify for 2:</u> Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the utility selling (exporting) the water and the purchasing Utility.	<u>to qualify for 4:</u> Install automatic datalogging equipment on exported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the purchasing utilities to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.		<u>to qualify for 6:</u> Refine computerized data collection and archive to include hourly exported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.		<u>to qualify for 8:</u> Ensure that all exported metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.		<u>to qualify for 10:</u> Conduct accountability checks to confirm that all exported metered flow data is reviewed and corrected each business day by the utility selling the water. Results of all meter accuracy tests and data corrections should be available for sharing between the utility and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreements with the purchasing utilities; at least every five years.		<u>to maintain 10:</u> Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the purchasing utilities to help identify meter replacement needs. Keep communication lines with the purchasing utilities open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.
AUTHORIZED CONSUMPTION											
Billed metered:	n/a (not applicable). Select n/a only if the entire customer population is not metered and is billed for water service on a flat or fixed rate basis. In such a case the volume entered must be zero.	Less than 50% of customers with volume-based billings from meter readings; flat or fixed rate billing exists for the majority of the customer population	At least 50% of customers with volume-based billing from meter reads; flat rate billing for others. Manual meter reading is conducted, with less than 50% meter read success rate, remaining accounts' consumption is estimated. Limited meter records, no regular meter testing or replacement. Billing data maintained on paper records, with no auditing.	Conditions between 2 and 4	At least 75% of customers with volume-based, billing from meter reads; flat or fixed rate billing for remaining accounts. Manual meter reading is conducted with at least 50% meter read success rate; consumption for accounts with failed reads is estimated. Purchase records verify age of customer meters; only very limited meter accuracy testing is conducted. Customer meters are replaced only upon complete failure. Computerized billing records exist, but only sporadic internal auditing conducted.	Conditions between 4 and 6	At least 90% of customers with volume-based billing from meter reads; consumption for remaining accounts is estimated. Manual customer meter reading gives at least 80% customer meter reading success rate; consumption for accounts with failed reads is estimated. Good customer meter records exist, but only limited meter accuracy testing is conducted. Regular replacement is conducted for the oldest meters. Computerized billing records exist with annual auditing of summary statistics conducting by utility personnel.	Conditions between 6 and 8	At least 97% of customers exist with volume-based billing from meter reads. At least 90% customer meter reading success rate; or at least 80% read success rate with planning and budgeting for trials of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) in one or more pilot areas. Good customer meter records. Regular meter accuracy testing guides replacement of statistically significant number of meters each year. Routine auditing of computerized billing records for global and detailed statistics occurs annually by utility personnel, and is verified by third party at least once every five years.	Conditions between 8 and 10	At least 99% of customers exist with volume-based billing from meter reads. At least 95% customer meter reading success rate; or minimum 80% meter reading success rate, with Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) trials underway. Statistically significant customer meter testing and replacement program in place on a continuous basis. Computerized billing with routine, detailed auditing, including field investigation of representative sample of accounts undertaken annually by utility personnel. Audit is conducted by third party auditors at least once every three years.
Improvements to attain higher data grading for "Billed Metered Consumption" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	<u>to qualify for 2:</u> Conduct investigations or trials of customer meters to select appropriate meter models. Budget funding for meter installations. Investigate volume based water rate structures.	<u>to qualify for 4:</u> Purchase and install meters on unmetered accounts. Implement policies to improve meter reading success. Catalog meter information during meter read visits to identify age/model of existing meters. Test a minimal number of meters for accuracy. Install computerized billing system.		<u>to qualify for 6:</u> Purchase and install meters on unmetered accounts. Eliminate flat fee billing and establish appropriate water rate structure based upon measured consumption. Continue to achieve verifiable success in removing manual meter reading barriers. Expand meter accuracy testing. Launch regular meter replacement program. Launch a program of annual auditing of global billing statistics by utility personnel.		<u>to qualify for 8:</u> Purchase and install meters on unmetered accounts. If customer meter reading success rate is less than 97%, assess cost-effectiveness of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system for portion or entire system; or otherwise achieve ongoing improvements in manual meter reading success rate to 97% or higher. Refine meter accuracy testing program. Set meter replacement goals based upon accuracy test results. Implement annual auditing of detailed billing records by utility personnel and implement third party auditing at least once every five years.		<u>to qualify for 10:</u> Purchase and install meters on unmetered accounts. Launch Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system trials if manual meter reading success rate of at least 99% is not achieved within a five-year program. Continue meter accuracy testing program. Conduct planning and budgeting for large scale meter replacement based upon meter life cycle analysis using cumulative flow target. Continue annual detailed billing data auditing by utility personnel and conduct third party auditing at least once every three years.		<u>to maintain 10:</u> Continue annual internal billing data auditing, and third party auditing at least every three years. Continue customer meter accuracy testing to ensure that accurate customer meter readings are obtained and entered as the basis for volume based billing. Stay abreast of improvements in Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) and information management. Plan and budget for justified upgrades in metering, meter reading and billing data management to maintain very high accuracy in customer metering and billing.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Billed unmetered:	Select n/a if it is the policy of the water utility to meter all customer connections and it has been confirmed by detailed auditing that all customers do indeed have a water meter, i.e. no intentionally unmetered accounts exist	Water utility policy does <u>not</u> require customer metering; flat or fixed fee billing is employed. No data is collected on customer consumption. The only estimates of customer population consumption available are derived from data estimation methods using average fixture count multiplied by number of connections, or similar approach.	Water utility policy does <u>not</u> require customer metering; flat or fixed fee billing is employed. Some metered accounts exist in parts of the system (pilot areas or District Metered Areas) with consumption read periodically or recorded on portable dataloggers over one, three, or seven day periods. Data from these sample meters are used to infer consumption for the total customer population. Site specific estimation methods are used for unusual buildings/water uses.	Conditions between 2 and 4	Water utility policy <u>does</u> require metering and volume based billing in general. However, a liberal amount of exemptions and a lack of clearly written and communicated procedures result in up to 20% of billed accounts believed to be unmetered by exemption; or the water utility is in transition to becoming fully metered, and a large number of customers remain unmetered. A rough estimate of the annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 4 and 6	Water utility policy <u>does</u> require metering and volume based billing but established exemptions exist for a portion of accounts such as municipal buildings. As many as 15% of billed accounts are unmetered due to this exemption or meter installation difficulties. Only a group estimate of annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 6 and 8	Water utility policy <u>does</u> require metering and volume based billing for all customer accounts. However, less than 5% of billed accounts remain unmetered because meter installation is hindered by unusual circumstances. The goal is to minimize the number of unmetered accounts. Reliable estimates of consumption are obtained for these unmetered accounts via site specific estimation methods.	Conditions between 8 and 10	Water utility policy <u>does</u> require metering and volume based billing for all customer accounts. Less than 2% of billed accounts are unmetered and exist because meter installation is hindered by unusual circumstances. The goal exists to minimize the number of unmetered accounts to the extent that is economical. Reliable estimates of consumption are obtained at these accounts via site specific estimation methods.
Improvements to attain higher data grading for "Billed Unmetered Consumption" component:		<u>to qualify for 2:</u> Conduct research and evaluate cost/benefit of a new water utility policy to require metering of the customer population; thereby greatly reducing or eliminating unmetered accounts. Conduct pilot metering project by installing water meters in small sample of customer accounts and periodically reading the meters or datalogging the water consumption over one, three, or seven day periods.	<u>to qualify for 4:</u> Implement a new water utility policy requiring customer metering. Launch or expand pilot metering study to include several different meter types, which will provide data for economic assessment of full scale metering options. Assess sites with access difficulties to devise means to obtain water consumption volumes. Begin customer meter installation.		<u>to qualify for 6:</u> Refine policy and procedures to improve customer metering participation for all but solidly exempt accounts. Assign staff resources to review billing records to identify errant unmetered properties. Specify metering needs and funding requirements to install sufficient meters to significant reduce the number of unmetered accounts		<u>to qualify for 8:</u> Push to install customer meters on a full scale basis. Refine metering policy and procedures to ensure that all accounts, including municipal properties, are designated for meters. Plan special efforts to address "hard-to-access" accounts. Implement procedures to obtain a reliable consumption estimate for the remaining few unmetered accounts awaiting meter installation.		<u>to qualify for 10:</u> Continue customer meter installation throughout the service area, with a goal to minimize unmetered accounts. Sustain the effort to investigate accounts with access difficulties, and devise means to install water meters or otherwise measure water consumption.		<u>to maintain 10:</u> Continue to refine estimation methods for unmetered consumption and explore means to establish metering, for as many billed remaining unmetered accounts as is economically feasible.
Unbilled metered:	select n/a if all billing-exempt consumption is unmetered.	Billing practices exempt certain accounts, such as municipal buildings, but written policies do not exist; and a reliable count of unbilled metered accounts is unavailable. Meter upkeep and meter reading on these accounts is rare and not considered a priority. Due to poor recordkeeping and lack of auditing, water consumption for all such accounts is purely guesstimated.	Billing practices exempt certain accounts, such as municipal buildings, but only scattered, dated written directives exist to justify this practice. A reliable count of unbilled metered accounts is unavailable. Sporadic meter replacement and meter reading occurs on an as-needed basis. The total annual water consumption for all unbilled, metered accounts is estimated based upon approximating the number of accounts and assigning consumption from actively billed accounts of same meter size.	Conditions between 2 and 4	Dated written procedures permit billing exemption for specific accounts, such as municipal properties, but are unclear regarding certain other types of accounts. Meter reading is given low priority and is sporadic. Consumption is quantified from meter readings where available. The total number of unbilled, unmetered accounts must be estimated along with consumption volumes.	Conditions between 4 and 6	Written policies regarding billing exemptions exist but adherence in practice is questionable. Metering and meter reading for municipal buildings is reliable but sporadic for other unbilled metered accounts. Periodic auditing of such accounts is conducted. Water consumption is quantified directly from meter readings where available, but the majority of the consumption is estimated.	Conditions between 6 and 8	Written policy identifies the types of accounts granted a billing exemption. Customer meter management and meter reading are considered secondary priorities, but meter reading is conducted at least annually to obtain consumption volumes for the annual water audit. High level auditing of billing records ensures that a reliable census of such accounts exists.	Conditions between 8 and 10	Clearly written policy identifies the types of accounts given a billing exemption, with emphasis on keeping such accounts to a minimum. Customer meter management and meter reading for these accounts is given proper priority and is reliably conducted. Regular auditing confirms this. Total water consumption for these accounts is taken from reliable readings from accurate meters.
Improvements to attain higher data grading for "Unbilled Metered Consumption" component:		<u>to qualify for 2:</u> Reassess the water utility's policy allowing certain accounts to be granted a billing exemption. Draft an outline of a new written policy for billing exemptions, with clear justification as to why any accounts should be exempt from billing, and with the intention to keep the number of such accounts to a minimum.	<u>to qualify for 4:</u> Review historic written directives and policy documents allowing certain accounts to be billing-exempt. Draft an outline of a written policy for billing exemptions, identify criteria that grants an exemption, with a goal of keeping the number of accounts to a minimum. Consider increasing the priority of reading meters on unbilled accounts at least annually.		<u>to qualify for 6:</u> Draft a new written policy regarding billing exemptions based upon consensus criteria allowing this occurrence. Assign resources to audit meter records and billing records to obtain census of unbilled metered accounts. Gradually include a greater number of these metered accounts to the routes for regular meter reading.		<u>to qualify for 8:</u> Communicate billing exemption policy throughout the organization and implement procedures that ensure proper account management. Conduct inspections of accounts confirmed in unbilled metered status and verify that accurate meters exist and are scheduled for routine meter readings. Gradually increase the number of unbilled metered accounts that are included in regular meter reading routes.		<u>to qualify for 10:</u> Ensure that meter management (meter accuracy testing, meter replacement) and meter reading activities for unbilled accounts are accorded the same priority as billed accounts. Establish ongoing annual auditing process to ensure that water consumption is reliably collected and provided to the annual water audit process.		<u>to maintain 10:</u> Reassess the utility's philosophy in allowing any water uses to go "unbilled". It is possible to bill all accounts, even if the fee charged for water consumption is discounted or waived. Metering and billing all accounts ensures that water consumption is tracked and water waste from plumbing leaks is detected and minimized.
Unbilled unmetered:		Extent of unbilled, unmetered consumption is unknown due to unclear policies and poor recordkeeping. Total consumption is quantified based upon a purely subjective estimate.	Clear extent of unbilled, unmetered consumption is unknown, but a number of events are randomly documented each year, confirming existence of such consumption, but without sufficient documentation to quantify an accurate estimate of the annual volume consumed.	Conditions between 2 and 4	Extent of unbilled, unmetered consumption is partially known, and procedures exist to document certain events such as miscellaneous fire hydrant uses. Formulae is used to quantify the consumption from such events (time running multiplied by typical flowrate, multiplied by number of events).	Default value of 1.25% of system input volume is employed	Coherent policies exist for some forms of unbilled, unmetered consumption but others await closer evaluation. Reasonable recordkeeping for the managed uses exists and allows for annual volumes to be quantified by inference, but unsupervised uses are guesstimated.	Conditions between 6 and 8	Clear policies and good recordkeeping exist for some uses (ex: water used in periodic testing of unmetered fire connections), but other uses (ex: miscellaneous uses of fire hydrants) have limited oversight. Total consumption is a mix of well quantified use such as from formulae (time running multiplied by typical flow, multiplied by number of events) or temporary meters, and relatively subjective estimates of less regulated use.	Conditions between 8 and 10	Clear policies exist to identify permitted use of water in unbilled, unmetered fashion, with the intention of minimizing this type of consumption. Good records document each occurrence and consumption is quantified via formulae (time running multiplied by typical flow, multiplied by number of events) or use of temporary meters.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Unbilled Unmetered Consumption" component:		<p><u>to qualify for 5:</u> Utilize the accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use.</p> <p><u>to qualify for 2:</u> Establish a policy regarding what water uses should be allowed to remain as unbilled and unmetered. Consider tracking a small sample of one such use (ex: fire hydrant flushings).</p>	<p><u>to qualify for 5:</u> Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use.</p> <p><u>to qualify for 4:</u> Evaluate the documentation of events that have been observed. Meet with user groups (ex: for fire hydrants - fire departments, contractors to ascertain their need and/or volume requirements for water from fire hydrants).</p>		<p><u>to qualify for 5:</u> Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process, and should focus on other components since the volume of unbilled, unmetered consumption is usually a relatively small quantity component, and other larger-quantity components should take priority.</p>	<p><u>to qualify for 6 or greater:</u> Finalize policy and begin to conduct field checks to better establish and quantify such usage. Proceed if top-down audit exists and/or a great volume of such use is suspected.</p>	<p><u>to qualify for 8:</u> Assess water utility policy and procedures for various unmetered usages. For example, ensure that a policy exists and permits are issued for use of fire hydrants by persons outside of the utility. Create written procedures for use and documentation of fire hydrants by water utility personnel. Use same approach for other types of unbilled, unmetered water usage.</p>		<p><u>to qualify for 10:</u> Refine written procedures to ensure that all uses of unbilled, unmetered water are overseen by a structured permitting process managed by water utility personnel. Reassess policy to determine if some of these uses have value in being converted to billed and/or metered status.</p>	<p><u>to maintain 10:</u> Continue to refine policy and procedures with intention of reducing the number of allowable uses of water in unbilled and unmetered fashion. Any uses that can feasibly become billed and metered should be converted eventually.</p>	
APPARENT LOSSES											
Unauthorized consumption:		<p>Extent of unauthorized consumption is unknown due to unclear policies and poor recordkeeping. Total unauthorized consumption is guesstimated.</p>	<p>Unauthorized consumption is a known occurrence, but its extent is a mystery. There are no requirements to document observed events, but periodic field reports capture some of these occurrences. Total unauthorized consumption is approximated from this limited data.</p>	Conditions between 2 and 4	<p>Procedures exist to document some unauthorized consumption such as observed unauthorized fire hydrant openings. Use formulae to quantify this consumption (time running multiplied typical flowrate, multiplied by number of events).</p>	<p>Default value of 0.25% of volume of water supplied is employed</p>	<p>Coherent policies exist for some forms of unauthorized consumption (more than simply fire hydrant misuse) but others await closer evaluation. Reasonable surveillance and recordkeeping exist for occurrences that fall under the policy. Volumes quantified by inference from these records.</p>	Conditions between 6 and 8	<p>Clear policies and good auditable recordkeeping exist for certain events (ex: tampering with water meters, illegal bypasses of customer meters); but other occurrences have limited oversight. Total consumption is a combination of volumes from formulae (time x typical flow) and subjective estimates of unconfirmed consumption.</p>	Conditions between 8 and 10	<p>Clear policies exist to identify all known unauthorized uses of water. Staff and procedures exist to provide enforcement of policies and detect violations. Each occurrence is recorded and quantified via formulae (estimated time running multiplied by typical flow) or similar methods. All records and calculations should exist in a form that can be audited by a third party.</p>
Improvements to attain higher data grading for "Unauthorized Consumption" component:		<p><u>to qualify for 5:</u> Use accepted default of 0.25% of volume of water supplied.</p> <p><u>to qualify for 2:</u> Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)</p>	<p><u>to qualify for 5:</u> Use accepted default of 0.25% of system input volume</p> <p><u>to qualify for 4:</u> Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)</p>		<p><u>to qualify for 5:</u> Utilize accepted default value of 0.25% of volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process.</p>	<p><u>to qualify for 6 or greater:</u> Finalize policy updates to clearly identify the types of water consumption that are authorized from those usages that fall outside of this policy and are, therefore, unauthorized. Begin to conduct regular field checks. Proceed if the top-down audit already exists and/or a great volume of such use is suspected.</p>	<p><u>to qualify for 8:</u> Assess water utility policies to ensure that all known occurrences of unauthorized consumption are outlawed, and that appropriate penalties are prescribed. Create written procedures for detection and documentation of various occurrences of unauthorized consumption as they are uncovered.</p>		<p><u>to qualify for 10:</u> Refine written procedures and assign staff to seek out likely occurrences of unauthorized consumption. Explore new locking devices, monitors and other technologies designed to detect and thwart unauthorized consumption.</p>	<p><u>to maintain 10:</u> Continue to refine policy and procedures to eliminate any loopholes that allow or tacitly encourage unauthorized consumption. Continue to be vigilant in detection, documentation and enforcement efforts.</p>	
Customer metering inaccuracies:	select n/a only if the entire customer population is unmetered. In such a case the volume entered must be zero.	<p>Customer meters exist, but with unorganized paper records on meters; no meter accuracy testing or meter replacement program for any size of retail meter. Metering workflow is driven chaotically with no proactive management. Loss volume due to aggregate meter inaccuracy is guesstimated.</p>	<p>Poor recordkeeping and meter oversight is recognized by water utility management who has allotted staff and funding resources to organize improved recordkeeping and start meter accuracy testing. Existing paper records gathered and organized to provide cursory disposition of meter population. Customer meters are tested for accuracy only upon customer request.</p>	Conditions between 2 and 4	<p>Reliable recordkeeping exists; meter information is improving as meters are replaced. Meter accuracy testing is conducted annually for a small number of meters (more than just customer requests, but less than 1% of inventory). A limited number of the oldest meters are replaced each year. Inaccuracy volume is largely an estimate, but refined based upon limited testing data.</p>	Conditions between 4 and 6	<p>A reliable electronic recordkeeping system for meters exists. The meter population includes a mix of new high performing meters and dated meters with suspect accuracy. Routine, but limited, meter accuracy testing and meter replacement occur. Inaccuracy volume is quantified using a mix of reliable and less certain data.</p>		<p>Ongoing meter replacement and accuracy testing result in highly accurate customer meter population. Testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for various types of meters.</p>	<p>Statistically significant number of meters are tested in audit year. This testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for these meters.</p>	<p>Good records of all active customer meters exist and include as a minimum: meter number, account number/location, type, size and manufacturer. Ongoing meter replacement occurs according to a targeted and justified basis. Regular meter accuracy testing gives a reliable measure of composite inaccuracy volume for the customer meter population. New metering technology is embracing to keep overall accuracy improving. Procedures are reviewed by a third party knowledgeable in the M36 methodology.</p>

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Customer meter inaccuracy volume" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	<u>to qualify for 2:</u> Gather available meter purchase records. Conduct testing on a small number of meters believed to be the most inaccurate. Review staffing needs of the metering group and budget for necessary resources to better organize meter management.	<u>to qualify for 4:</u> Implement a reliable record keeping system for customer meter histories, preferably using electronic methods typically linked to, or part of, the Customer Billing System or Customer Information System. Expand meter accuracy testing to a larger group of meters.		<u>to qualify for 6:</u> Standardize the procedures for meter recordkeeping within an electronic information system. Accelerate meter accuracy testing and meter replacements guided by testing results.		<u>to qualify for 8:</u> Expand annual meter accuracy testing to evaluate a statistically significant number of meter makes/models. Expand meter replacement program to replace statistically significant number of poor performing meters each year.		<u>to qualify for 9:</u> Continue efforts to manage meter population with reliable recordkeeping. Test a statistically significant number of meters each year and analyze test results in an ongoing manner to serve as a basis for a target meter replacement strategy based upon accumulated volume throughput.	<u>to qualify for 10:</u> Continue efforts to manage meter population with reliable recordkeeping, meter testing and replacement. Evaluate new meter types and install one or more types in 5-10 customer accounts each year in order to pilot improving metering technology.	<u>to maintain 10:</u> Increase the number of meters tested and replaced as justified by meter accuracy test data. Continually monitor development of new metering technology and Advanced Metering Infrastructure (AMI) to grasp opportunities for greater accuracy in metering of water flow and management of customer consumption data.
Systematic Data Handling Errors:	Note: all water utilities incur some amount of this error. Even in water utilities with unmetered customer populations and fixed rate billing, errors occur in annual billing tabulations. Enter a positive value for the volume and select a grading.	Policies and procedures for activation of new customer water billing accounts are vague and lack accountability. Billing data is maintained on paper records which are not well organized. No auditing is conducted to confirm billing data handling efficiency. An unknown number of customers escape routine billing due to lack of billing process oversight.	Policy and procedures for activation of new customer accounts and oversight of billing records exist but need refinement. Billing data is maintained on paper records or insufficiently capable electronic database. Only periodic unstructured auditing work is conducted to confirm billing data handling efficiency. The volume of unbilled water due to billing lapses is a guess.	Conditions between 2 and 4	Policy and procedures for new account activation and oversight of billing operations exist but needs refinement. Computerized billing system exists, but is dated or lacks needed functionality. Periodic, limited internal audits conducted and confirm with approximate accuracy the consumption volumes lost to billing lapses.	Conditions between 4 and 6	Policy and procedures for new account activation and oversight of billing operations is adequate and reviewed periodically. Computerized billing system is in use with basic reporting available. Any effect of billing adjustments on measured consumption volumes is well understood. Internal checks of billing data error conducted annually. Reasonably accurate quantification of consumption volume lost to billing lapses is obtained.	Conditions between 6 and 8	New account activation and billing operations policy and procedures are reviewed at least biannually. Computerized billing system includes an array of reports to confirm billing data and system functionality. Checks are conducted routinely to flag and explain zero consumption accounts. Annual internal checks conducted with third party audit conducted at least once every five years. Accountability checks flag billing lapses. Consumption lost to billing lapses is well quantified and reducing year-by-year.	Conditions between 8 and 10	Sound written policy and procedures exist for new account activation and oversight of customer billing operations. Robust computerized billing system gives high functionality and reporting capabilities which are utilized, analyzed and the results reported each billing cycle. Assessment of policy and data handling errors are conducted internally and audited by third party at least once every three years, ensuring consumption lost to billing lapses is minimized and detected as it occurs.
Improvements to attain higher data grading for "Systematic Data Handling Error volume" component:		<u>to qualify for 2:</u> Draft written policy and procedures for activating new water billing accounts and oversight of billing operations. Investigate and budget for computerized customer billing system. Conduct initial audit of billing records by flow-charting the basic business processes of the customer account/billing function.	<u>to qualify for 4:</u> Finalize written policy and procedures for activation of new billing accounts and overall billing operations management. Implement a computerized customer billing system. Conduct initial audit of billing records as part of this process.		<u>to qualify for 6:</u> Refine new account activation and billing operations procedures and ensure consistency with the utility policy regarding billing, and minimize opportunity for missed billings. Upgrade or replace customer billing system for needed functionality - ensure that billing adjustments don't corrupt the value of consumption volumes. Procedurize internal annual audit process.		<u>to qualify for 8:</u> Formalize regular review of new account activation process and general billing practices. Enhance reporting capability of computerized billing system. Formalize regular auditing process to reveal scope of data handling error. Plan for periodic third party audit to occur at least once every five years.		<u>to qualify for 10:</u> Close policy/procedure loopholes that allow some customer accounts to go unbilled, or data handling errors to exist. Ensure that billing system reports are utilized, analyzed and reported every billing cycle. Ensure that internal and third party audits are conducted at least once every three years.		<u>to maintain 10:</u> Stay abreast of customer information management developments and innovations. Monitor developments of Advanced Metering Infrastructure (AMI) and integrate technology to ensure that customer endpoint information is well-monitored and errors/lapses are at an economic minimum.
SYSTEM DATA											
Length of mains:		Poorly assembled and maintained paper as-built records of existing water main installations makes accurate determination of system pipe length impossible. Length of mains is guesstimated.	Paper records in poor or uncertain condition (no annual tracking of installations & abandonments). Poor procedures to ensure that new water mains installed by developers are accurately documented.	Conditions between 2 and 4	Sound written policy and procedures exist for documenting new water main installations, but gaps in management result in a uncertain degree of error in tabulation of mains length.	Conditions between 4 and 6	Sound written policy and procedures exist for permitting and commissioning new water mains. Highly accurate paper records with regular field validation; or electronic records and asset management system in good condition. Includes system backup.	Conditions between 6 and 8	Sound written policy and procedures exist for permitting and commissioning new water mains. Electronic recordkeeping such as a Geographical Information System (GIS) and asset management system are used to store and manage data.	Conditions between 8 and 10	Sound written policy exists for managing water mains extensions and replacements. Geographic Information System (GIS) data and asset management database agree and random field validation proves truth of databases. Records of annual field validation should be available for review.
Improvements to attain higher data grading for "Length of Water Mains" component:		<u>to qualify for 2:</u> Assign personnel to inventory current as-built records and compare with customer billing system records and highway plans in order to verify poorly documented pipelines. Assemble policy documents regarding permitting and documentation of water main installations by the utility and building developers; identify gaps in procedures that result in poor documentation of new water main installations.	<u>to qualify for 4:</u> Complete inventory of paper records of water main installations for several years prior to audit year. Review policy and procedures for commissioning and documenting new water main installation.		<u>to qualify for 6:</u> Finalize updates/improvements to written policy and procedures for permitting/commissioning new main installations. Confirm inventory of records for five years prior to audit year; correct any errors or omissions.		<u>to qualify for 8:</u> Launch random field checks of limited number of locations. Convert to electronic database such as a Geographic Information System (GIS) with backup as justified. Develop written policy and procedures.		<u>to qualify for 10:</u> Link Geographic Information System (GIS) and asset management databases, conduct field verification of data. Record field verification information at least annually.		<u>to maintain 10:</u> Continue with standardization and random field validation to improve the completeness and accuracy of the system.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Number of active AND inactive service connections:		Vague permitting (of new service connections) policy and poor paper recordkeeping of customer connections/billings result in suspect determination of the number of service connections, which may be 10-15% in error from actual count.	General permitting policy exists but paper records, procedural gaps, and weak oversight result in questionable total for number of connections, which may vary 5-10% of actual count.	Conditions between 2 and 4	Written account activation policy and procedures exist, but with some gaps in performance and oversight. Computerized information management system is being brought online to replace dated paper recordkeeping system. Reasonably accurate tracking of service connection installations & abandonments; but count can be up to 5% in error from actual total.	Conditions between 4 and 6	Written new account activation and overall billing policies and procedures are adequate and reviewed periodically. Computerized information management system is in use with annual installations & abandonments totaled. Very limited field verifications and audits. Error in count of number of service connections is believed to be no more than 3%.	Conditions between 6 and 8	Policies and procedures for new account activation and overall billing operations are written, well-structured and reviewed at least biannually. Well managed computerized information management system exists and routine, periodic field checks and internal system audits are conducted. Counts of connections are no more than 2% in error.	Conditions between 8 and 10	Sound written policy and well managed and audited procedures ensure reliable management of service connection population. Computerized information management system, Customer Billing System, and Geographic Information System (GIS) information agree; field validation proves truth of databases. Count of connections recorded as being in error is less than 1% of the entire population.
Improvements to attain higher data grading for "Number of Active and Inactive Service Connections" component:	Note: The number of Service Connections does not include fire hydrant leads/lines connecting the hydrant to the water main	to qualify for 2: Draft new policy and procedures for new account activation and overall billing operations. Research and collect paper records of installations & abandonments for several years prior to audit year.	to qualify for 4: Refine policy and procedures for new account activation and overall billing operations. Research computerized recordkeeping system (Customer Information System or Customer Billing System) to improve documentation format for service connections.		to qualify for 6: Refine procedures to ensure consistency with new account activation and overall billing policy to establish new service connections or decommission existing connections. Improve process to include all totals for at least five years prior to audit year.		to qualify for 8: Formalize regular review of new account activation and overall billing operations policies and procedures. Launch random field checks of limited number of locations. Develop reports and auditing mechanisms for computerized information management system.		to qualify for 10: Close any procedural loopholes that allow installations to go undocumented. Link computerized information management system with Geographic Information System (GIS) and formalize field inspection and information system auditing processes. Documentation of new or decommissioned service connections encounters several levels of checks and balances.		to maintain 10: Continue with standardization and random field validation to improve knowledge of system.
Average length of customer service line:	Note: if customer water meters are located outside of the customer building next to the curb stop or boundary separating utility/customer responsibility, then the auditor should answer "Yes" to the question on the Reporting Worksheet asking about this. If the answer is Yes, the grading description listed under the Grading of 10(a) will be followed, with a value of zero automatically entered at a Grading of 10. See the Service Connection Diagram worksheet for a visual presentation of this distance.	Gratings 1-9 apply if customer properties are unmetered, if customer meters exist and are located inside the customer building premises, or if the water utility owns and is responsible for the entire service connection piping from the water main to the customer building. In any of these cases the average distance between the curb stop or boundary separating utility/customer responsibility for service connection piping, and the typical first point of use (ex: faucet) or the customer meter must be quantified. Gratings of 1-9 are used to grade the validity of the means to quantify this value. (See the "Service Connection Diagram" worksheet)									Either of two conditions can be met for a grading of 10: a) Customer water meters exist outside of customer buildings next to the curb stop or boundary separating utility/customer responsibility for service connection piping. If so, answer "Yes" to the question on the Reporting Worksheet asking about this condition. A value of zero and a Grading of 10 are automatically entered in the Reporting Worksheet. b) Meters exist inside customer buildings, or properties are unmetered. In either case, answer "No" to the Reporting Worksheet question on meter location, and enter a distance determined by the auditor. For a Grading of 10 this value must be a very reliable number from a Geographic Information System (GIS) and confirmed by a statistically valid number of field checks.
Improvements to attain higher data grading for "Average Length of Customer Service Line" component:		to qualify for 2: Research and collect paper records of service line installations. Inspect several sites in the field using pipe locators to locate curb stops. Obtain the length of this small sample of connections in this manner.	to qualify for 4: Formalize and communicate policy delineating utility/customer responsibilities for service connection piping. Assess accuracy of paper records by field inspection of a small sample of service connections using pipe locators as needed. Research the potential migration to a computerized information management system to store service connection data.		to qualify for 6: Establish coherent procedures to ensure that policy for curb stop, meter installation and documentation is followed. Gain consensus within the water utility for the establishment of a computerized information management system.		to qualify for 8: Implement an electronic means of recordkeeping, typically via a customer information system, customer billing system, or Geographic Information System (GIS). Standardize the process to conduct field checks of a limited number of locations.		to qualify for 10: Link customer information management system and Geographic Information System (GIS), standardize process for field verification of data.		to maintain 10: Continue with standardization and random field validation to improve knowledge of service connection configurations and customer meter locations.
Average operating pressure:		Available records are poorly assembled and maintained paper records of supply pump characteristics and water distribution system operating conditions. Average pressure is guesstimated based upon this information and ground elevations from crude topographical maps. Widely varying distribution system pressures due to undulating terrain, high system head loss and weak/erratic pressure controls further compromise the validity of the average pressure calculation.	Limited telemetry monitoring of scattered pumping station and water storage tank sites provides some static pressure data, which is recorded in handwritten logbooks. Pressure data is gathered at individual sites only when low pressure complaints arise. Average pressure is determined by averaging relatively crude data, and is affected by significant variation in ground elevations, system head loss and gaps in pressure controls in the distribution system.	Conditions between 2 and 4	Effective pressure controls separate different pressure zones; moderate pressure variation across the system, occasional open boundary valves are discovered that breach pressure zones. Basic telemetry monitoring of the distribution system logs pressure data electronically. Pressure data gathered by gauges or dataloggers at fire hydrants or buildings when low pressure complaints arise, and during fire flow tests and system flushing. Reliable topographical data exists. Average pressure is calculated using this mix of data.	Conditions between 4 and 6	Reliable pressure controls separate distinct pressure zones; only very occasional open boundary valves are encountered that breach pressure zones. Well-covered telemetry monitoring of the distribution system (not just pumping at source treatment plants or wells) logs extensive pressure data electronically. Pressure gathered by gauges/dataloggers at fire hydrants and buildings when low pressure complaints arise, and during fire flow tests and system flushing. Average pressure is determined by using this mix of reliable data.	Conditions between 6 and 8	Well-managed, discrete pressure zones exist with generally predictable pressure fluctuations. A current full-scale SCADA System or similar realtime monitoring system exists to monitor the water distribution system and collect data, including real time pressure readings at representative sites across the system. The average system pressure is determined from reliable monitoring system data.	Conditions between 8 and 10	Well-managed pressure districts/zones, SCADA System and hydraulic model exist to give very precise pressure data across the water distribution system. Average system pressure is reliably calculated from extensive, reliable, and cross-checked data. Calculations are reported on an annual basis as a minimum.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
<p>Improvements to attain higher data grading for "Average Operating Pressure" component:</p>		<p><u>to qualify for 2:</u> Employ pressure gauging and/or datalogging equipment to obtain pressure measurements from fire hydrants. Locate accurate topographical maps of service area in order to confirm ground elevations. Research pump data sheets to find pump pressure/flow characteristics</p>	<p><u>to qualify for 4:</u> Formalize a procedure to use pressure gauging/datalogging equipment to gather pressure data during various system events such as low pressure complaints, or operational testing. Gather pump pressure and flow data at different flow regimes. Identify faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) and plan to properly configure pressure zones. Make all pressure data from these efforts available to generate system-wide average pressure.</p>		<p><u>to qualify for 6:</u> Expand the use of pressure gauging/datalogging equipment to gather scattered pressure data at a representative set of sites, based upon pressure zones or areas. Utilize pump pressure and flow data to determine supply head entering each pressure zone or district. Correct any faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) to ensure properly configured pressure zones. Use expanded pressure dataset from these activities to generate system-wide average pressure.</p>		<p><u>to qualify for 8:</u> Install a Supervisory Control and Data Acquisition (SCADA) System, or similar realtime monitoring system, to monitor system parameters and control operations. Set regular calibration schedule for instrumentation to insure data accuracy. Obtain accurate topographical data and utilize pressure data gathered from field surveys to provide extensive, reliable data for pressure averaging.</p>		<p><u>to qualify for 10:</u> Annually, obtain a system-wide average pressure value from the hydraulic model of the distribution system that has been calibrated via field measurements in the water distribution system and confirmed in comparisons with SCADA System data.</p>	<p><u>to maintain 10:</u> Continue to refine the hydraulic model of the distribution system and consider linking it with SCADA System for real-time pressure data calibration, and averaging.</p>	

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
COST DATA											
Total annual cost of operating water system:		Incomplete paper records and lack of financial accounting documentation on many operating functions makes calculation of water system operating costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to estimate the major portion of water system operating costs.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. However, gaps in data are known to exist, periodic internal reviews are conducted but not a structured financial audit.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited periodically by utility personnel, but not a Certified Public Accountant (CPA).	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited at least annually by utility personnel, and at least once every three years by third-party CPA.	Conditions between 8 and 10	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited annually by utility personnel and annually also by third-party CPA.
Improvements to attain higher data grading for "Total Annual Cost of Operating the Water System" component:		<u>to qualify for 2:</u> Gather available records, institute new financial accounting procedures to regularly collect and audit basic cost data of most important operations functions.	<u>to qualify for 4:</u> Implement an electronic cost accounting system, structured according to accounting standards for water utilities		<u>to qualify for 6:</u> Establish process for periodic internal audit of water system operating costs; identify cost data gaps and institute procedures for tracking these outstanding costs.		<u>to qualify for 8:</u> Standardize the process to conduct routine financial audit on an annual basis. Arrange for CPA audit of financial records at least once every three years.		<u>to qualify for 10:</u> Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		<u>to maintain 10:</u> Maintain program, stay abreast of expenses subject to erratic cost changes and long-term cost trend, and budget/track costs proactively
Customer retail unit cost (applied to Apparent Losses):	Customer population unmetered, and/or only a fixed fee is charged for consumption.	Antiquated, cumbersome water rate structure is used, with periodic historic amendments that were poorly documented and implemented; resulting in classes of customers being billed inconsistent charges. The actual composite billing rate likely differs significantly from the published water rate structure, but a lack of auditing leaves the degree of error indeterminate.	Dated, cumbersome water rate structure, not always employed consistently in actual billing operations. The actual composite billing rate is known to differ from the published water rate structure, and a reasonably accurate estimate of the degree of error is determined, allowing a composite billing rate to be quantified.	Conditions between 2 and 4	Straight-forward water rate structure in use, but not updated in several years. Billing operations reliably employ the rate structure. The composite billing rate is derived from a single customer class such as residential customer accounts, neglecting the effect of different rates from varying customer classes.	Conditions between 4 and 6	Clearly written, up-to-date water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average residential rate using volumes of water in each rate block.	Conditions between 6 and 8	Effective water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average composite consumption rate, which includes residential, commercial, industrial, institutional (CII), and any other distinct customer classes within the water rate structure.	Conditions between 8 and 10	Current, effective water rate structure is in force and applied reliably in billing operations. The rate structure and calculations of composite rate - which includes residential, commercial, industrial, institutional (CII), and other distinct customer classes - are reviewed by a third party knowledgeable in the M36 methodology at least once every five years.
Improvements to attain higher data grading for "Customer Retail Unit Cost" component:		<u>to qualify for 2:</u> Formalize the process to implement water rates, including a secure documentation procedure. Create a current, formal water rate document and gain approval from all stakeholders.	<u>to qualify for 4:</u> Review the water rate structure and update/formalize as needed. Assess billing operations to ensure that actual billing operations incorporate the established water rate structure.		<u>to qualify for 6:</u> Evaluate volume of water used in each usage block by residential users. Multiply volumes by full rate structure.	<u>Launch effort to fully meter the customer population and charge rates based upon water volumes</u>	<u>to qualify for 8:</u> Evaluate volume of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		<u>to qualify for 10:</u> Conduct a periodic third-party audit of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		<u>to maintain 10:</u> Keep water rate structure current in addressing the water utility's revenue needs. Update the calculation of the customer unit rate as new rate components, customer classes, or other components are modified.
Variable production cost (applied to Real Losses):	Note: if the water utility purchases/imports its entire water supply, then enter the unit purchase cost of the bulk water supply in the Reporting Worksheet with a grading of 10	Incomplete paper records and lack of documentation on primary operating functions (electric power and treatment costs most importantly) makes calculation of variable production costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to roughly estimate the basic operations costs (pumping power costs and treatment costs) and calculate a unit variable production cost.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. Electric power and treatment costs are reliably tracked and allow accurate weighted calculation of unit variable production costs based on these two inputs and water imported purchase costs (if applicable). All costs are audited internally on a periodic basis.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Pertinent additional costs beyond power, treatment and water imported purchase costs (if applicable) such as liability, residuals management, wear and tear on equipment, impending expansion of supply, are included in the unit variable production cost, as applicable. The data is audited at least annually by utility personnel.	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent primary and secondary variable production and water imported purchase (if applicable) costs tracked. The data is audited at least annually by utility personnel, and at least once every three years by a third-party knowledgeable in the M36 methodology.	Conditions between 8 and 10	Either of two conditions can be met to obtain a grading of 10: 1) Third party CPA audit of all pertinent primary and secondary variable production and water imported purchase (if applicable) costs on an annual basis. or 2) Water supply is entirely purchased as bulk water imported, and the unit purchase cost - including all applicable marginal supply costs - serves as the variable production cost. If all applicable marginal supply costs are not included in this figure, a grade of 10 should not be selected.
Improvements to attain higher data grading for "Variable Production Cost" component:		<u>to qualify for 2:</u> Gather available records, institute new procedures to regularly collect and audit basic cost data and most important operations functions.	<u>to qualify for 4:</u> Implement an electronic cost accounting system, structured according to accounting standards for water utilities		<u>to qualify for 6:</u> Formalize process for regular internal audits of production costs. Assess whether additional costs (liability, residuals management, equipment wear, impending infrastructure expansion) should be included to calculate a more representative variable production cost.		<u>to qualify for 8:</u> Formalize the accounting process to include direct cost components (power, treatment) as well as indirect cost components (liability, residuals management, etc.) Arrange to conduct audits by a knowledgeable third-party at least once every three years.		<u>to qualify for 10:</u> Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		<u>to maintain 10:</u> Maintain program, stay abreast of expenses subject to erratic cost changes and budget/track costs proactively



**AWWA Free Water Audit Software:
Determining Water Loss Standing**

WAS v5.0

American Water Works Association.
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Water Audit Report for: **Rainbow Municipal Water District**
 Reporting Year: **2015** 1/2015 - 12/2015
 Data Validity Score: **81**

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Level / Score				
	Level I (0-25)	Level II (26-50)	Level III (51-70)	Level IV (71-90)	Level V (91-100)
Audit Data Collection	Launch auditing and loss control team; address production metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations. Identify data gaps.	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs. Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc.	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or Automatic Meter Reading (AMR) system.	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process.	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon the Infrastructure Leakage Index (ILI) for performance comparisons for real losses (see below table)	Performance Benchmarking - ILI is meaningful in comparing real loss standing	Identify Best Practices/ Best in class - the ILI is very reliable as a real loss performance indicator for best in class service

For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.

Once data have been entered into the Reporting Worksheet, the performance indicators are automatically calculated. How does a water utility operator know how well his or her system is performing? The AWWA Water Loss Control Committee provided the following table to assist water utilities in gauging an approximate Infrastructure Leakage Index (ILI) that is appropriate for their water system and local conditions. The lower the amount of leakage and real losses that exist in the system, then the lower the ILI value will be.

Note: this table offers an approximate guideline for leakage reduction target-setting. The best means of setting such targets include performing an economic assessment of various loss control methods. However, this table is useful if such an assessment is not possible.

**General Guidelines for Setting a Target ILI
(without doing a full economic analysis of leakage control options)**

Target ILI Range	Financial Considerations	Operational Considerations	Water Resources Considerations
1.0 - 3.0	Water resources are costly to develop or purchase; ability to increase revenues via water rates is greatly limited because of regulation or low ratepayer affordability.	Operating with system leakage above this level would require expansion of existing infrastructure and/or additional water resources to meet the demand.	Available resources are greatly limited and are very difficult and/or environmentally unsound to develop.
>3.0 -5.0	Water resources can be developed or purchased at reasonable expense; periodic water rate increases can be feasibly imposed and are tolerated by the customer population.	Existing water supply infrastructure capability is sufficient to meet long-term demand as long as reasonable leakage management controls are in place.	Water resources are believed to be sufficient to meet long-term needs, but demand management interventions (leakage management, water conservation) are included in the long-term planning.
>5.0 - 8.0	Cost to purchase or obtain/treat water is low, as are rates charged to customers.	Superior reliability, capacity and integrity of the water supply infrastructure make it relatively immune to supply shortages.	Water resources are plentiful, reliable, and easily extracted.
Greater than 8.0	Although operational and financial considerations may allow a long-term ILI greater than 8.0, such a level of leakage is not an effective utilization of water as a resource. Setting a target level greater than 8.0 - other than as an incremental goal to a smaller long-term target - is discouraged.		
Less than 1.0	If the calculated Infrastructure Leakage Index (ILI) value for your system is 1.0 or less, two possibilities exist. a) you are maintaining your leakage at low levels in a class with the top worldwide performers in leakage control. b) A portion of your data may be flawed, causing your losses to be greatly understated. This is likely if you calculate a low ILI value but do not employ extensive leakage control practices in your operations. In such cases it is beneficial to validate the data by performing field measurements to confirm the accuracy of production and customer meters, or to identify any other potential sources of error in the data.		

Appendix E
SBx7-7 Calculation Worksheets

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	27,198	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period ¹	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range ²	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range ³	2007	
¹ If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.			
² The ending year must be between December 31, 2004 and December 31, 2010.			
³ The ending year must be between December 31, 2007 and December 31, 2010.			
NOTES: Potable per SDCWA			

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
<input type="checkbox"/>	1. Department of Finance (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input type="checkbox"/>	2. Persons-per-Connection Method
<input type="checkbox"/>	3. DWR Population Tool
<input checked="" type="checkbox"/>	4. Other* DWR recommends pre-review
<p>* Estimates per San Diego Association of Governments (SANDAG). Data provided by SANDAG 4/5/16. Custom data sort to Rainbow service area boundary, per shape file provided by District 2015. SANDAG methodology uses census data for 2000 and 2010, at census block level.</p>	

SB X7-7 Table 3: Service Area Population		
Year		Population
10 Year Baseline Population		
Year 1	1999	16,045
Year 2	2000	16,178
Year 3	2001	17,201
Year 4	2002	17,099
Year 5	2003	17,122
Year 6	2004	17,882
Year 7	2005	17,899
Year 8	2006	18,039
Year 9	2007	18,145
Year 10	2008	18,242
5 Year Baseline Population		
Year 1	2003	17,122
Year 2	2005	17,882
Year 3	2006	17,899
Year 4	2007	18,039
Year 5	2008	18,145
2015 Compliance Year Population		
	2015	20,279
<p>NOTES: Estimates per San Diego Association of Governments (SANDAG). Data provided by SANDAG 4/5/16. Custom data sort to Rainbow service area boundary, per shape file provided by District 2015. SANDAG methodology uses census data for 2000 and 2010, at census block level.</p>		

SB X7-7 Table 4: Annual Gross Water Use								
	Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>Fm SB X7-7 Table(s) 4-A</i>	Deductions					Annual Gross Water Use
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>Fm SB X7-7 Table 4-B</i>	Water Delivered for Ag Use	Process Water <i>Fm SB X7-7 Table(s) 4-D</i>	
10 Year Baseline - Gross Water Use								
Year 1	1999	25,177			0		0	25,177
Year 2	2000	29,859			0		0	29,859
Year 3	2001	27,329			0		0	27,329
Year 4	2002	31,633			0		0	31,633
Year 5	2003	28,995			0		0	28,995
Year 6	2004	33,300			0		0	33,300
Year 7	2005	25,273			0		0	25,273
Year 8	2006	30,501			0		0	30,501
Year 9	2007	33,186			0		0	33,186
Year 10	2008	27,198			0		0	27,198
10 year baseline average gross water use								29,245
5 Year Baseline - Gross Water Use								
Year 1	2003	28,995			0		0	28,995
Year 2	2005	33,300			0		0	33,300
Year 3	2006	25,273			0		0	25,273
Year 4	2007	30,501			0		0	30,501
Year 5	2008	33,186			0		0	33,186
5 year baseline average gross water use								30,251
2015 Compliance Year - Gross Water Use								
	2015	20,062			0		0	20,062
NOTES : The Agricultural Use deduction is optional per SBx7-7 and the DWR Methodology guidebook. By not deducting its agricultural usage, the District satisfies its agricultural water management reporting through its UWMP, and is not subject to separate agricultural water management plan requirements.								

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
 Complete one table for each source.

Name of Source		SDCWA		
This water source is:				
<input type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
Baseline Year <i>Fm SB X7-7 Table 3</i>		Volume Entering Distribution System	Meter Error Adjustment* Optional (+/-)	Corrected Volume Entering Distribution System
10 Year Baseline - Water into Distribution System				
Year 1	1999	25,177		25,177
Year 2	2000	29,859		29,859
Year 3	2001	27,329		27,329
Year 4	2002	31,633		31,633
Year 5	2003	28,995		28,995
Year 6	2004	33,300		33,300
Year 7	2005	25,273		25,273
NOTES: P	2006	30,501		30,501
Year 9	2007	33,186		33,186
Year 10	2008	27,198		27,198
5 Year Baseline - Water into Distribution System				
Year 1	2003	28,995		28,995
Year 2	2005	33,300		33,300
Year 3	2006	25,273		25,273
Year 4	2007	30,501		30,501
Year 5	2008	33,186		33,186
2015 Compliance Year - Water into Distribution System				
	2015	20,062		20,062
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				
NOTES: Sole source of District supply.				

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)				
Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Annual Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use (GPCD)
10 Year Baseline GPCD				
Year 1	1999	16,045	25,177	1,401
Year 2	2000	16,178	29,859	1,648
Year 3	2001	17,201	27,329	1,418
Year 4	2002	17,099	31,633	1,652
Year 5	2003	17,122	28,995	1,512
Year 6	2004	17,882	33,300	1,662
Year 7	2005	17,899	25,273	1,261
Year 8	2006	18,039	30,501	1,509
Year 9	2007	18,145	33,186	1,633
Year 10	2008	18,242	27,198	1,331
10 Year Average Baseline GPCD				1,503
5 Year Baseline GPCD				
Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use
Year 1	2003	17,122	28,995	1,512
Year 2	2005	17,882	33,300	1,662
Year 3	2006	17,899	25,273	1,261
Year 4	2007	18,039	30,501	1,509
Year 5	2008	18,145	33,186	1,633
5 Year Average Baseline GPCD				1,515
2015 Compliance Year GPCD				
2015		20,279	20,062	883
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day <i>Summary From Table SB X7-7 Table 5</i>	
10 Year Baseline GPCD	1,503
5 Year Baseline GPCD	1,515
2015 Compliance Year GPCD	883
NOTES:	

SB X7-7 Table 7: 2020 Target Method		
<i>Select Only One</i>		
Target Method		Supporting Documentation
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D <i>Contact DWR for these tables</i>
<input type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10 Year Baseline GPCD	2020 Target GPCD
1503	1202
NOTES: Target = 80% of Baseline	

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target			
5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target*	Calculated 2020 Target <i>Fm Appropriate Target Table</i>	Confirmed 2020 Target
1515	1440	1202	1202
* Maximum 2020 Target is 95% of the 5 Year Baseline GPCD			
NOTES:			

SB X7-7 Table 8: 2015 Interim Target GPCD		
Confirmed 2020 Target <i>Fm SB X7-7 Table 7-F</i>	10 year Baseline GPCD <i>Fm SB X7-7 Table 5</i>	2015 Interim Target GPCD
1,202	1,503	1,352
NOTES: Interim Target = 90% Baseline		

SB X7-7 Table 9: 2015 Compliance					
Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments		2015 GPCD <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015?
		TOTAL Adjustments	Adjusted 2015 GPCD		
883	1352	0	883	883	YES
NOTES:					

Appendix F

Water Authority Documentation of Supply Reliability

- Section 9 of the San Diego County Water Authority's Draft Regional UWMP, April 2016. The complete UWMP is available on the Water Authority website at <http://www.sdcwa.org/uwmp>.

Section 9

Water Supply Reliability

Under the Act, every UWMP must include an assessment of water supply reliability. The assessment must compare the total projected water supply and demands over the next 20 years in five-year increments under normal, single dry year, and multiple dry water years. The assessment contained in the 2015 Plan evaluates reliability through the next 25 years. In addition to the verifiable mix of resources utilized in the reliability assessment, additional planned resources by the Water Authority and its member agencies have also been identified. Additional planned projects can further reduce the region's reliance on sources of supply from Metropolitan, such as the Bay-Delta. This section presents a summary of the water demands and supplies within the Water Authority's service area, along with the reliability assessment and discussion on additional planned projects. Results from the reliability assessment demonstrate that even with very conservative assumptions regarding the availability of dry year supplies from Metropolitan, the region's existing and projected water resource mix is increasingly drought-resilient, but shortages still occur during a single dry-year by 2030, and more significant shortages during a multiple dry water year event beginning in 2028. These shortages can be mitigated through extraordinary water conservation actions and if necessary, dry-year transfers.

9.1 Development of Projected Water Resources Mix

In summary, development of the projected mix of resources to meet future demands is based on the following factors:

- I. Member agency information on projected water recycling, potable reuse, groundwater, desalination, and surface water (discussed in **Section 5**)
- II. Attaining the additional regional water use efficiency targets (**Section 2**)
- III. Board approvals taken in regard to Water Authority supplies (**Sections 4 and 11**):
 - a. Agreement between IID and the Water Authority for Transfer of Conserved Water, and other related agreements (**Section 4.2**);
 - b. Agreements related to the ACC and CC Lining Projects, and other related agreements (**Section 4.3**);
 - c. Claude "Bud" Lewis Carlsbad Desalination Plant Water Purchase Agreement between the Water Authority and Poseidon Water (**Section 4.5**);
 - d. Acceptance of San Vicente Dam Raise Project (emergency and carryover storage) as complete (**Section 11.2.4**);
 - e. Approval of 2013 Regional Water Facilities Optimization and Master Plan Update (**Section 1.6.4**); and
 - f. Agreements and actions related to out-of-region groundwater banking program (**Section 11.2.4**).

9.2 Normal Water Year Assessment

Table 9-1 shows the normal year assessment, summarizing the total water demands within the Water Authority's service area through the year 2040 along with the supplies necessary to meet demands under normal conditions. **Section 2** contains a discussion of the normal year water demands in the Water Authority's service area. If Metropolitan, the Water Authority and member agency supplies are maintained and developed as planned, along with achievement of the additional water conservation, no shortages are anticipated within the Water Authority's service area in a normal year through 2040.

In the reliability assessment, the projected supplies from Metropolitan are considered supplemental and are calculated as the increment of supply necessary to meet demands after taking into account member agency and Water Authority supplies. Metropolitan staff provided the Water Authority with estimated demands on Metropolitan that will be used in their 2015 Plan. The estimated demands are shown to be adequate to cover the supplemental need identified in Table 9-1. The data provided by Metropolitan is included in **Appendix I**.

Table 9-1. Normal Water Year Supply and Demand Assessment (AF/YR)¹

	2020	2025	2030	2035	2040
Water Authority Supplies					
IID Water Transfer	190,000	200,000	200,000	200,000	200,000
ACC and CC Lining Projects	80,200	80,200	80,200	80,200	80,200
Lewis Carlsbad Desalination Plant	50,000	50,000	50,000	50,000	50,000
Sub-Total	320,200	330,200	330,200	330,200	330,200
Member Agency Supplies					
Surface Water	51,580	51,480	51,380	51,280	51,180
Water Recycling	41,166	44,381	46,465	46,825	47,565
Seawater Desalination	6,000	6,000	6,000	6,000	6,000
Potable Reuse	3,300	3,300	3,300	3,300	3,300
Brackish GW Recovery	12,100	12,507	12,507	12,507	12,507
Groundwater	17,940	19,130	20,170	20,170	20,170
Sub-Total	132,086	136,798	139,822	140,082	140,722
Metropolitan Water District Supplies	130,897	164,855	183,578	202,042	226,713
Total Projected Supplies	583,183	631,853	653,600	672,324	697,635
Total Demands w/ Water Efficiency Savings	583,183	631,853	653,600	672,324	697,635

¹ Normal water year demands based on 1960 – 2013 hydrology.

9.3 Dry Water Year Assessment

In addition to a normal water year assessment, the Act requires an assessment to compare supply and demands under a single dry year and multiple dry water years over the next 20 years, in five-year increments. **Section 2** describes the derivation of the dry water year demands. Table 9-2 shows the single dry-year assessment. The dry-year demands reflect long-term water use efficiency, but do not incorporate potential savings due to extraordinary conservation occurring during droughts. This approach allows for a more comprehensive shortage analysis and drought response planning.

The projected groundwater and surface water yields shown in the table are based on 2015 dry-year supplies during the present drought beginning in 2012. The Verifiable supplies available from member agency projected recycling, potable reuse, and groundwater recovery projects are assumed to experience little, if any, reduction in a dry year. The Water Authority's existing and planned conserved supplies from the IID transfer, canal lining projects, and Carlsbad Desalination Plant are also considered "drought-resilient" supplies as discussed in **Section 4**. For this single dry-year assessment, it was assumed that Metropolitan is limited to 1.4 MAF of supplies due to dry conditions and increased reductions in deliveries from State Water Project (no Delta improvements) and/or reduction in Colorado River deliveries; and the Water Authority receives its preferential right based on Metropolitan's current method of calculating such rights.

Table 9-2. Single Dry Water Year Supply and Demand Assessment Five Year Increments (AF/YR)

	2020	2025	2030	2035	2040
Water Authority Supplies					
IID Water Transfer	190,000	200,000	200,000	200,000	200,000
ACC and CC Lining Projects	80,200	80,200	80,200	80,200	80,200
Regional Seawater Desalination	50,000	50,000	50,000	50,000	50,000
Sub-Total	320,200	330,200	330,200	330,200	330,200
Member Agency Supplies					
Surface Water	6,004	6,004	6,004	6,004	6,004
Water Recycling	41,166	44,381	46,465	46,825	47,565
Seawater Desalination	6,000	6,000	6,000	6,000	6,000
Potable Reuse	3,300	3,300	3,300	3,300	3,300
Brackish GW Recovery	12,100	12,507	12,507	12,507	12,507
Groundwater	15,281	15,281	15,281	15,281	15,281
Sub-Total	83,851	87,473	89,557	89,917	90,657
Metropolitan Water District Supplies	263,340	264,740	263,340	260,680	258,720
Total Projected Supplies w/o Storage Takes	667,391	682,413	683,097	680,797	679,577
Total Demands w/ Water Efficiency Savings	624,523	676,872	700,459	720,531	759,852
Potential Supply (Shortage) or Surplus	42,868	5,541	(17,362)	(39,734)	(80,275)
Utilization Carryover Supplies	0	0	17,362	39,734	40,000
Total Projected Core Supplies w/ Utilization of Carryover Storage Supplies	667,391	682,413	700,459	720,531	719,577
Remaining Potential Surplus Supply, or (Shortage) that will be handled through Management Actions	42,868	5,541	0	0	(40,275)

With a very conservative assumption regarding limited Metropolitan supplies during a single dry water year and assuming Water Authority and member agency supplies are maintained and developed as planned, along with achievement of the additional conservation target, no shortages are anticipated within the Water Authority's service area in a single dry year until 2040. These shortages would be eliminated should Metropolitan supplies approach the supply levels projected in Metropolitan's Draft 2015 UWMP Single Dry Year Supply Capability.

As discussed in **Section 11.2.4**, the Water Authority has invested in carryover storage supply capacity, which can be utilized in dry years to improve reliability. The carryover storage investment includes both surface water storage in San Vicente Reservoir and out-of-region groundwater storage in California's Central Valley, for a total of 170,000 AF of carryover storage capacity available.

As described in **Section 11.2.4**, there are a number of factors to consider when determining the utilization of carryover supplies to reduce or eliminate shortages. The storage take amount should be handled on a case-by-case basis, considering such items as, current demand trends, core supply availability, hydrologic conditions, and storage supply available for withdrawal. These factors will vary depending upon the situation. For the analysis in the 2015 Plan, it was assumed the available carryover storage would be 120,000 AF going into the dry-year period. In determining the amount to utilize, the analysis uses general guidelines, consistent with previous Water Authority planning documents, that approximately one third of the carryover supplies available in storage will be utilized in one year. Utilizing a portion of available storage supplies avoids depletion of storage reserves, thereby making water available for potential ongoing or future shortages. The supplies taken from carryover storage will be considered a Water Authority regional supply to be combined with the Water Authority's core supplies and any potential dry-year transfers.

Under the Water Authority's current Transitional Special Agricultural Water Rate (TSAWR) program requirements, customers in the TSAWR class of service receive no water from the Carryover Storage Program during Stage 2 or 3 of the Water Shortage Drought Response Plan. During shortages, TSAWR deliveries are also cut back at the same level as Metropolitan's cutback to the Water Authority. Extension of the TSAWR program was approved by the Water Authority Board in March 2014 and will be revisited by the Board again in 2020. For planning purposes only, the assessments in Tables 9-3 through 9-7 do not factor in the exclusion from the Carryover Storage Program due to the uncertainties associated with the future of the program beyond 2020. This also provides a more conservative planning analysis.

In years where shortages may still occur after utilization of carryover storage, additional regional shortage management measures, consistent with the Water Authority's Water Shortage and Drought Response Plan (described in **Section 11.2.1**), will be taken to fill the supply shortfall. These measures could include extraordinary conservation, achieved through voluntary or mandatory water-use restrictions. A description of the savings achieved during the 2012-2016 shortage period is included in **Section 11.2.3**. As discussed in the following section, the amount of savings achieved through extraordinary conservation measures could be limited due to demand hardening. In addition, the Water Authority could evaluate the option of securing dry-year transfers, which the Water Authority successfully acquired and utilized during the 2007-2011 shortage management period. (A description of the Water Authority's dry year transfer program is included in **Section 11.2.4**).

In accordance with the Act, Tables 9-3, 9-4, 9-5, 9-6, and 9-7 show the multiple dry water year assessments in five-year increments. Similar to the single dry-year assessment, the member agencies' surface and groundwater yields shown in these tables are reflective of supplies available during the present drought, beginning in 2012, in years 2013, 2014 and 2015. However, due to recent supply conditions, the analysis for the 2017 to 2019 period was based on a different assumption. For this period, it was assumed water supplies are based on current levels for the first year and reduced down to actual 2015 levels over the three-year cycle ending with 2019. While surface and groundwater yields are based on historic estimates and remain the same, recycled and brackish groundwater yields are based on projected growth in these member agency supplies. For the multiple dry-year reliability analysis, the conservative planning assumption is that Metropolitan will be allocating supplies to its member agencies. By assuming allocations in this reliability assessment, it allows the Water Authority to analyze how storage supplies could potentially be utilized and the likelihood of shortages. Currently, Metropolitan allocates supplies through its WSAP. Because it is uncertain in the future how Metropolitan will allocate supplies to its member agencies, the analysis in the tables assumes supplies are allocated based on preferential right to Metropolitan supplies. As discussed above in **Section 6.1.1**, Section 135, Preferential Right to Purchase Water, is included in the Metropolitan Act and allows a Metropolitan member agency to acquire, for use within the agency, supplies based on preferential right at any time.

The Water Authority's annual preferential right percentage of Metropolitan supplies, used in Tables 9-3 through 9-7, is estimated through 2040 and is based on Metropolitan's current method of calculating preferential rights. In 2015, a Superior Court ruled Metropolitan under-calculated the Water Authority's preferential right to Metropolitan water. That ruling is being appealed. The analysis assumes the total Metropolitan dry-year supplies available for allocation to be 1.2 MAF for the period of 2017 to 2019 due to temporal proximity to current dry conditions and depleted storage levels; and a decreasing amount of 1.4 MAF, 1.3 MAF, and 1.2 MAF for the first, second, and third year respectively for the remaining multi-year dry periods. A conservative methodology was employed due to the numerous uncertainties associated with identifying Metropolitan's future available supplies and storage. In **Section 10**, there are scenarios presented that modify the dry-year supplies available for allocation. This total supply assumes reduced deliveries from the State Water Project and Colorado River Aqueduct along with limited storage supplies. This conservative approach is based on Water Authority's experience with the current 5-year drought and its adverse impacts on imported water supplies.

Because of the closeness in time, the demands for the period of 2017 to 2019 were adjusted to align with current demands that are also dampened due the statewide Emergency Conservation Regulation currently in place. Specifically, the 2017 demands were adjusted to match demands from the Calendar Year 2017 Rates and Charges forecast to yield more accurate demand projections. Years 2018 and 2019 demands were then increased one percent from the previous year to account for minimal growth. As a result of this adjust to the 2017-2019 demands, there is a step-up in demand between Tables 9-3 and 9-4 that provides for a return to, and alignment with the undampened dry year demand projections developed for the 2015 Plan.

The rest of the multi dry-year periods have the first year based on the multi dry-year demand forecast with the next two years being increased one percent from the previous year to account for growth. This method for the multi dry-year events was used in order to account for the lower than normal demand increases being experienced by the Water Authority and its member agencies as they respond to the current drought and conservation efforts.

Table 9-3. Multiple Dry Water Year Supply and Demand Assessment Five-Year Increments (AF/YR) – 2017-2019

	2017	2018	2019
Member Agency Supplies	72,233	71,858	69,233
Water Authority Supplies	230,200	260,200	290,200
Metropolitan Allocation (Preferential Right)	223,560	224,400	225,120
Total Estimated Core Supplies w/o Storage Takes	525,993	556,458	584,553
Total Demands w/ Water Efficiency Savings	491,841	496,759	501,727
Potential Supply (Shortage) or Surplus <i>(Difference between Supplies and Demands)</i>	34,152	59,698	82,826
Utilization Carryover Supplies	0	0	0
Total Projected Core Supplies w/ Utilization of Carryover Storage Supplies	525,993	556,458	584,553
Remaining Potential Surplus Supply, or (Shortage) that will be handled through Management Actions	34,152	59,698	82,826

Table 9-4. Multiple Dry Water Year Supply and Demand Assessment Five-Year Increments (AF/YR) – 2021-2023

	2021	2022	2023
Member Agency Supplies	125,259	102,592	85,780
Water Authority Supplies	330,200	330,200	330,200
Metropolitan Allocation (Preferential Right)	263,900	245,310	226,680
Total Estimated Core Supplies w/o Storage Takes	719,359	678,102	642,660
Total Demands w/ Water Efficiency Savings	632,681	639,008	645,398
Potential Supply (Shortage) or Surplus <i>(Difference between Supplies and Demands)</i>	86,678	39,094	(2,738)
Utilization Carryover Supplies	0	0	2,738
Total Projected Core Supplies w/ Utilization of Carryover Storage Supplies	719,359	678,102	645,398
Remaining Potential Surplus Supply, or (Shortage) that will be handled through Management Actions	86,678	39,094	0

Table 9-5. Multiple Dry Water Year Supply and Demand Assessment Five-Year Increments (AF/YR) – 2026-2028

	2026	2027	2028
Member Agency Supplies	130,355	107,462	90,423
Water Authority Supplies	330,200	330,200	330,200
Metropolitan Allocation (Preferential Right)	264,600	245,570	226,440
Total Estimated Core Supplies w/o Storage Takes	725,155	683,232	647,063
Total Demands w/ Water Efficiency Savings	681,549	688,364	695,248
Potential Supply (Shortage) or Surplus <i>(Difference between Supplies and Demands)</i>	43,606	(5,133)	(48,185)
Utilization Carryover Supplies	0	5,133	40,000
Total Projected Core Supplies w/ Utilization of Carryover Storage Supplies	725,155	688,364	687,063
Remaining Potential Surplus Supply, or (Shortage) that will be handled through Management Actions	43,606	0	(8,185)

Table 9-6. Multiple Dry Water Year Supply and Demand Assessment Five-Year Increments (AF/YR) – 2031-2033

	2031	2032	2033
Member Agency Supplies	132,094	108,856	91,473
Water Authority Supplies	330,200	330,200	330,200
Metropolitan Allocation (Preferential Right)	262,780	243,490	224,280
Total Estimated Core Supplies w/o Storage Takes	725,074	682,546	645,953
Total Demands w/ Water Efficiency Savings	704,215	711,257	718,370
Potential Supply (Shortage) or Surplus <i>(Difference between Supplies and Demands)</i>	20,859	(28,711)	(72,417)
Utilization Carryover Supplies	0	28,711	40,000
Total Projected Core Supplies w/ Utilization of Carryover Storage Supplies	725,074	711,257	685,953
Remaining Potential Surplus Supply, or (Shortage) that will be handled through Management Actions	20,859	0	(32,417)

Table 9-7. Multiple Dry Water Year Supply and Demand Assessment Five-Year Increments (AF/YR) – 2036-2038

	2036	2037	2038
Member Agency Supplies	132,530	109,368	92,061
Water Authority Supplies	330,200	330,200	330,200
Metropolitan Allocation (Preferential Right)	260,260	241,410	222,480
Total Estimated Core Supplies w/o Storage Takes	722,990	680,978	644,741
Total Demands w/ Water Efficiency Savings	730,024	737,324	744,697
Potential Supply (Shortage) or Surplus <i>(Difference between Supplies and Demands)</i>	(7,034)	(56,346)	(99,956)
Utilization Carryover Supplies	7,034	40,000	40,000
Total Projected Core Supplies w/ Utilization of Carryover Storage Supplies	730,024	720,978	684,741
Remaining Potential Surplus Supply, or (Shortage) that will be handled through Management Actions	0	(16,346)	(59,956)

Under specific parameters assumed in the multi dry-year analysis, shortages are experienced, as shown in Tables 9-5 thru 9-7. The significant shortages are due to increasing water demands due to economic growth within the region and the approach of applying restricted supply from Metropolitan. As with the Single Dry Water Year Supply and Demand Assessment, these shortages could be eliminated should Metropolitan supplies approach the supply levels projected in Metropolitan’s Draft 2015 UWMP Multiple Dry Year Supply Capability.

As stated in the single dry-year analysis, carryover storage would be utilized in order to lessen the impacts of a supply shortfall.

It should be emphasized that the amount of extraordinary conservation savings expected to be achieved through mandatory measures, such as water-use restrictions, could be less than that experienced in the previous shortage periods due to demand hardening. Responsiveness to drought pricing and general price increases will diminish because remaining essential uses are less responsive to price. This will reduce customer discretionary demands and create less flexibility in the managing of demand during shortages, which will increase the importance of acquiring supplemental dry-year supplies to eliminate or reduce potential supply shortages. **Section 11.2.4** discusses the Water Authority’s potential dry-year supplies. Long-term permanent conservation savings is critical to ensuring water is used most efficiently and will help avoid or minimize drought situations. Due to potential demand hardening, shortage management measures such as water-use restrictions and drought pricing may not be as effective in the future in achieving necessary savings to help reduce the supply gap.

9.4 Reliability of Supply

The above sections identify the diverse mix of resources planned to meet future demands in both a normal and dry year. Implementation of this regional resource mix will require maintaining and

developing projects and programs by the Water Authority, its member agencies, and Metropolitan. The Water Authority coordinated with its member agencies and Metropolitan during preparation of the 2015 Plan on the future demands and supplies projected for the region. The steps being taken by the member agencies and Metropolitan to develop supplies are addressed in their respective UWMPs. **Section 4** contains the steps taken and remaining actions necessary to develop and maintain the Water Authority supplies.

The Act requires agencies to describe reliability of the water supply and vulnerability to seasonal and climatic shortage. **Section 9.2** and **Section 9.3** describe the results of the water supply reliability assessment for the region, during normal water years, single dry years, and multiple dry years. The Act also requires the 2015 Plan to contain historic data on supplies available for the three water year types. The following is the historic total supplies, both local and imported, that were utilized during the periods identified: Normal/average (607,200 AF) based on a 30-year average between 1986 and 2015, single dry year (477,458 AF) based on 2015, and multiple dry water years (581,828 AF, 590,119 AF, and 477,458 AF) based on years 2013–2015. Supplies utilized in a non-allocation dry period could exceed the supplies utilized in a normal year, due to the ability to purchase additional imported supplies from Metropolitan. It should also be noted that in the reliability assessment, contained in **Section 9.2**, the average local supply yields are not based on historic yields, but projected numbers provided by member agencies. These figures more accurately reflect the expected yield based on current local agency policies and procedures on operations and management of the supply.

Key to long-term reliability will be the monitoring of supplies and demands in order to make necessary modifications to the core and dry-year resources identified in the normal and dry-year resource mixes. The Water Authority Board will monitor reliability of existing supplies and development of identified future supplies through the Annual Supply Report and five-year updates to the UWMP.

The Act requires that, for any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, the agency describe, to the extent practicable, plans to replace that source with alternative sources or water demand management measures. As stated throughout the 2015 Plan, the Water Authority and its member agencies are planning to develop a diverse supply of resources. The unavailability of any one supply source will be buffered because of the diversity of the supplies: the region is not reliant on a single source. To replace or supplement an existing supply, the Water Authority could take steps to further long-term efficient water use and work with member agencies to further maximize development of recycled water, potable reuse, groundwater, and seawater desalination. To adequately plan for potential supply uncertainties and identify alternative sources, the 2015 Plan contains a scenario planning process described in **Section 10**.

9.5 Additional Planned Supply Projects

The mix of current and future supplies is developed jointly between the Water Authority and its member agencies. The mix of supplies is being represented in two ways. Verifiable supplies are those supplies identified by the Water Authority or member agencies as having achieved a level of certainty in their planning and implementation, such as where CEQA has been satisfied, permits are in hand, or contracts have been executed. As part of this general definition, these projects also have the political support of the governing body to move forward and be implemented at this time.

Verifiable supplies are included in water supply assessments and verifications prepared by retail water agencies and used by the cities and county in their land use decisions regarding available water supplies for growth under SB 221 and SB 610. Those projects with adequate documentation regarding implementation and supply utilization, or existing projects already planned for expansion, were included in the assessments discussed in **Sections 9.2** and **9.3**. Additional planned supplies are those that have not yet achieved the same level of certainty as the verifiable supplies, but have progressed to a point where the Water Authority or a member agency has taken significant financial actions to pursue the project. Additional planned supplies are not included in supply verifications for SB 221 and SB 610.

These additional planned supplies are important to the region for a number of reasons. The Water Authority and member agencies must continue to strive to develop cost-effective local resources that can further diversify the region’s supplies and reduce demands for imported water from Metropolitan. They provide objectives for the region to work toward by resolving any funding, regulatory, and other constraints associated with implementation. As part of conducting comprehensive supply planning, both the verifiable and additional planned projects are evaluated in regard to meeting future demands and the need for supplemental supplies from Metropolitan. Table 9-8 includes the evaluation of verifiable and additional planned projects compared with projected water demands in a normal year. It is important to emphasize that this evaluation is presented as a potential supply scenario and not the region’s reliability analysis for purposes of compliance with state laws governing approval of land use projects (SB 610 and SB 221).

Table 9-8. Supply Scenario with Additional Planned Projects (Normal Year AF/YR)

	2020	2025	2030	2035	2040
Water Authority Supplies					
IID Water Transfer	190,000	200,000	200,000	200,000	200,000
ACC and CC Lining Projects	80,200	80,200	80,200	80,200	80,200
Regional Seawater Desalination	50,000	50,000	50,000	50,000	50,000
Sub-Total	320,200	330,200	330,200	330,200	330,200
Water Authority Additional Planned (Desal)	0	5,600	5,600	61,600	61,600
Water Authority Total	320,200	335,800	335,800	391,800	391,800
Member Agency Supplies					
Verifiable Total	132,086	136,798	139,822	140,082	140,722
(Additional Planned)					
Surface Water	0	0	0	0	0
Water Recycling	2,840	9,926	10,926	10,926	10,926
Seawater Desalination	0	15,100	15,600	16,100	16,800
Potable Reuse	4,470	29,086	46,686	106,099	106,099
Brakish GW Recovery	0	0	0	0	0
Groundwater	3,100	3,100	3,600	3,600	3,600
Member Agency Total	142,496	194,010	216,634	276,807	278,147
Total Projected Local Supplies	462,696	529,810	552,434	668,607	669,947

Metropolitan Water District Supplies	120,486	102,043	101,166	3,717	27,688
Total Supplies	583,182	631,853	653,600	672,324	697,635
Total Demands w/ Water Efficiency Savings	583,182	631,853	653,600	672,324	697,635

¹ Normal water year demands based on 1960 – 2008 hydrology.
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The specific member agency local recycled water, potable reuse and brackish groundwater projects included in the figures are listed in Tables F-2 and F-4, respectively, in Appendix F. Also included in Appendix F are conceptual projects identified by the member agencies.

Appendix G
Rainbow Drought Response Ordinance 15-08

ORDINANCE NO. 15-08

**AN ORDINANCE OF RAINBOW MUNICIPAL WATER DISTRICT
ADOPTING A DROUGHT RESPONSE CONSERVATION PROGRAM**

Be it ordained by the Board of Directors of Rainbow Municipal Water District as follows;

WHEREAS, article 10, section 2 of the California Constitution declares that waters of the State are to be put to beneficial use, that waste, unreasonable use, or unreasonable method of use of water be prevented, and that water be conserved for the public welfare; and

WHEREAS, conservation of current water supplies and minimization of the effects of water supply shortages that are the result of drought are essential to the public health, safety and welfare; and

WHEREAS, regulation of the time of certain water use, manner of certain water use, design of rates, method of application of water for certain uses, installation and use of water-saving devices, provide an effective and immediately available means of conserving water; and

WHEREAS, California Water Code sections 375 et seq. authorize water suppliers to adopt and enforce a comprehensive water conservation program; and

WHEREAS, adoption and enforcement of a comprehensive water conservation program will allow the Rainbow Municipal Water District to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by California Water Code sections 350 et seq.; and

WHEREAS, San Diego County is a semi-arid region and local water resources are scarce. The region is dependent upon imported water supplies provided by the San Diego County Water Authority, which obtains a substantial portion of its supplies from the Metropolitan Water District of Southern California. Because the region is dependent upon imported water supplies, weather and other conditions in other portions of this State and of the Southwestern United States affect the availability of water for use in San Diego County; and

WHEREAS, the San Diego County Water Authority has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of the Water Authority's programs to provide a reliable supply of water to meet the needs of the Water Authority's 24 member public agencies, including the Rainbow Municipal Water District. The Water Authority's Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Water Authority's Urban Water Management Plan; and

WHEREAS, as anticipated by its Urban Water Management Plan, the San Diego County Water Authority, in cooperation and consultation with its member public agencies, has adopted a Drought Management Plan, which establishes a progressive program for responding to water supply limitations resulting from drought conditions. This ordinance is intended to be consistent with and to implement the Water Authority's Drought Management Plan; and

WHEREAS, the Water Authority's Drought Management Plan contains three stages containing regional actions to be taken to lessen or avoid supply shortages. This ordinance contains drought response levels that correspond with the Drought Management Plan stages; and

WHEREAS, the Rainbow Municipal Water District, due to the geographic and climatic conditions within its territory and its dependence upon water imported and provided by the San Diego County Water Authority, may experience shortages due to drought conditions, regulatory restrictions enacted upon imported supplies and other factors. The Rainbow Municipal Water District has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of its programs to provide a reliable supply of water to meet the needs of the public within its service territory. The Rainbow Municipal Water District Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Urban Water Management Plan adopted by the Rainbow Municipal Water District; and

WHEREAS, the Governor of California issued an Executive Order on April 1, 2015 mandating certain water use restrictions and conservation targets for water utilities, and

WHEREAS, the State Water Resources Control Board adopted regulations implementing the Governor's Executive Order on May 18, 2015, and

WHEREAS, the San Diego County Water Authority adopted Shortage Management Actions on May 14, 2015 that include allocations for the Transitional Special Agricultural Water Rate supply and the Municipal and Industrial supply in addition to adding new restrictions on residential watering days, and

WHEREAS, the water conservation measures and progressive restrictions on water use and method of use identified by this ordinance provide certainty to water users and enable Rainbow Municipal Water District to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

NOW, THEREFORE, the Board of Directors of Rainbow Municipal Water District does ordain as follows:

SECTION 1.0 DECLARATION OF NECESSITY AND INTENT

(a) This ordinance establishes water management requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the Rainbow Municipal Water District (RMWD) in order to assure adequate

supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management not only in times of drought, but at all times.

(b) This ordinance establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

(c) Level 1 condition drought response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by RMWD. During drought response condition Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals.

(d) During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established by this ordinance are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies specified in this ordinance and as provided in RMWD Administrative or Municipal Code.

SECTION 2.0 DEFINITIONS

(a) The following words and phrases whenever used in this chapter shall have the meaning defined in this section:

1. “Grower” refers to those engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. “Grower” does not refer to customers who purchase water subject to the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs.

2. “Water Authority” means the San Diego County Water Authority.

3. “DMP” means the Water Authority’s Drought Management Plan in existence on the effective date of this ordinance and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

4. “Metropolitan” means the Metropolitan Water District of Southern California.

5. “Person” means any natural person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the RMWD.

SECTION 3.0 APPLICATION

(a) The provisions of this ordinance apply to any person in the use of any water provided by the RMWD.

(b) This ordinance is intended solely to further the conservation of water. It is not intended to implement any provision of federal, State, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff. Refer to the local jurisdiction or Regional Water Quality Control Board for information on any stormwater ordinances and stormwater management plans.

(c) Nothing in this ordinance is intended to affect or limit the ability of the RMWD to declare and respond to an emergency, including an emergency that affects the ability of the RMWD to supply water.

(d) Notwithstanding any other section of this ordinance, the restrictions imposed upon the use of water herein do not apply to use of water from private wells or to recycled water.

(e) Nothing in this ordinance shall apply to use of water that is subject to a special supply program, such as the Water Authority Transitional Special Agricultural Water (TSAWR) Rate program, except as may be specified in that program. For instance, the water reductions contained in this ordinance shall not be in addition to any mandatory reductions which may apply to a participant in the TSAWR, unless expressly stated in the TSAWR. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program. A person using water subject to a special supply program and other water provided by the RMWD is subject to this ordinance in the use of the other water.

SECTION 4.0 DROUGHT RESPONSE LEVEL 1 – DROUGHT WATCH CONDITION

(a) A Drought Response Level 1 condition is also referred to as a “Drought Watch” condition. A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be supply shortages and that a consumer demand reduction is required in order to ensure that sufficient supplies will be available to meet anticipated demands. The General Manager shall declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices identified in this ordinance.

(b) During a Level 1 Drought Watch condition, RMWD will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement the following water conservation practices. [The same water conservation practices become mandatory if RMWD declares a Level 2 Drought Alert condition]:

1. Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.

2. Stop water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, or overspray, etc. Similarly, stop water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

3. Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.

4. Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.

5. Irrigate nursery and commercial grower's products before 10 a.m. and after 6 p.m. only. Watering is permitted at any time with a hand-held hose equipped with a positive shut-off nozzle, a bucket or watering can. Irrigation of nursery propagation beds is permitted at any time. Watering of livestock is permitted at any time.

6. Use re-circulated water to operate ornamental fountains.

7. Wash vehicles using a bucket and a hand-held hose with positive shut-off nozzle, mobile high pressure/low volume wash system, or at a commercial site that re-circulates (reclaims) water on-site. Avoid washing during hot conditions when additional water is required due to evaporation.

8. Serve and refill water in restaurants and other food service establishments only upon request.

9. Offer guests in hotels, motels, and other commercial lodging establishments the option of not laundering towels and linens daily.

10. Repair all water leaks within five (5) days of notification by the RMWD unless other arrangements are made with the General Manager.

11. Use recycled or non-potable water for construction purposes when available.

(c) During a Drought Response Level 2 condition or higher, all persons shall be required to implement the conservation practices established in a Drought Response Level 1 condition.

**SECTION 5.0 DROUGHT RESPONSE LEVEL 2 – DROUGHT ALERT
CONDITION**

(a) A Drought Response Level 2 condition is also referred to as a “Drought Alert” condition. A Level 2 condition may apply when the Water Authority notifies its member agencies that due to cutbacks caused by drought or other reduction in supplies, a consumer¹ demand reduction is required in order to have sufficient supplies available to meet anticipated demands. The RMWD Board of Directors shall consider the Water Authority declaration of a “Drought Alert” condition, and may declare the existence of a Drought Response Level 2 condition and direct the General Manager to implement the mandatory Level 2 conservation measures identified in this ordinance. The RMWD Board of Directors may make a determination to enter or exit the Drought Response Level 2 stage depending on a variety of factors, including but not limited to local water availability, RMWD’s ability to meet their allocation supply, and/or the financial impact of implementation on RMWD.

(b) All persons using RMWD water shall comply with Level 1 Drought Watch water conservation practices during a Level 2 Drought Alert, and shall also comply with the following additional conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to: weather based controllers, drip/micro-irrigation systems and stream rotor sprinklers.

a. Operating irrigation systems in a manner that allows water to run off the property is defined as water waste. In cases where irrigating for 10 minutes per station will result in water runoff due to the inability of the soil or landscape materials to absorb that amount of water, customers shall alter their watering schedules to prevent such runoff. The customer shall modify the schedules to prevent runoff but shall ensure that the total reduction in irrigation is equivalent to the two day per week watering schedule. Customers may adjust their schedules to water on more than two days per week so long as the equivalent reduction in irrigation is achieved.

3. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 5 (b) (1), on the same schedule set forth in section 5 (b) (1) by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

¹ Also referred to as Municipal or Industrial (M&I) water user.

4. Repair all leaks within seventy-two (72) hours of notification by the RMWD unless other arrangements are made with the General Manager.

5. No application of potable water to outdoor landscapes is allowed during and within 48 hours of measureable rainfall.

SECTION 6.0 DROUGHT RESPONSE LEVEL 3 – DROUGHT CRITICAL CONDITION

(a) A Drought Response Level 3 condition is also referred to as a “Drought Critical” condition. A Level 3 condition applies when the Water Authority notifies its member agencies that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction is required in order to have sufficient supplies available to meet anticipated demands. The RMWD Board of Directors shall declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in this ordinance.

(b) All persons using RMWD water shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 6 (b) (1), on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation.

3. Stop filling or re-filling swimming pools, spas, ornamental fountains, lakes ponds or other water features, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.

4. Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.

5. Repair all leaks within forty-eight (48) hours of notification by the RMWD unless other arrangements are made with the General Manager.

(c) Upon the declaration of a Drought Response Level 3 condition, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances:

1. A valid, unexpired building permit has already been issued for the project;
or
2. In the opinion of the RMWD Board of Directors the project is necessary to protect the public's health, safety, and welfare; or
3. The applicant provides substantial evidence of an enforceable binding commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of RMWD.

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted **for a period of one year or less, provided that such period shall in no event commence before the effective date of this ordinance.**

(d) Upon the declaration of a Drought Response Level 3 condition, RMWD will suspend consideration of annexations to its service area until such time that the Drought Response Level 2 is decreased to a Drought Response Level 1 condition or lower.

(e) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penalize persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 7.0 DROUGHT RESPONSE LEVEL 4 – DROUGHT EMERGENCY CONDITION

(a) A Drought Response Level 4 condition is also referred to as a “Drought Emergency” condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code section 350 and notifies its member agencies that Level 4 requires a demand reduction in order for the RMWD to have maximum supplies available to meet anticipated demands. The RMWD Board of Directors shall declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350.

(b) All persons using RMWD water shall comply with conservation measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions and shall also comply with the following additional mandatory conservation measures:

1. Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the RMWD has determined that recycled water is available and may be lawfully applied to the use:

A. Maintenance of trees and shrubs that are watered on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

B. Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated;

C. Maintenance of existing landscaping for erosion control;

D. Maintenance of plant materials identified to be rare or essential to the well being of rare animals;

E. Maintenance of landscaping within active public facilities, including parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week according to the schedule established under section 6 (b) (1);

F. Watering of livestock; and

G. Public works projects and actively irrigated environmental mitigation projects.

2. Repair all water leaks within twenty-four (24) hours of notification by the RMWD unless other arrangements are made with the General Manager.

(c) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penalize persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 8.0 CORRELATION BETWEEN DROUGHT MANAGEMENT PLAN AND DROUGHT RESPONSE LEVELS

(a) The correlation between the Water Authority's DMP stages and the RMWD's drought response levels identified in this ordinance is described herein. Under DMP Stage 1, the RMWD would implement Drought Response Level 1 actions. Under DMP Stage 2, the RMWD

would implement Drought Response Level 1 or Level 2 actions. Under DMP Stage 3, the RMWD would implement Drought Response Level 2, Level 3, or Level 4 actions.

(b) The drought response levels identified in this ordinance correspond with the Water Authority DMP as identified in the following table:

Drought Response Levels	Use Restrictions	Conservation Target	DMP Stage
1 - Drought Watch	Voluntary	Up to 10%	Stage 1 or 2
2 - Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 - Drought Critical	Mandatory	>20 to 40%	Stage 3
4 - Drought Emergency	Mandatory	Above 40%	Stage 3

SECTION 9.0 PROCEDURES FOR DETERMINATION AND NOTIFICATION OF DROUGHT RESPONSE LEVEL

(a) The existence of a Drought Response Level 1 condition may be declared by the General Manager upon a written determination of the existence of the facts and circumstances supporting the determination. A copy of the written determination shall be filed with the Clerk or Secretary of the RMWD and provided to the RMWD Board of Directors. The General Manager may publish a notice of the determination of existence of Drought Response Level 1 condition in one or more newspapers, including a newspaper of general circulation within the RMWD. The RMWD may also post notice of the condition on their website.

(b) The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the RMWD Board of Directors adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices.

(c) The existence of a Drought Response Level 4 condition may be declared in accordance with the procedures specified in California Water Code sections 351 and 352. The mandatory conservation measures applicable to Drought Response Level 4 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices. If the RMWD establishes a water allocation, it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the RMWD customarily mails the billing statement for fees or charges for on-going water service. Water allocation shall be effective on the fifth (5) day following the date of mailing or at such later date as specified in the notice.

(d) The RMWD Board of Directors may declare an end to a Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

SECTION 10.0 HARDSHIP VARIANCE

(a) If, due to unique circumstances, a specific requirement of this ordinance would result in undue hardship to a person using agency water or to property upon which agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water uses, then the person may apply for a variance to the requirements as provided in this section.

(b) The variance may be granted or conditionally granted, only upon a written finding of the existence of facts demonstrating an undue hardship to a person using agency water or to property upon with agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user’s property.

1. Application. Application for a variance shall be a form prescribed by RMWD and shall be accompanied by a non-refundable processing fee in an amount set by resolution of the RMWD Board of Directors.

2. Supporting Documentation. The application shall be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant.

3. Required Findings for Variance. An application for a variance shall be denied unless the approving authority finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the RMWD, all of the following:

A. That the variance does not constitute a grant of special privilege inconsistent with the limitations upon other RMWD customers.

B. That because of special circumstances applicable to the property or its use, the strict application of this ordinance would have a disproportionate impact on the property or use that exceeds the impacts to customers generally.

C. That the authorizing of such variance will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the RMWD to effectuate the purpose of this chapter and will not be detrimental to the public interest.

D. That the condition or situation of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.

4. Approval Authority. The General Manager shall exercise approval authority and act upon any completed application no later than 30 days after submittal and may approve, conditionally approve, or deny the variance. The applicant requesting the variance shall be promptly notified in writing of any action taken. Unless specified otherwise at the time a variance is approved, the variance applies to the subject property during the term of the mandatory drought response.

5. Appeals to RMWD Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application to the being mailed to the applicant. The appeal must be in the form of a written request for a hearing, and shall state the grounds for the appeal. At a public meeting, the RMWD Board of Directors shall act as the approval authority and review the appeal de novo by following the regular variance procedure. The decision of the RMWD Board of Directors is final.

SECTION 11.0 VIOLATIONS AND PENALTIES

(a) Any person, who uses, causes to be used, or permits the use of water in violation of this ordinance is guilty of an offense punishable as provided herein.

(b) Each day that a violation of this ordinance occurs is a separate offense.

(c) Administrative fines may be levied for each violation of a provision of this ordinance as follows:

1. One hundred dollars for a first violation.
2. Two hundred dollars for a second violation of any provision of this ordinance within one year from occurrence of the first violation.
3. Five hundred dollars for each additional violation of this ordinance within one year of the first violation.

(d) Violation of a provision of this ordinance is subject to enforcement through installation of a flow-restricting device in the meter.

(e) Each violation of this ordinance may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding \$1,000, or by both as provided in Water Code section 377.

(f) Willful violations of the mandatory conservation measures and water use restrictions as set forth in Section 7.0 and applicable during a Level 4 Drought Emergency condition may be enforced by discontinuing service to the property at which the violation occurs as provided by Water Code section 356.

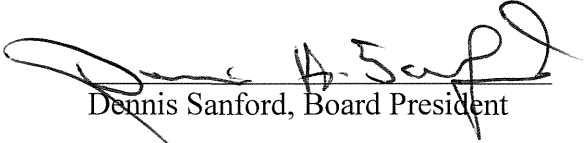
(g) All remedies provided for herein shall be cumulative and not exclusive.


SECTION 12.0 EFFECTIVE DATE

This ordinance is effective immediately upon adoption or as otherwise established by State law for RMWD.

PASSED, APPROVED AND ADOPTED this 23rd day of June, 2015, by the following vote:

AYES: Directors Brazier, Lucy, Sanford, and Walker
NOES: Director Griffiths
ABSTAIN: None
ABSENT: None



Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary

Appendix H
RMWD BMP Report 2013-2014

2014 CUWCC Report

(Screenshots)



Reporting Unit:Rainbow Municipal Water District
Signatory:Rainbow Municipal Water District
RU Type:Retail

Welcome **Maricela Munoz** | [Logout](#)
 Role: **Editor**
CUWCC Reporting Database

Home
Annual Input Forms
Base Year Data
Reports
Reporting Unit

Reporting Year

<

2014

>

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices**
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

GPCD

ON TRACK
[Online Help](#)

BMP 1.1 Operations Practices

Submitted to CUWCC
 5/31/2016 5:19:53 PM

Form Complete ?
Form Status: Submitted

Conservation Coordinator

Conservation Coordinator Yes No N/A ON TRACK

Contact Information

First Name	Maricela
Last Name	Munoz
Title	Billing Specialist
Phone	760-728-1178
Email	mmunoz@rainbowmwd.com

Water Waste Prevention

An agency MUST do at least one or more of the following six strategies; although water agencies are encouraged to do them all when possible.

Option A: Describe (upload or provide an electronic link) the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP. ON TRACK

Upload File

NA

URL

Describe Ordinance or Terms 90 characters remaining

Ordinance 11-01 declaring that waste, unreasonable use, or unreasonable method of use of water be prevented, and that water be conserved for the public welfare.



Reporting Year

< **2014** >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control**
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective

Yes No N/A

ON TRACK

Type of Program Activities Used to Detect Unreported Leaks

22 characters remaining

Customer service staff utilize customer service database software to identify spikes in usage/reads. Meter reading staff respond by either visiting the site/meter where spikes are occurring, notify customer, and/or make repairs.

Does your agency maintain in-house records of audit or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC?

Yes No N/A

ON TRACK

Does your agency keeps records of each component analysis performed, and incorporates results into future annual standard water balances?

Yes No N/A

Annual Summary Information

ON TRACK

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired	Economic Value Of RealLoss	Economic Value Of AppLoss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Intervention	Linear feet of pipe renewal and rehabilitation	Water Saved (AF/Year)
124	52,281.00	937,375.0	315.00	<input type="checkbox"/>			

Reporting Year

< **2014** >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control

1.3 Retail Metering with Commodity

- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

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GPCD:

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Provisional Coverage Indication NOT ON TRACK
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BMP 1.3 Metering with Commodity Rates

Submitted to CUWCC
5/31/2016 5:19:53 PM

Form Complete ?

Form Status: Submitted

Implementation

ON TRACK

Does your agency have any unmetered service connections? Yes No N/A

If YES, has your agency completed a meter retrofit plan? Yes No N/A

If YES, number of previously unmetered accounts fitted with meters during reporting year:

ON TRACK

Are all new service connections being metered? Yes No N/A

Are all new service connections being billed volumetrically? Yes No N/A

ON TRACK

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? ? Yes No N/A

NA

Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# Estimated Bills/Year	# Of Meter Readings per Year
Single-Family	5,117.00	5,117.00	5,117.00	Monthly	61,404.00	61,404.00
Multi-Family	88.00	88.00	88.00	Monthly	1,056.00	1,056.00
Commercial	255.00	255.00	255.00	Monthly	3,060.00	3,060.00
Agricultural	2,362.00	2,362.00	2,362.00	Monthly	28,344.00	28,344.00



Reporting Year

< 2014 >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity

1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

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BMP 1.4 Retail Conservation Pricing

Provisional Coverage Indication

[Online Help](#)

**Submitted to CUWCC
5/31/2016 5:19:53 PM**

Form Complete

Form Status: Submitted

A. Implementation (Water Rate Structure)

Based on Rate Structure **Not On Track**
Based on Revenue **Not On Track**

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class.

Rate Structure Option	Customer Class Name	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed) Charges	New	
Uniform	Single-Family	5,691,834.00	4,458,237.00	Edit	Delete
Uniform	Multi-Family	396,639.00	150,677.00	Edit	Delete
Uniform	Agricultural	8,150,338.00	4,483,452.00	Edit	Delete
Uniform	Commercial	356,619.00	260,100.00	Edit	Delete
		\$14,595,430.00	\$9,352,466.00		

B. Implementation Options (Compliance with Conservation Pricing Options (Water))

Please Select an Option

Option 1: Annual Revenue As Reported Option 2: Canadian Water Wastewater Assn Rate Design Model

Use 3 years average instead of most recent year

If CWWA is selected, please upload spreadsheet here.

NA

Canadian Water & Wastewater Association Rate Design Model Implementation

C. Canadian Water & Wastewater Association

Reporting Year

< **2014** >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity

1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

GPCD

\$0.00

\$0.00

D. Retail Waste Water (Sewer) Rate Structure by Customer Class

Does your agency provide sewer service? Yes No N/A

Select the Retail Waste Water (Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure Option	Customer Class Name	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed) Charges
Non-Volumetric Flat Rate	Single-Family	2,160,538.00	
Non-Volumetric Flat Rate	Other	389,322.00	247,812.00
		\$2,549,860.00	\$247,812.00

Option 3: Click here to use option 3 and/or to report your Agency's good faith efforts - redirects to new page

At Least As Effective As

Agency is implementing an 'At Least As Effective As' variant of this BMP? Yes No N/A

If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 of the MOU and why you consider it to be "at least as effective as."

250 characters remaining

Please Upload Document(s)

NA

Exemption Request

Reporting Year

< **2014** >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

2.1 Public Information Programs

- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

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BMP 2.1 Public Information Programs

Provisional Coverage Indication **ON TRACK**
[Online Help](#)

Submitted to CUWCC
5/31/2016 5:19:53 PM

Form Complete

Form Status: Submitted

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

Yes No N/A

If "Yes" please select council wholesale agencies;

San Diego County Water Authority

Please provide the name of agency, contact name and email address if not A Council Group 1 member.

133 characters remaining

SAN DIEGO COUNTY WATER AUTHORITY
 LORI SWANSON
 LSWANSON@SDCWA.ORG

Report a minimum of four water conservation related contacts your agency had with the public during the year.

ON TRACK

Public Information Programs List

Did at least one contact take place during each quarter of the reporting year?

Number of Public Contacts	Public Information Programs
7,160	Newsletter articles on conservation
7,160	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
14,320	

Contact with the Media

Yes No N/A

ON TRACK

Media Contacts List

Did at least one contact take place during each quarter of the reporting year?

Reporting Year

< **2014** >

Water Sources and Usage

Potable Water Sources

Non Potable Water Sources

Potable Water Uses

Non Potable Water Uses

BMP 1

1.1 Retail Operations Practices

1.2 Retail Water Loss Control

1.3 Retail Metering with Commodity

1.4 Retail Conservation Pricing

BMP 2

2.1 Public Information Programs

2.2 School Education

BMP 3 - Residential

3 Traditional / FlexTrack

BMP 4 - CII

4 Traditional / FlexTrack

BMP 5 - Landscape

5 Traditional / FlexTrack

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Number of Media Contacts	Media Contacts Type
4	News releases
4	

Agency Website Updates

Enter your agency's URL (website address): *232 characters remaining*

Describe a minimum of four water conservation related updates to your agency's website that took place during the year: *124 characters remaining*

Did at least one website update take place during each quarter of the reporting year? Yes No N/A

ON TRACK

Public Information Programs Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or break the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount	Personnel Costs Included?	Comments
Public Relations and Conservation	2,000.00	<input checked="" type="checkbox"/>	
\$2,000.00			

Public Information Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget. For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?

Reporting Year

< 2014 >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs

2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

GPCD

- GPCD

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Provisional Coverage Indication **ON TRACK**
Online Help

BMP 2.2 School Education Programs, Retail Agencies

Submitted to CUWCC
5/31/2016 5:19:53 PM

Form Complete ? Form Status: Submitted

Does your agency implement a school education program? Yes No N/A

Are there one or more wholesale agencies performing school education programs which can be counted to help your agency comply with the BMP?

ON TRACK

Materials meet state education framework requirements. Description: *192 characters remaining*

ON TRACK

Materials distributed to K-6 students. Description of materials distributed to K-6 students: *210 characters remaining*

Number of student reached.

Materials distributed to 7-12 students. (optional) Description of materials distributed to 7-12 students: *169 characters remaining*

Annual budget for school education program. **ON TRACK**

Reporting Year

< **2014** >

Water Sources and Usage

Potable Water Sources

Non Potable Water Sources

Potable Water Uses

Non Potable Water Uses

BMP 1

1.1 Retail Operations Practices

1.2 Retail Water Loss Control

1.3 Retail Metering with
Commodity

1.4 Retail Conservation Pricing

BMP 2

2.1 Public Information
Programs

2.2 School Education

BMP 3 - Residential

3 Traditional / FlexTrack

BMP 4 - CII

4 Traditional / FlexTrack

BMP 5 - Landscape

5 Traditional / FlexTrack

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\$7500.00

ON TRACK

194 characters remaining

Description of all other water supplier education programs.

Youth and scout merit patch program. Splash science lab.

School Program Activities

Classroom presentations:

Number of presentations

Number of attendees

250 characters remaining

Describe the topics covered in your classroom presentations:

Large group assemblies:

Number of presentations

Number of attendees

Children's water festivals or other events:

Number of presentations

Number of attendees

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations

Number of attendees

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Description

250 characters remaining

Number distributed

Staffing children's booths at events and festivals:

Number of booths

Number of attendees

Water conservation contests such as poster and photo:

Reporting Year

< **2014** >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs

2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

GPCD

GPCD

Review / Submit

Staffing children's booths at events and festivals:

Number of booths 2	Number of attendees 500
-----------------------	----------------------------

Water conservation contests such as poster and photo:

Description <i>220 characters remaining</i> PARTICIPATED IN WATER CALENDAR	Number of Participants 300
---	-------------------------------

Offer monetary awards/funding or scholarships awards to students:

Number offered	Total funding
----------------	---------------

Teacher training workshops:

Number of presentations	Number of attendees
-------------------------	---------------------

Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:

Number of tours or field trips 50	Number of participants 300
--------------------------------------	-------------------------------

College internships in water conservation offered:

Number of internships	Total funding
-----------------------	---------------

Career fair/workshops:

Number of presentations	Number of attendees
-------------------------	---------------------

Additional program(s) supported by agency:

Not mentioned above <i>250 characters remaining</i>	Number of events (if applicable)	Number of participants
--	----------------------------------	------------------------

Total reporting period budget expenditures for school education programs (include all agency costs):

At Least As Effective As

Is your Agency implementing an "At Least As Effective As" Variant of this BMP? Yes No N/A

Reporting Year

< 2014 >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 3 Residential

Online Help

Form Complete

Save All

From the Coverage Option dropdown menu, select the track you want to use for coverage in this BMP. You can enter data for all tracks in this form. The data and water savings are saved for future use. Data and equations corresponding to the track you select here are used in this year's coverage report.

Coverage Option: GPCD Calculate

Total Measured Water Savings (AF/Year)

Form Status: Not Submitted

Traditional	FlexTrack	Total	FlexTrack Target	Prior Activities Credit
2.02	0	2.02	0.05	

From the Coverage Option drop down menu to the right, select the track you want to use for coverage in this BMP. You can enter data for all tracks in this form. The data and water savings are saved for future use. Data and equations corresponding to the track you select here are used in this year's coverage report.

Residential Assistance / Landscape Water Survey

Traditional

	Single Family Accounts	Target	Coverage	Multi Family Units	Target	Coverage
Total Number	45			0		
Total Number Of Leak Det Surveys	45	0.68	ONTRACK	0	0	
Total Number Of Showerheads	0					
Total Number Of Faucet Aerators	0			0		
Total Number of Landscape Water Survey	45	0.68	ONTRACK	0		

Has your agency reached a 75% market saturation for showerheads? Yes No N/A

Reporting Year

< 2014 >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

Traditional

	Target	Coverage
Number of installations for HECWs	0.45	

Enter the Average Water Factor for all installations if it is less than 5.0:

Are financial incentives provided for HECWs? Yes No N/A

Has your agency completed a HECW Market Penetration Study? Yes No N/A

HECW Market Penetration Study Documents

Choose File No file chosen
Upload Clear

Flex

If there are water savings in this measure, upload your back up data, or a methodology Spreadsheet that you have created.

Measured Water Savings AF/YR:

Choose File No file chosen
Upload Clear

WaterSense Specification (WSS) toilets



- Home
- Annual Input Forms
- Base Year Data
- Reports
- Reporting Unit

Reporting Year

< 2014 >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control**
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

GPCD

- GPCD

[Review / Submit](#)

Provisional Coverage Indication ON TRACK
Online Help

BMP 1.2 Water Loss Control

Submitted to CUWCC
5/31/2016 5:19:53 PM

Form Complete Form Status: Submitted

AWWA Water Audit

Agency to complete a water audit and balance using the AWWA software Yes No N/A **ON TRACK**

Upload Worksheets (AWWA Water Audit) **ON TRACK**

Uploaded filename: Copy of AWWA-WAS-v5-09152014.xls

Water Audit Validity Score

Agency Completed Training In The AWWA Water Audit Method Yes No N/A **ON TRACK**

Agency Completed Training In The Component Analysis Process Yes No N/A **ON TRACK**

Completed/Updated the Component Analysis (at least every 4 years) (Effective from 2013) Yes No N/A **ON TRACK**

Component Analysis Completed/Updated Date: format:mm/dd/yyyy

Water Loss Performance

Agency repaired all reported leaks & breaks to the extent cost effective Yes No N/A **ON TRACK**

Recording Keeping Requirements Beginning in Year 2

Does your agency maintain a record keeping system for the following?

Date/Time Leak Reported	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Leak Location	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
Type of Leaking Pipe Segment or Fitting	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Leak Running Time From Report to Repair	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
Leak Volume Estimate :	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Cost of Repair:	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
Do you have an infrastructure rehabilitation and renewal program?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		

Reporting Year

< **2014** >

Water Sources and Usage

- Potable Water Sources
- Non Potable Water Sources
- Potable Water Uses
- Non Potable Water Uses

BMP 1

- 1.1 Retail Operations Practices
- 1.2 Retail Water Loss Control
- 1.3 Retail Metering with Commodity
- 1.4 Retail Conservation Pricing

BMP 2

- 2.1 Public Information Programs
- 2.2 School Education

BMP 3 - Residential

- 3 Traditional / FlexTrack

BMP 4 - CII

- 4 Traditional / FlexTrack

BMP 5 - Landscape

- 5 Traditional / FlexTrack

GPCD

GPCD

Review / Submit

Form Complete ?

Save ALL

From the Coverage Option dropdown menu, select the track you want to use for coverage in this BMP. You can enter data for all tracks in this form. The data and water savings is saved for future use. Data and equations corresponding to the track you select here is used in this year's coverage report.

Coverage Option: GPCD Calculate

Total Measured Water Savings (AF/Year)

Form Status: Not Submitted

Traditional	FlexTrack	Total	FlexTrack Target	Prior Activities ?
1225.74	0	1225.74	575.21	<input style="width: 80%;" type="text"/>

You must enter all measured water savings manually entered in the summary cells on the right. For each measure entered, upload a spreadsheet with sufficient information to show the way that water savings were measured and that the measure was adequately tracked (i.e., all relevant data was collected) - in some cases there are specific data points also requested in the flex track data entry form which are necessary to show that the measure was implemented as described.

1) Accounts with Dedicated Irrigation Meters

Not On Track

Traditional

- a) Number of dedicated irrigation meter accounts
- b) Number of dedicated irrigation meter accounts with water budgets
- c) Aggregate water use for all dedicated non-recreational landscape accounts with water budgets
- d) Aggregate acreage assigned water budgets for dedicated non-recreational landscape accounts with budgets
- Aggregate acreage of recreational areas assigned water budgets for dedicated recreational landscape accounts with budgets
- Preserved water use records and budgets for customers with dedicated landscape irrigation accounts for at least four years
 Yes
 No
 N/A

If there are water savings in this measure, upload your backup data or the methodology spreadsheet that you have created. ?

Measured Water Savings (AF/Year)



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DROUGHT ORDINANCE UPDATE

DESCRIPTION

In August 2015, the RMWD Board of Directors amended our Drought Ordinance to reflect the mandatory conservation requirements established by the State Water Resources Control Board (SWRCB). These mandatory requirements were part of a groundbreaking set of Emergency Regulations that were part of an Executive Order from Governor Brown. The revisions to the Drought Ordinance brought our local regulations in line with those from the SWRCB.

Since that time, the SWRCB, thanks to a rapidly improving water supply situation, has decided to change the emergency regulations and step back from some of the requirements of the earlier versions of the regulations. On May 18, 2016 the SWRCB adopted revisions to the emergency regulations that represented a positive step for our region. In these revised regulations, the mandatory statewide volumetric cutbacks that were disconnected from regional supply conditions will be replaced with cutbacks that each agency will self-certify as being appropriate for their region. In our case, our cutback percentage will drop from 28% to 0% as we have a full allocation of supply for the next few fiscal years.

Part of the changes being made by the SWRCB is to make certain water consumption practices permanently illegal. These items are listed in our current drought ordinance under Level 1 as voluntary practices, so we need to revise the ordinance to reflect this change. The SWRCB has made the following end-user requirements mandatory:

- (1) The application of potable water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures.
- (2) The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.
- (3) The application of potable water to driveways and sidewalks.
- (4) The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.
- (5) The application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall.
- (6) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.
- (7) The irrigation with potable water of ornamental turf on public street medians.
- (8) The irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.

Our water supply conditions are such that a return to Drought Level 1 is appropriate. Drought Level 1 includes no specific watering restrictions except for those listed above. A separate resolution will be provided for Board consideration on the move to Drought Level 1

POLICY


Ordinance No. 16-10 amending the District's Drought Ordinance

BOARD OPTIONS/FISCAL IMPACTS

There is no specific fiscal impact to the District with this ordinance but drought rules do affect water sales. It is unclear whether these changes to the Drought ordinance will impact water sales as certain conservation practices, once established, can remain indefinitely.

STAFF RECOMMENDATION

Staff recommends that the Board adopt the revised Drought Ordinance No. 16-10.



Tom Kennedy
General Manager

June 28, 2016

ORDINANCE NO. 16-10

**AN ORDINANCE OF RAINBOW MUNICIPAL WATER DISTRICT
ADOPTING A DROUGHT RESPONSE CONSERVATION PROGRAM**

Be it ordained by the Board of Directors of Rainbow Municipal Water District as follows;

WHEREAS, article 10, section 2 of the California Constitution declares that waters of the State are to be put to beneficial use, that waste, unreasonable use, or unreasonable method of use of water be prevented, and that water be conserved for the public welfare; and

WHEREAS, conservation of current water supplies and minimization of the effects of water supply shortages that are the result of drought are essential to the public health, safety and welfare; and

WHEREAS, regulation of the time of certain water use, manner of certain water use, design of rates, method of application of water for certain uses, installation and use of water-saving devices, provide an effective and immediately available means of conserving water; and

WHEREAS, California Water Code sections 375 et seq. authorize water suppliers to adopt and enforce a comprehensive water conservation program; and

WHEREAS, adoption and enforcement of a comprehensive water conservation program will allow the Rainbow Municipal Water District to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by California Water Code sections 350 et seq.; and

WHEREAS, San Diego County is a semi-arid region and local water resources are scarce. The region is dependent upon imported water supplies provided by the San Diego County Water Authority, which obtains a substantial portion of its supplies from the Metropolitan Water District of Southern California. Because the region is dependent upon imported water supplies, weather and other conditions in other portions of this State and of the Southwestern United States affect the availability of water for use in San Diego County; and

WHEREAS, the San Diego County Water Authority has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of the Water Authority's programs to provide a reliable supply of water to meet the needs of the Water Authority's 24 member public agencies, including the Rainbow Municipal Water District. The Water Authority's Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Water Authority's Urban Water Management Plan; and

WHEREAS, as anticipated by its Urban Water Management Plan, the San Diego County Water Authority, in cooperation and consultation with its member public agencies, has adopted a Drought Management Plan, which establishes a progressive program for responding to water

supply limitations resulting from drought conditions. This ordinance is intended to be consistent with and to implement the Water Authority’s Drought Management Plan; and

WHEREAS, the Water Authority’s Drought Management Plan contains three stages containing regional actions to be taken to lessen or avoid supply shortages. This ordinance contains drought response levels that correspond with the Drought Management Plan stages; and

WHEREAS, the Rainbow Municipal Water District, due to the geographic and climatic conditions within its territory and its dependence upon water imported and provided by the San Diego County Water Authority, may experience shortages due to drought conditions, regulatory restrictions enacted upon imported supplies and other factors. The Rainbow Municipal Water District has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of its programs to provide a reliable supply of water to meet the needs of the public within its service territory. The Rainbow Municipal Water District Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Urban Water Management Plan adopted by the Rainbow Municipal Water District; and

WHEREAS, the Governor of California issued an Executive Order on May 9, 2016 revising certain water use restrictions and conservation targets for water utilities, and

WHEREAS, the State Water Resources Control Board adopted revised emergency regulations implementing the Governor’s Executive Order on May 18, 2016, and

WHEREAS, the revised emergency regulations contain certain mandatory end-user restrictions on water use that prohibit certain practices, and

WHEREAS, the water conservation measures and progressive restrictions on water use and method of use identified by this ordinance provide certainty to water users and enable Rainbow Municipal Water District to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

NOW, THEREFORE, the Board of Directors of Rainbow Municipal Water District does ordain as follows:

SECTION 1.0 DECLARATION OF NECESSITY AND INTENT

(a) This ordinance establishes water management requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the Rainbow Municipal Water District (RMWD) in order to assure adequate supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management not only in times of drought, but at all times.

(b) This ordinance establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

(c) Level 1 condition drought response measures include certain mandatory end user water use restrictions and will be reinforced through local and regional public education and awareness measures that may be funded in part by RMWD. During drought response condition Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals.

(d) During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established by this ordinance are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies specified in this ordinance and as provided in RMWD Administrative or Municipal Code.

SECTION 2.0 DEFINITIONS

(a) The following words and phrases whenever used in this chapter shall have the meaning defined in this section:

1. “Grower” refers to those engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. “Grower” does not refer to customers who purchase water subject to the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs.

2. “Water Authority” means the San Diego County Water Authority.

3. “DMP” means the Water Authority’s Drought Management Plan in existence on the effective date of this ordinance and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

4. “Metropolitan” means the Metropolitan Water District of Southern California.

5. “Person” means any natural person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the RMWD.

SECTION 3.0 APPLICATION

(a) The provisions of this ordinance apply to any person in the use of any water provided by the RMWD.

(b) This ordinance is intended solely to further the conservation of water. It is not intended to implement any provision of federal, State, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff. Refer to the local jurisdiction or Regional Water Quality Control Board for information on any stormwater ordinances and stormwater management plans.

(c) Nothing in this ordinance is intended to affect or limit the ability of the RMWD to declare and respond to an emergency, including an emergency that affects the ability of the RMWD to supply water.

(d) Notwithstanding any other section of this ordinance, the restrictions imposed upon the use of water herein do not apply to use of water from private wells or to recycled water.

(e) Nothing in this ordinance shall apply to use of water that is subject to a special supply program, such as the Water Authority Transitional Special Agricultural Water (TSAWR) Rate program, except as may be specified in that program. For instance, the water reductions contained in this ordinance shall not be in addition to any mandatory reductions which may apply to a participant in the TSAWR, unless expressly stated in the TSAWR. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program. A person using water subject to a special supply program and other water provided by the RMWD is subject to this ordinance in the use of the other water.

SECTION 4.0 DROUGHT RESPONSE LEVEL 1 – DROUGHT WATCH CONDITION

(a) A Drought Response Level 1 condition is also referred to as a “Drought Watch” condition. A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be supply shortages and that a consumer demand reduction is required in order to ensure that sufficient supplies will be available to meet anticipated demands. A Drought Response Level 1 condition will also apply if the State Water Resources Control Board adopts regulations that place restrictions on certain end user water use. The General Manager shall declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices identified in this ordinance.

(b) During a Level 1 Drought Watch condition, RMWD will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement water conservation practices. In accordance with the State Water Resources Control Board regulations, the following end-user practices are prohibited:

- (1) The application of potable water to outdoor landscapes in a manner that causes excessive runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures.
- (2) The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.
- (3) The application of potable water to driveways and sidewalks.
- (4) The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.
- (5) The application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall.
- (6) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.
- (7) The irrigation with potable water of ornamental turf on public street medians.
- (8) The irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.

(c) During a Drought Response Level 2 condition or higher, all persons shall be required to implement the conservation practices established in a Drought Response Level 1 condition.

SECTION 5.0 DROUGHT RESPONSE LEVEL 2 – DROUGHT ALERT CONDITION

(a) A Drought Response Level 2 condition is also referred to as a “Drought Alert” condition. A Level 2 condition may apply when the Water Authority notifies its member agencies that due to cutbacks caused by drought or other reduction in supplies, a consumer¹ demand reduction is required in order to have sufficient supplies available to meet anticipated demands. The RMWD Board of Directors shall consider the Water Authority declaration of a “Drought Alert” condition, and may declare the existence of a Drought Response Level 2 condition and direct the General Manager to implement the mandatory Level 2 conservation measures identified in this ordinance. The RMWD Board of Directors may make a determination to enter or exit the Drought Response Level 2 stage depending on a variety of factors, including but not limited to local water availability, RMWD’s ability to meet their allocation supply, and/or the financial impact of implementation on RMWD.

¹Also referred to as Municipal or Industrial (M&I) water user.

(b) All persons using RMWD water shall comply with Level 1 Drought Watch water conservation practices during a Level 2 Drought Alert, and shall also comply with the following additional conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to: weather based controllers, drip/micro-irrigation systems and stream rotor sprinklers.

a. Operating irrigation systems in a manner that allows water to run off the property is defined as water waste. In cases where irrigating for 10 minutes per station will result in water runoff due to the inability of the soil or landscape materials to absorb that amount of water, customers shall alter their watering schedules to prevent such runoff. The customer shall modify the schedules to prevent runoff but shall ensure that the total reduction in irrigation is equivalent to the two day per week watering schedule. Customers may adjust their schedules to water on more than two days per week so long as the equivalent reduction in irrigation is achieved.

3. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 5 (b) (1), on the same schedule set forth in section 5 (b) (1) by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

4. Repair all leaks within seventy-two (72) hours of notification by the RMWD unless other arrangements are made with the General Manager.

5. No application of potable water to outdoor landscapes is allowed during and within 48 hours of measureable rainfall.

SECTION 6.0 DROUGHT RESPONSE LEVEL 3 – DROUGHT CRITICAL CONDITION

(a) A Drought Response Level 3 condition is also referred to as a “Drought Critical” condition. A Level 3 condition applies when the Water Authority notifies its member agencies that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction is required in order to have sufficient supplies available to meet anticipated demands. The RMWD Board of Directors shall declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in this ordinance.

(b) All persons using RMWD water shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 6 (b) (1), on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation.

3. Stop filling or re-filling swimming pools, spas, ornamental fountains, lakes ponds or other water features, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.

4. Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.

5. Repair all leaks within forty-eight (48) hours of notification by the RMWD unless other arrangements are made with the General Manager.

(c) Upon the declaration of a Drought Response Level 3 condition, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances:

1. A valid, unexpired building permit has already been issued for the project;
or

2. In the opinion of the RMWD Board of Directors the project is necessary to protect the public's health, safety, and welfare; or

3. The applicant provides substantial evidence of an enforceable binding commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of RMWD.

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted **for a period of one**

year or less, provided that such period shall in no event commence before the effective date of this ordinance.

(d) Upon the declaration of a Drought Response Level 3 condition, RMWD will suspend consideration of annexations to its service area until such time that the Drought Response Level 2 is decreased to a Drought Response Level 1 condition or lower.

(e) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penalize persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 7.0 DROUGHT RESPONSE LEVEL 4 – DROUGHT EMERGENCY CONDITION

(a) A Drought Response Level 4 condition is also referred to as a “Drought Emergency” condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code section 350 and notifies its member agencies that Level 4 requires a demand reduction in order for the RMWD to have maximum supplies available to meet anticipated demands. The RMWD Board of Directors shall declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350.

(b) All persons using RMWD water shall comply with conservation measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions and shall also comply with the following additional mandatory conservation measures:

(1) Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the RMWD has determined that recycled water is available and may be lawfully applied to the use:

A. Maintenance of trees and shrubs that are watered on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

B. Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated;

C. Maintenance of existing landscaping for erosion control;

D. Maintenance of plant materials identified to be rare or essential to the well being of rare animals;

E. Maintenance of landscaping within active public facilities, including parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week according to the schedule established under section 6 (b) (1);

F. Watering of livestock; and

G. Public works projects and actively irrigated environmental mitigation projects.

2. Repair all water leaks within twenty-four (24) hours of notification by the RMWD unless other arrangements are made with the General Manager.

(c) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penalize persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 8.0 CORRELATION BETWEEN DROUGHT MANAGEMENT PLAN AND DROUGHT RESPONSE LEVELS

(a) The correlation between the Water Authority’s DMP stages and the RMWD’s drought response levels identified in this ordinance is described herein. Under DMP Stage 1, the RMWD would implement Drought Response Level 1 actions. Under DMP Stage 2, the RMWD would implement Drought Response Level 1 or Level 2 actions. Under DMP Stage 3, the RMWD would implement Drought Response Level 2, Level 3, or Level 4 actions.

(b) The drought response levels identified in this ordinance correspond with the Water Authority DMP as identified in the following table:

Drought Response Levels	Use Restrictions	Conservation Target	DMP Stage
1 - Drought Watch	Voluntary	0% to 10%	Stage 1 or 2
2 - Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 - Drought Critical	Mandatory	>20 to 40%	Stage 3
4 - Drought Emergency	Mandatory	Above 40%	Stage 3

SECTION 9.0 PROCEDURES FOR DETERMINATION AND NOTIFICATION OF DROUGHT RESPONSE LEVEL

(a) The existence of a Drought Response Level 1 condition may be declared by the General Manager upon a written determination of the existence of the facts and circumstances supporting the determination. A copy of the written determination shall be filed with the Clerk or Secretary of the RMWD and provided to the RMWD Board of Directors. The General Manager may publish a notice of the determination of existence of Drought Response Level 1

condition in one or more newspapers, including a newspaper of general circulation within the RMWD. The RMWD may also post notice of the condition on their website.

(b) The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the RMWD Board of Directors adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices.

(c) The existence of a Drought Response Level 4 condition may be declared in accordance with the procedures specified in California Water Code sections 351 and 352. The mandatory conservation measures applicable to Drought Response Level 4 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices. If the RMWD establishes a water allocation, it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the RMWD customarily mails the billing statement for fees or charges for on-going water service. Water allocation shall be effective on the fifth (5) day following the date of mailing or at such later date as specified in the notice.

(d) The RMWD Board of Directors may declare an end to a Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

SECTION 10.0 HARDSHIP VARIANCE

(a) If, due to unique circumstances, a specific requirement of this ordinance would result in undue hardship to a person using agency water or to property upon which agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water uses, then the person may apply for a variance to the requirements as provided in this section.

(b) The variance may be granted or conditionally granted, only upon a written finding of the existence of facts demonstrating an undue hardship to a person using agency water or to property upon with agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

1. Application. Application for a variance shall be a form prescribed by RMWD and shall be accompanied by a non-refundable processing fee in an amount set by resolution of the RMWD Board of Directors.

2. Supporting Documentation. The application shall be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant.

3. Required Findings for Variance. An application for a variance shall be denied unless the approving authority finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the RMWD, all of the following:

A. That the variance does not constitute a grant of special privilege inconsistent with the limitations upon other RMWD customers.

B. That because of special circumstances applicable to the property or its use, the strict application of this ordinance would have a disproportionate impact on the property or use that exceeds the impacts to customers generally.

C. That the authorizing of such variance will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the RMWD to effectuate the purpose of this chapter and will not be detrimental to the public interest.

D. That the condition or situation of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.

4. Approval Authority. The General Manager shall exercise approval authority and act upon any completed application no later than 30 days after submittal and may approve, conditionally approve, or deny the variance. The applicant requesting the variance shall be promptly notified in writing of any action taken. Unless specified otherwise at the time a variance is approved, the variance applies to the subject property during the term of the mandatory drought response.

(c) Appeals to RMWD Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application to the being mailed to the applicant. The appeal must be in the form of a written request for a hearing, and shall state the grounds for the appeal. At a public meeting, the RMWD Board of Directors shall act as the approval authority and review the appeal de novo by following the regular variance procedure. The decision of the RMWD Board of Directors is final.

SECTION 11.0 VIOLATIONS AND PENALTIES

(a) Any person, who uses, causes to be used, or permits the use of water in violation of this ordinance is guilty of an offense punishable as provided herein.

(b) Each day that a violation of this ordinance occurs is a separate offense.

(c) Administrative fines may be levied for each violation of a provision of this ordinance as follows:

1. One hundred dollars for a first violation.
2. Two hundred dollars for a second violation of any provision of this ordinance within one year from occurrence of the first violation.
3. Five hundred dollars for each additional violation of this ordinance within one year of the first violation.

(d) Violation of a provision of this ordinance is subject to enforcement through installation of a flow-restricting device in the meter.

(e) Each violation of this ordinance may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding \$1,000, or by both as provided in Water Code section 377.

(f) Willful violations of the mandatory conservation measures and water use restrictions as set forth in Section 7.0 and applicable during a Level 4 Drought Emergency condition may be enforced by discontinuing service to the property at which the violation occurs as provided by Water Code section 356.

(g) All remedies provided for herein shall be cumulative and not exclusive.

SECTION 12.0 EFFECTIVE DATE

This ordinance is effective immediately upon adoption or as otherwise established by State law for RMWD.

PASSED, APPROVED AND ADOPTED this 28th day of June 2016, by the following vote:

- AYES:**
- NOES:**
- ABSTAIN:**
- ABSENT:**

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary

ORDINANCE NO. ~~15-08~~16-10**AN ORDINANCE OF RAINBOW MUNICIPAL WATER DISTRICT
ADOPTING A DROUGHT RESPONSE CONSERVATION PROGRAM**

Be it ordained by the Board of Directors of Rainbow Municipal Water District as follows;

WHEREAS, article 10, section 2 of the California Constitution declares that waters of the State are to be put to beneficial use, that waste, unreasonable use, or unreasonable method of use of water be prevented, and that water be conserved for the public welfare; and

WHEREAS, conservation of current water supplies and minimization of the effects of water supply shortages that are the result of drought are essential to the public health, safety and welfare; and

WHEREAS, regulation of the time of certain water use, manner of certain water use, design of rates, method of application of water for certain uses, installation and use of water-saving devices, provide an effective and immediately available means of conserving water; and

WHEREAS, California Water Code sections 375 et seq. authorize water suppliers to adopt and enforce a comprehensive water conservation program; and

WHEREAS, adoption and enforcement of a comprehensive water conservation program will allow the Rainbow Municipal Water District to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by California Water Code sections 350 et seq.; and

WHEREAS, San Diego County is a semi-arid region and local water resources are scarce. The region is dependent upon imported water supplies provided by the San Diego County Water Authority, which obtains a substantial portion of its supplies from the Metropolitan Water District of Southern California. Because the region is dependent upon imported water supplies, weather and other conditions in other portions of this State and of the Southwestern United States affect the availability of water for use in San Diego County; and

WHEREAS, the San Diego County Water Authority has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of the Water Authority's programs to provide a reliable supply of water to meet the needs of the Water Authority's 24 member public agencies, including the Rainbow Municipal Water District. The Water Authority's Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Water Authority's Urban Water Management Plan; and

WHEREAS, as anticipated by its Urban Water Management Plan, the San Diego County Water Authority, in cooperation and consultation with its member public agencies, has adopted a Drought Management Plan, which establishes a progressive program for responding to water supply limitations resulting from drought conditions. This ordinance is intended to be consistent with and to implement the Water Authority’s Drought Management Plan; and

WHEREAS, the Water Authority’s Drought Management Plan contains three stages containing regional actions to be taken to lessen or avoid supply shortages. This ordinance contains drought response levels that correspond with the Drought Management Plan stages; and

WHEREAS, the Rainbow Municipal Water District, due to the geographic and climatic conditions within its territory and its dependence upon water imported and provided by the San Diego County Water Authority, may experience shortages due to drought conditions, regulatory restrictions enacted upon imported supplies and other factors. The Rainbow Municipal Water District has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of its programs to provide a reliable supply of water to meet the needs of the public within its service territory. The Rainbow Municipal Water District Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Urban Water Management Plan adopted by the Rainbow Municipal Water District; and

WHEREAS, the Governor of California issued an Executive Order on ~~April 1, 2015~~ mandating May 9, 2016 revising certain water use restrictions and conservation targets for water utilities, and

WHEREAS, the State Water Resources Control Board adopted revised emergency regulations implementing the Governor’s Executive Order on May 18, ~~2015~~2016, and

~~**WHEREAS**, the San Diego County Water Authority adopted Shortage Management Actions on May 14, 2015 that include allocations for the Transitional Special Agricultural Water Rate supply and the Municipal and Industrial supply in addition to adding new restrictions on residential watering days, and~~

WHEREAS, the revised emergency regulations contain certain mandatory end-user restrictions on water use that prohibit certain practices, and

WHEREAS, the water conservation measures and progressive restrictions on water use and method of use identified by this ordinance provide certainty to water users and enable Rainbow Municipal Water District to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

NOW, THEREFORE, the Board of Directors of Rainbow Municipal Water District does ordain as follows:

SECTION 1.0 DECLARATION OF NECESSITY AND INTENT

(a) This ordinance establishes water management requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the Rainbow Municipal Water District (RMWD) in order to assure adequate supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management not only in times of drought, but at all times.

(b) This ordinance establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

(c) Level 1 condition drought response measures ~~are voluntary~~include certain mandatory end user water use restrictions and will be reinforced through local and regional public education and awareness measures that may be funded in part by RMWD.– During drought response condition Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals.

(d) During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established by this ordinance are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies specified in this ordinance and as provided in RMWD Administrative or Municipal Code.

SECTION 2.0 DEFINITIONS

(a) The following words and phrases whenever used in this chapter shall have the meaning defined in this section:

1. “Grower” refers to those engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. “Grower” does not refer to customers who purchase water subject to the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs.
2. “Water Authority” means the San Diego County Water Authority.

3. “DMP” means the Water Authority’s Drought Management Plan in existence on the effective date of this ordinance and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

4. “Metropolitan” means the Metropolitan Water District of Southern California.

5. “Person” means any natural person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the RMWD.

SECTION 3.0 APPLICATION

(a) The provisions of this ordinance apply to any person in the use of any water provided by the RMWD.

(b) This ordinance is intended solely to further the conservation of water. It is not intended to implement any provision of federal, State, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff. Refer to the local jurisdiction or Regional Water Quality Control Board for information on any stormwater ordinances and stormwater management plans.

(c) Nothing in this ordinance is intended to affect or limit the ability of the RMWD to declare and respond to an emergency, including an emergency that affects the ability of the RMWD to supply water.

(d) Notwithstanding any other section of this ordinance, the restrictions imposed upon the use of water herein do not apply to use of water from private wells or to recycled water.

(e) Nothing in this ordinance shall apply to use of water that is subject to a special supply program, such as the Water Authority Transitional Special Agricultural Water (TSAWR) Rate program, except as may be specified in that program. For instance, the water reductions contained in this ordinance shall not be in addition to any mandatory reductions which may apply to a participant in the TSAWR, unless expressly stated in the TSAWR. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program. A person using water subject to a special supply program and other water provided by the RMWD is subject to this ordinance in the use of the other water.

SECTION 4.0 DROUGHT RESPONSE LEVEL 1 – DROUGHT WATCH

CONDITION

(a) A Drought Response Level 1 condition is also referred to as a “Drought Watch” condition. A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be

supply shortages and that a consumer demand reduction is required in order to ensure that sufficient supplies will be available to meet anticipated demands. A Drought Response Level 1 condition will also apply if the State Water Resources Control Board adopts regulations that place restrictions on certain end user water use. The General Manager shall declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices identified in this ordinance.

(b) During a Level 1 Drought Watch condition, RMWD will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement ~~the following~~ water conservation practices. ~~[The same water conservation~~In accordance with the State Water Resources Control Board regulations, the following end-user practices become mandatory if RMWD declares a Level 2 Drought Alert condition]: are prohibited:

~~1. — Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.~~

~~2. — Stop water waste resulting from inefficient landscape irrigation, such as) The application of potable water to outdoor landscapes in a manner that causes excessive runoff, low head drainage, or overspray, etc. Similarly, stop such that water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes private and public walkways, roadways, parking lots or structures.~~

~~3. — Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.~~

~~4. — Use a hand-held (2) The use of a hose equipped with a positive that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or bucket device attached to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.~~

~~5. — Irrigate nursery and commercial grower's products before 10 a.m. and after 6 p.m. only. Watering is permitted at any time with a hand held hose equipped with a positive shut off nozzle, a bucket or watering can. Irrigation of nursery propagation beds is permitted at any time. Watering of livestock is permitted at any time.~~

~~6. — Use re-circulated it that causes it to cease dispensing water to operate ornamental fountains. — immediately when not in use.~~

~~7. Wash vehicles using a bucket and a hand-held hose with positive shut-off nozzle, mobile high pressure/low volume wash system, or at a commercial site that re-circulates (reclaims) water on site. Avoid washing during hot conditions when additional water is required due to evaporation.~~

~~8. Serve (3) The application of potable water to driveways and sidewalks.~~

~~(4) The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.~~

~~(5) The application of potable water to outdoor landscapes during and ~~refill~~ within 48 hours after measurable rainfall.~~

~~(6) The serving of drinking water in restaurants and other food service than upon request in eating or drinking establishments only upon request, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.~~

~~9. Offer guests in hotels, motels, and other commercial lodging establishments the option of not laundering towels and linens daily.~~

~~10. Repair all water leaks within five (5) days of notification by the RMWD unless other arrangements are made with the General Manager.~~

~~11. Use recycled or non-potable water for construction purposes when available.~~

~~(7) The irrigation with potable water of ornamental turf on public street medians.~~

~~(8) The irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.~~

(c) During a Drought Response Level 2 condition or higher, all persons shall be required to implement the conservation practices established in a Drought Response Level 1 condition.

– (b) All persons using RMWD water shall comply with Level 1 Drought Watch water conservation practices during a Level 2 Drought Alert, and shall also comply with the following additional conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to: weather based controllers, drip/micro-irrigation systems and stream rotor sprinklers.

a. Operating irrigation systems in a manner that allows water to run off the property is defined as water waste. In cases where irrigating for 10 minutes per station will result in water runoff due to the inability of the soil or landscape materials to absorb that amount of water, customers shall alter their watering schedules to prevent such runoff. The customer shall modify the schedules to prevent runoff but shall ensure that the total reduction in irrigation is equivalent to the two day per week watering schedule. Customers may adjust their schedules to water on more than two days per week so long as the equivalent reduction in irrigation is achieved.

3. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 5 (b) (1), on the same schedule set forth in section 5 (b) (1) by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

4. Repair all leaks within seventy-two (72) hours of notification by the RMWD unless other arrangements are made with the General Manager.

5. No application of potable water to outdoor landscapes is allowed during and within 48 hours of measureable rainfall.

SECTION 6.0 DROUGHT RESPONSE LEVEL 3 – DROUGHT CRITICAL
CONDITION

(a) A Drought Response Level 3 condition is also referred to as a “Drought Critical” condition. A Level 3 condition applies when the Water Authority notifies its member agencies that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction is required in order to have sufficient supplies available to meet anticipated demands. The RMWD Board of Directors shall declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in this ordinance.

(b) All persons using RMWD water shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 6 (b) (1), on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation.

3. Stop filling or re-filling swimming pools, spas, ornamental fountains, lakes ponds or other water features, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.

4. Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.

5. Repair all leaks within forty-eight (48) hours of notification by the RMWD unless other arrangements are made with the General Manager.

(c) Upon the declaration of a Drought Response Level 3 condition, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances:

1. A valid, unexpired building permit has already been issued for the project;
or
2. In the opinion of the RMWD Board of Directors the project is necessary to protect the public's health, safety, and welfare; or
3. The applicant provides substantial evidence of an enforceable binding commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of RMWD.

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted **for a period of one year or less, provided that such period shall in no event commence before the effective date of this ordinance.**

(d) Upon the declaration of a Drought Response Level 3 condition, RMWD will suspend consideration of annexations to its service area until such time that the Drought Response Level 2 is decreased to a Drought Response Level 1 condition or lower.

(e) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penalize persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 7.0 DROUGHT RESPONSE LEVEL 4 – DROUGHT EMERGENCY CONDITION

(a) A Drought Response Level 4 condition is also referred to as a “Drought Emergency” condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code section 350 and notifies its member agencies that Level 4 requires a demand reduction in order for the RMWD to have maximum supplies available to meet anticipated demands. The RMWD Board of Directors shall declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350.

(b) All persons using RMWD water shall comply with conservation measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical

conditions and shall also comply with the following additional mandatory conservation measures:

~~1.~~(1) Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the RMWD has determined that recycled water is available and may be lawfully applied to the use:

A. Maintenance of trees and shrubs that are watered on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

B. Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated;

C. Maintenance of existing landscaping for erosion control;

D. Maintenance of plant materials identified to be rare or essential to the well being of rare animals;

E. Maintenance of landscaping within active public facilities, including parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week according to the schedule established under section 6 (b) (1);

F. Watering of livestock; and

G. Public works projects and actively irrigated environmental mitigation projects.

2. Repair all water leaks within twenty-four (24) hours of notification by the RMWD unless other arrangements are made with the General Manager.

~~(e)~~ (c) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penalize persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 8.0 CORRELATION BETWEEN DROUGHT MANAGEMENT PLAN AND DROUGHT RESPONSE LEVELS

(a) The correlation between the Water Authority’s DMP stages and the RMWD’s drought response levels identified in this ordinance is described herein. Under DMP Stage 1, the RMWD would implement Drought Response Level 1 actions. Under DMP Stage 2, the RMWD would implement Drought Response Level 1 or Level 2 actions. Under DMP Stage 3, the RMWD would implement Drought Response Level 2, Level 3, or Level 4 actions.

(b) The drought response levels identified in this ordinance correspond with the Water Authority DMP as identified in the following table:

Drought Response Levels	Use Restrictions	Conservation Target	DMP Stage
1 - Drought Watch	Voluntary	Up to 0% to 10%	Stage 1 or 2
2 - Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 - Drought Critical	Mandatory	>20 to 40%	Stage 3
4 - Drought Emergency	Mandatory	Above 40%	Stage 3

SECTION 9.0 PROCEDURES FOR DETERMINATION AND NOTIFICATION OF DROUGHT RESPONSE LEVEL

(a) The existence of a Drought Response Level 1 condition may be declared by the General Manager upon a written determination of the existence of the facts and circumstances supporting the determination. A copy of the written determination shall be filed with the Clerk or Secretary of the RMWD and provided to the RMWD Board of Directors. The General Manager may publish a notice of the determination of existence of Drought Response Level 1 condition in one or more newspapers, including a newspaper of general circulation within the RMWD. The RMWD may also post notice of the condition on their website.

(b) The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the RMWD Board of Directors adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices.

(c) The existence of a Drought Response Level 4 condition may be declared in accordance with the procedures specified in California Water Code sections 351 and 352. The mandatory conservation measures applicable to Drought Response Level 4 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices. If the RMWD establishes a water allocation, it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the RMWD customarily mails the billing statement for fees or charges for on-going water service. Water allocation shall be effective on the fifth (5) day following the date of mailing or at such later date as specified in the notice.

(d) The RMWD Board of Directors may declare an end to a Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

SECTION 10.0 HARDSHIP VARIANCE

(a) If, due to unique circumstances, a specific requirement of this ordinance would result in undue hardship to a person using agency water or to property upon which agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water uses, then the person may apply for a variance to the requirements as provided in this section.

(b) The variance may be granted or conditionally granted, only upon a written finding of the existence of facts demonstrating an undue hardship to a person using agency water or to property upon with agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

1. Application. Application for a variance shall be a form prescribed by RMWD and shall be accompanied by a non-refundable processing fee in an amount set by resolution of the RMWD Board of Directors.

2. Supporting Documentation. The application shall be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant.

3. Required Findings for Variance. An application for a variance shall be denied unless the approving authority finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the RMWD, all of the following:

A. That the variance does not constitute a grant of special privilege inconsistent with the limitations upon other RMWD customers.

B. That because of special circumstances applicable to the property or its use, the strict application of this ordinance would have a disproportionate impact on the property or use that exceeds the impacts to customers generally.

C. That the authorizing of such variance will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the RMWD to effectuate the purpose of this chapter and will not be detrimental to the public interest.

D. That the condition or situation of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.

4. Approval Authority. The General Manager shall exercise approval authority and act upon any completed application no later than 30 days after submittal and may approve, conditionally approve, or deny the variance. The applicant requesting the variance shall be promptly notified in writing of any action taken. Unless specified otherwise at the time a variance is approved, the variance applies to the subject property during the term of the mandatory drought response.

~~5.(c)~~ Appeals to RMWD Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application to the being mailed to the applicant. The appeal must be in the form of a written request for a hearing, and shall state the grounds for the appeal. At a public meeting, the RMWD Board of Directors shall act as the approval authority and review the appeal de novo by following the regular variance procedure. The decision of the RMWD Board of Directors is final.

SECTION 11.0 VIOLATIONS AND PENALTIES

(a) Any person, who uses, causes to be used, or permits the use of water in violation of this ordinance is guilty of an offense punishable as provided herein.

(b) Each day that a violation of this ordinance occurs is a separate offense.

(c) Administrative fines may be levied for each violation of a provision of this ordinance as follows:

1. One hundred dollars for a first violation.
2. Two hundred dollars for a second violation of any provision of this ordinance within one year from occurrence of the first violation.
3. Five hundred dollars for each additional violation of this ordinance within one year of the first violation.

(d) Violation of a provision of this ordinance is subject to enforcement through installation of a flow-restricting device in the meter.

(e) Each violation of this ordinance may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding \$1,000, or by both as provided in Water Code section 377.

(f) Willful violations of the mandatory conservation measures and water use restrictions as set forth in Section 7.0 and applicable during a Level 4 Drought Emergency condition may be enforced by discontinuing service to the property at which the violation occurs as provided by Water Code section 356.

(g) All remedies provided for herein shall be cumulative and not exclusive.

SECTION 12.0 EFFECTIVE DATE

This ordinance is effective immediately upon adoption or as otherwise established by State law for RMWD.

PASSED, APPROVED AND ADOPTED this ~~23rd~~28th day of June, ~~2015~~ 2016, by the following vote:

~~**AYES:** Directors Brazier, Lucy, Sanford, and Walker~~

AYES: _____

NOES: ~~Director Griffiths~~

ABSTAIN: ~~None~~

ABSENT: ~~None~~

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 16-16 REDUCING THE DROUGHT LEVEL FROM LEVEL 2 TO LEVEL 1 IN ACCORDANCE WITH RMWD DROUGHT ORDINANCE NO. 16-10

DESCRIPTION

The supply forecasts mandated by the State Water Resources Control Board (SWRCB) have recently been completed for the San Diego region by the San Diego County Water Authority (SDCWA). This analysis used recent high consumption years (2013 and 2014) and compared them to three more successive dry years, using the historically low 2015 water year to evaluate supply conditions. As a result of the ongoing efforts to diversify supplies for San Diego County, this evaluation showed that RMWD's allocation from SDCWA will be well above our projected demand conditions. SDCWA and RMWD have certified to the SWRCB that our conservation target using their methodology is zero percent.

For this reason, there is no basis to remain in Drought Level 2 at this time. The recommendation is to move to Drought Level 1 which has no specific irrigation controls but does contain certain mandatory end user water use restrictions. These restrictions were mandated by the SWRCB and were incorporated into the Drought Ordinance in Ordinance No. 16-10.

POLICY

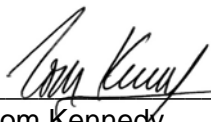
Resolution No. 16-16

BOARD OPTIONS/FISCAL IMPACTS

The Board could choose to remain in Drought Level 2 but this could present a case for customers to challenge the drought restrictions as they would be out of line with supplies. The reduction of water use restrictions may increase water sales, although it is impossible to forecast what sort of demand rebound may result from this change.

STAFF RECOMMENDATION

Staff recommends Board approval of Resolution No. 16-16.



 Tom Kennedy
 General Manager

June 28, 2016

RESOLUTION NO. 16-16

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
RAINBOW MUNICIPAL WATER DISTRICT
DECLARING A DROUGHT RESPONSE LEVEL 1
DROUGHT ALERT CONDITION**

WHEREAS, the Board of Directors of the Rainbow Municipal Water District (the "District") established a Drought Response Conservation Program pursuant to Ordinance No. 16-10 ("Drought Ordinance"); and

WHEREAS, the Drought Ordinance provides that a Drought Response Level 1 condition applies when the San Diego County Water Authority ("Authority") notifies its member agencies, including the District, that due to cutbacks caused by drought or other reduction in supplies, a consumer demand reduction of up to 10 percent is required in order to have sufficient supplies available to meet anticipated demands or when the State Water Resources Control Board issues regulations that include mandatory end user water restrictions; and

WHEREAS, on May 18, 2016 the State Water Resources Control Board adopted Emergency Regulations that include mandatory end user water restrictions; and

WHEREAS, on May 26, 2016, the Authority rescinded its drought regulations based on supply and demand conditions in the region; and

WHEREAS, pursuant to the direction in the Drought Ordinance, all persons using District water shall be required to comply with Level 1 Drought Watch water conservation practices

WHEREAS, pursuant to the direction in the Drought Ordinance, within five (5) days following the District Board of Directors' declaration of the response level, or as soon thereafter as reasonably practicable, the District shall publish a copy of this resolution in a newspaper used for publication of official notices, and shall post notice of the Drought Response Level 2 condition on the District website;

WHEREAS, pursuant to the direction in the Drought Ordinance, the mandatory conservation measures applicable to Drought Response Level 1 conditions shall take effect on the tenth (10) day after the date the response level is declared;

NOW THEREFORE, BE IT RESOLVED THAT:

1. The Board of Directors of the District hereby confirms its declaration that a Drought Response Level 1 condition exists and directs District staff to take the necessary steps to implement Level conservation measures.

PASSED AND ADOPTED on the 28th day of June, 2016, by the following vote:

AYES:
NOES:
ABSENT:
ABSTENTIONS:

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO APPROVE ORDINANCE NO. 16-11 AMENDING AND UPDATING ADMINISTRATIVE CODE SECTION 8.20 – CROSS-CONNECTION CONTROL

BACKGROUND

The sole purpose of this Ordinance No. 16-11 within the Administration Code is to protect the District system from the possibility of contamination or pollution, by isolating within customer systems such contaminants or pollutants which could backflow into the District's potable water system. It is important that we continue to meet and exceed all Federal and State regulations pertaining to cross-connection control issues in order to protect the public's health from exposure to such contaminants. Regulations are constantly changing, therefore the cross-connection program has been reviewed by internal staff and they have found a need to update this document to meet today's standards. Operations Staff have recognized these changes and are seeking Board approval for Ordinance No. 16-11.

DESCRIPTION

The District's Cross-Connection Control Program was last reviewed, amended and approved on November 18, 2014 by Ordinance No. 14-08. This version is outdated and needs to be revised to incorporate changes pertaining to the degree of hazards on the customer's property and clarification of certain specifications in determining if a cross-connection control device is required.

ATTACHMENTS

Redlined and Final Draft of Revised Administrative Code Section 8.20

POLICY

Administrative Code Section 8.20

BOARD OPTIONS/FISCAL IMPACTS

1. Approve Ordinance No. 16-11 Amending and Updating Administrative Code Section 8.20 – Cross-Connection Control.
2. Approve Ordinance No. 16-11 with revisions.
3. Deny approval of Ordinance No. 16-11.

STAFF RECOMMENDATION

Staff recommends Option 1.

Darren S. Milner

Darren S. Milner
Operations Manager

June 28, 2016

Ordinance No. 16-11

**Ordinance of the Board of Directors of the Rainbow Municipal Water District
Amending the Administrative Code Section 8.20 –
Cross-Connection Control**

WHEREAS, the Rainbow Municipal Water District has, from time to time, adopted various rules and regulations for the operation of the District; and

WHEREAS, certain of those rules and regulations require updating to reflect best practices, as well as changes in applicable laws; and

WHEREAS, the Board of Directors has determined that changes in the rules or regulations of the District shall occur solely by amendment to the Administrative Code;

NOW, THEREFORE,

BE IT ORDAINED by the Board of Directors of Rainbow Municipal Water District as follows:

1. The following rules and regulations of the District, collected and attached are hereby adopted and shall be incorporated into the Administrative Code, consisting of:

8.20 Cross-Connection Control

2. The General Manager is hereby directed to update the Administrative Code to reflect the approval of these rules and regulations, and to assign or reassign the numbering of the Administrative Code as necessary to codify these rules and regulations as amended.

3. This ordinance shall take effect immediately upon its adoption on this 28th day of June, 2016.

AYES:
NOES:
ABSTAIN:
ABSENT:

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary

**Chapter 8.20
CROSS-CONNECTION CONTROL**

Sections	
8.20.010	Purpose
8.20.020	Legal Basis for Program
8.20.030	Definitions
8.20.031	Degree of Hazard
8.20.040	Backflow Prevention Device-General Requirements
8.20.041	Appeal Procedure
8.20.050	Protection Required Before System Connection
8.20.060	Backflow Prevention Device Installation, Replacement, Relocation, and Repair
8.20.070	Systems to be Open for Inspection and Installation
8.20.080	Backflow Prevention Device Required
8.20.090	Certification of Backflow Prevention Devices
8.20.100	Existing Devices
8.20.110	Inspections and Testing Responsibility
8.20.120	Noncompliance, Penalties
8.20.130	Monthly Charges
8.20.140	Interpretation of Provisions

Section 8.20.010

Purpose

The purpose of this chapter is:

- A. To protect the District system from the possibility of contamination or pollution, by isolating within customer systems such contaminants or pollutants that have the potential to backflow into the District's potable water system; and
- B. To provide for an ongoing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of the District's potable water system; and
- C. To meet or exceed Federal and State regulations pertaining to cross-connection control issues.

8.20.020

Legal Basis for Program

All legal authorities and references shall be current versions and revisions.

Authority

- 1. Code of Federal Regulations, Safe drinking Water Act - most current
- 2. Code of California Regulations, Titles 17 and 22
- 3. State of California Water Code, Chapter 1, Section 110. Chapter 8, Section 500 and Chapter 723, Sections 13553, 13554.2, and 13554.3
- 4. American Water Works Association Manual of Water Supply Practices M14
- 5. University of Southern California (USC Manual) – latest or current edition
- 6. California Plumbing Code (CPC)
- 7. Rainbow Municipal Water District Administrative Code

8.20.030

Definitions

Whenever in this chapter or in any document where they govern, the following terms are used, they shall be defined as follows:

"Air-Gap" is a means of backflow prevention utilizing the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of said vessel. An approved air-gap shall be at least double the diameter of the supply pipe, measured vertically, above the top of the rim of the vessel; provided however, that in no case shall the air-gap be less than one inch.

"Approved" means accepted by the District as meeting an applicable specification stated or cited in this chapter suitable for the proposed use.

"Auxiliary Water Supply" means any water supply, other than the District's system available to a customer system. These auxiliary supplies may include water from other purveyor's public potable water supply or any natural source(s) such as a well, spring, river, stream, harbor, etc., or used waters or industrial fluids. These waters may be polluted or contaminated, or they may be objectionable, and constitute an unacceptable water source over which the District does not have control.

"Agricultural Properties" is a parcel, lot, grove or residence of any size which is used for an agrarian nature, whether for commercial purposes or not. Typical uses would include, but not be limited to, the practice of cultivating crops, the breeding and raising of livestock, aquaculture and any other form of husbandry.

"Backflow" means the reversal of flow of water or mixtures of water and other liquids, gases or other substances into the District's distribution pipes of water from any source or sources.

"Backflow Preventer" means a device or means designed to prevent backflow or backsiphonage.

"Backpressure" means any elevation of pressure in the downstream piping system (by pump, elevation of piping, or steam and/or air pressure) above the supply pressure at the point of consideration, which would cause, or tend to cause, a reversal of the normal direction of flow.

"Backsiphonage" means the flow of water (or other liquids, mixtures or substances) into the District system from any source caused by the reduction of pressure in the District system.

"Board" means Board of Directors of the Rainbow Municipal Water District.

"Certified Backflow Tester" means a person who has proven his / her ability to test backflow prevention assemblies to the satisfaction of the District and the San Diego County Department of Environmental Health.

"Contamination" means the impairment of the quality of the potable water by sewage, industrial fluids, waste liquids or any other compounds or other materials to a degree which creates an actual hazard to the public health through poisoning or the spreading of disease.

"Control" means the right and power over the quality of water.

"Cross-Connection" means any physical connection, or arrangement of piping or fixtures, between two otherwise separate piping systems, one of which contains potable water and the other of which contains nonpotable water, industrial fluids, or fluids of questionable safety, through which, or because of which, backflow may occur into the District's system. A water service connection between the District system and a customer system which is cross-connected to a contaminated fixture, industrial fluid system or with a potentially contaminated supply or auxiliary water system, constitutes one type of cross-connection. Other types of cross-connections include connectors such as swing connections, removable sections, four-way plug valves, spools, dummy sections of pipe, swivel or change-over devices, sliding multiport tubes, solid connections, garden hoses, etc.

"Cross-Connection Control by Containment" means the installation of an approved backflow prevention device in any customer system chosen as practical for the water service connection.

"District" means Rainbow Municipal Water District.

"Double Check-Detector Backflow Prevention Assembly" (DCDA) means a specially Designed assembly composed of a line-size approved double check valve assembly with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall register accuracy for only very low rates of flow up to 3 GPM.

"Double Check Valve Backflow Prevention Assembly" an assembly composed of two (2) independently acting, approved check valves, including tightly closing resilient seated shut-off valves attached at each end of the assembly and fitted with properly located resilient seated test cocks.

"Health Hazard" means any condition, device or practice in the customer system, or its operation, which endangers, or in the judgment of the District, has the potential to endanger the health and well-being of any water customer.

"Industrial Fluids System" means any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution or plumbing hazard if introduced into the District system.

"Locked-off" means any water service which has been shut off at the meter by the District.

"Manager" means General Manager of the Rainbow Municipal Water District or his/her authorized representative.

"Nonpotable Water" means water which is not safe for human consumption or which is of questionable potability.

"Plumbing Hazard" means an internal or plumbing type cross-connection in a customer/user's potable water system that may be either a pollution or a contamination-type hazard.

"Pollution" means the presence of any foreign substance (organic, inorganic or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

"Pollution Hazard" means an actual or potential threat to the physical properties, or to the potability, of the District system, which would constitute a nuisance or be aesthetically objectionable or could cause damage to the District system, but would not be dangerous to health.

"Potable water" means any water which, according to recognized standards is safe for human consumption.

"Potable water service connection" means the terminal end of a service connection from the District system (where the District loses control over the water at its point of delivery to the customer system), being the downstream end of the meter. There should be no unprotected tees/take-offs from the service line upstream of any backflow prevention device. Service connections shall also include temporary connections from a fire hydrant and all other temporary or emergency water service connections from the District system.

"Public Health Agency" means the State Water Resources Control Board.

"Reduced Pressure Principle Device" (RP) means a backflow prevention device consisting of an assembly of two independently operating approved check valves with an automatically operating differential relief valve between the two check valves, tightly closing shut-off valves on either side of the check valves, plus properly located test cocks for the testing of the check and relief valves. The entire assembly shall meet the design and performance specifications and approval of a recognized and approved testing agency for backflow prevention assemblies. The device shall operate to maintain the pressure in the zone between the two check valves at a level less than the pressure of the inlet device. At cessation of normal flow the pressure between the two check valves shall be less than the pressure at the inlet of the device. In case of leakage of either of the check valves, the differential relief valve shall operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere. To be approved, these devices must be readily accessible for inline maintenance and testing and be installed in a location where no part of the device will be submerged.

"Reduced Pressure Principle-Detector Backflow Assembly (RPDA)" means a specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly. The meter shall register for only very low rates of flow up to 3 GPM and shall show a registration for all rates of flow.

"Residential Properties" is a parcel or lot with at least one residence regardless of the lot size, with a primary purpose of providing a dwelling that serves as living quarters for one or more families, and does not meet the definition of an "Agricultural Property".

"Title 17" means California Code of Regulations, Title 17, Public Health Regulations relating to cross-connection.

"Unlocked" means any water service previously shut off by the District which has been turned back on by the District.

"Used Water" means any water supplied by the District from the District system to a customer system that has passed through the metered water service connection and is no longer under the control of the District.

"Water System" The water system is made up of two parts; namely, the District system and the customer systems:

The District system consists of the storage, treatment and distribution facilities under the complete control of the District, up to the point where the customer system begins (immediately after the water meter).

The customer systems consist of all water components beyond the water meter.

8.20.031

Degree of Hazard

The District's Cross-Connection Control Specialist will evaluate the degree of potential health hazard to the public water supply as a result of conditions existing on a customer/user's premises. The Cross-Connection Control Specialist will consider the following as a non-exclusive basis for determining if a hazard exists or has the potential to exist:

- The existence of an actual cross-connection;
- The nature of material handled on the property;
- The probability of a backflow occurring;
- The degree of piping system complexity and the potential for system modification.

Commercial:

All meters serving commercial properties are required to have District approved backflow devices installed.

Agricultural:

All meters serving Agricultural Properties are required to have District approved backflow devices installed.

Residential:

A backflow device would not be required unless one or more of the following conditions apply:

- Pressure in the customers system that may exceed the water pressure in the District system (onsite pumps, elevation, etc.)
- Auxiliary water system (well, etc.)
- Storage of chemicals, fertilizers, pesticides or any other substance in sufficient quantities or in a manner that has the potential to contaminate the water system.
- For Residential Properties, the District's Cross-Connection Control Specialist may conduct an inspection of the user's property to determine if potential cross-connections have been mitigated through the use of approved measures, such as the installation of approved anti-siphon hose bibs, air gaps on swimming pool fill lines, anti-siphon backflow preventers on irrigation systems, etc.

8.20.040

Backflow Prevention Device - General Requirements

The District is responsible for the protection of the potable water system from potential contamination or pollution due to the backflow of contaminants or pollutants through the potable water service connections.

An approved backflow prevention device is required at all potable water service connections except for the following:

- (1) Any water service connection for single or duplex Residential Properties where the connection is one inch (1") or smaller and the degree of hazard does not rise to the level requiring a backflow device as determined by the District's Cross-Connection Control Specialist.
- (2) Any water service connection which is locked off, provided however, that before water service may be unlocked the customer shall comply with all of the backflow prevention provisions of this chapter.

The Cross-Connection Control Specialist shall give notice in writing to all District customers who are required to install an approved backflow prevention device at each potable water service connection. Within the time prescribed by the General Manager or designate, which shall not be less than sixty (60) days, the customer shall install such approved device(s) at the customer's own expense; and failure or refusal or inability on the part of the customer to install said device(s) shall immediately constitute grounds for discontinuing water service to the metered water service connections until the required device(s) have been properly installed.

The District shall maintain records of all approved backflow devices installed in the water system. The District shall also keep records regarding the certification of all devices. The District shall be responsible for notifying each customer/user when a device is required to be installed or tested. Testing of backflow devices shall be done at least annually or more often as the District deems necessary, depending on the degree of hazard. It is the District's primary responsibility to ensure that all testing and record keeping conforms to State Health regulations relating to cross-connections.

8.20.041

Appeal Procedure

Any customer wishing to appeal a determination of the requirement for installation of a backflow prevention device may do so, in writing, within forty-five (45) days of the date of the first written notification. There will be an Appeal Hearing scheduled for the customer or customer representative to present his arguments against complying with either the directives or the schedule given in the notification. The Appeal Hearing Panel consists of the Engineering Manager and the General Manager. The purpose of the hearing is to confirm, modify or deny the findings of the Cross-Connection Control Specialist. The decision of the Appeal Hearing Panel is final.

8.20.050

Protection Required Before System Connection

No potable water service connection to any premises shall be placed in service by the District unless the District system is protected as required by this chapter. Service of water to any premises shall be immediately discontinued by the District if a backflow prevention device required by state laws and regulation and by this chapter is not installed, tested and maintained, or if it is found that a backflow prevention device has been removed, by-passed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

8.20.060

Backflow Prevention Device Installation, Replacement, Relocation, and Repair

- 1. Installation:** All backflow prevention devices shall be installed directly behind and as close to the meter as practical but no more than eight (8) feet away, per Rainbow Standards Drawing number W-1. The device is to be installed before any branches, trees, valves and strainers in the water line. Two or more backflow prevention devices of the same type may be installed in parallel when approved by the District. All single device installations shall be the size of the meter or greater. Devices must be installed to the District's specifications. When the street pressure exceeds the maximum working pressure of the backflow device (150 PSI), a pressure regulator can be installed on the upstream leg of the backflow assembly. Pressure regulators can be installed on the downstream leg of the backflow assembly. The District will be the final authority in determining the required location of a backflow prevention device.

Backflow prevention devices shall be tested by a certified tester immediately after they are installed and not placed into service unless they are functioning as required.

2. **Replacement:** A device may be removed and replaced provided the water use is discontinued until the replacement device is installed and tested. All Replacement devices must be approved by the District.
3. **Relocation:** A device may be relocated following confirmation by the District that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the device;
4. **Repair:** A device may be removed for repair; provided the water use is either discontinued until repair is completed and the device is returned to service, or the service connection is equipped with other backflow protection approved by the District. A retest will be required following the repair of the device.

8.20.070

Systems to be Open for Inspection, Installation and Testing

All customer/user systems shall be available for inspection, installation and testing at all reasonable times to authorized representatives of the District to determine whether cross-connections or other structural or sanitary hazards exist, including violations of this chapter. Refusal of an inspection will result in a mandatory requirement that the water service be locked off until a backflow device is installed or an inspection reveals that no hazard exist. When such a condition becomes known, the District shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition(s) in conformance with state laws and District ordinances relating to plumbing and water supplies and with regulations adopted pursuant thereto.

8.20.080

Backflow Prevention Device Required

The District will determine which one of the following backflow prevention devices is required: Reduced Pressure Principle Backflow Prevention Device (RP) or Reduced Pressure-Principle-Detector Backflow Assembly (RPDA). Existing nonconforming devices may remain until they need replacement. If a hazard exist an approved device will be required. The District will be the final authority in determining what type of backflow prevention is required.

When required, a reduced pressure backflow preventer shall be installed immediately after the meter at each and every potable water service connection within the District as required by this chapter.

When required, Reduced Pressure Principle Backflow Prevention Device (RP) will be installed as close to the water service connection as possible. Such backflow protection will be required for but not limited to the following conditions:

- Sewage treatment plants;
- Manufacturing, processing or fabricating plants where toxic materials or water are pumped, processed or treated;
- Any location where the District deems the installation of a Reduced Pressure Principle Backflow Prevention Device (RP) is necessary.

8.20.090

Certification of Backflow Prevention Devices

Any backflow prevention device required by this chapter shall be of a model and size approved by the District. The term "approved backflow prevention device" means a device that has been established by the American Water Works Association, as set forth in its publication entitled, AWWA C511-89 Standards for Reduce Pressure Principle Backflow Prevention Devices, and meets the most current edition of the Manual of Cross-Connection Control of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California.

Final approval shall be evidenced by a certificate of approval issued by an approved testing laboratory, certifying full compliance with said AWWA Standards and FCC&HR Specifications.

The following testing laboratory is approved by the board to test and certify backflow preventers: Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, KAP-200 University Park MC-2531, Los Angeles, California 90089-2531.

Backflow preventers which may be subjected to back pressure or backsiphonage that have been fully tested and have been granted a certificate of approval by said approved laboratory and are listed on the laboratory's current list of approved devices may be used.

8.20.100

Existing Devices

All presently installed backflow prevention devices previously approved by the District shall be deemed to comply with the requirements of this chapter provided such devices meet current performance and testing requirements. Existing devices which do not meet current performance or testing requirements shall be repaired or replaced by a backflow prevention device meeting the requirements of this chapter. Any such replacement cost will be borne by the customer/user.

Existing nonconforming devices may remain until they need replacement. If a hazard exists an approved device will be required. The District will be the final authority in determining what type of backflow prevention is required.

Any existing Double Check-Detector Backflow Prevention Assembly (DCDA) devices needing to be replaced shall be replaced with a Reduced Pressure Principal Detector Backflow Prevention Assembly. Any existing Double Check Valve Backflow Prevention Assembly needing to be replaced shall be replaced with a Reduced Pressure Principal Device (RP) if a hazard exists.

Existing devices not required by this ordinance may be:

- Maintained and tested at owners expense
- Removed at owners expense if District determines no hazard exist

It is the customer's responsibility to notify the District if they wish to withdraw from the testing program under this provision. An inspection would be required before withdrawing or removing from the program.

8.20.110 Inspections and Testing Responsibility

The customer/user is responsible for insuring the annual testing and making any necessary repairs to pass the test. The District will maintain a record of testing performed and a calendar indicating when the next test is required. The District has retained the services of a licensed contractor to administer the testing and monitoring program. Customers may elect to be included in this monitoring group and their devices will be tested annually by the contractor. The District shall pass its actual cost for the testing on to the customer in a monthly cross-connection control fee.

All other expenses where backflow prevention devices are installed, replaced, relocated, repaired or overhauled are the responsibility of the customer. All inspections and operational tests will be made by a certified tester. In those instances where the District deems the hazard to be great enough, it may require certified inspections at more frequent intervals. These inspections and tests shall be at the expense of the customer/user, and shall be performed by a District-approved certified tester. It shall be the duty of the District to see that these timely tests are to be undertaken so that District personnel may witness the tests if it is so desired. These devices shall be repaired, overhauled or replaced at the expense of the customer/user whenever said devices are found to be defective. Records of such tests, repairs and overhaul shall be kept on file with the District.

8.20.120 Noncompliance, Penalties

In the event a customer is notified that a backflow device shall be installed or tested on the customer's service connection and a reasonable compliance time has been allowed by the District in which the customer has not complied with the District's request, then the customer's water service shall be locked off. The customer's water service shall remain locked until an approved backflow device is installed and/or tested by a certified backflow tester; and all unlock fees are paid.

If a device is found to be tampered with or any deliberate action to impede the function of the backflow device, the service will be locked immediately and the customer will be responsible for paying all costs and fines associated with the violation.

8.20.130

Monthly Charges

Monthly charges will be established by the District as necessary. The purpose of such charges will be to cover the cost incurred by the District for regulation and enforcement of the cross-connection control regulations and annual testing of customer backflow devices and the repair if necessary to pass test.

8.20.140

Interpretation of Provisions

This chapter and Title 17 of the California Code of Regulations shall guide the District in the implementing and functioning of its backflow prevention program. In instances where this chapter does not define the application of the backflow prevention program the District shall reply on Title 17 of the California Code of Regulations for definition. In instances where this chapter or said Title 17 does not give definition then the District shall rely on the State Water Resources Control Board.

Section 8.20.010

Purpose

The purpose of this chapter is:

- A.** To protect the District system from the possibility of contamination or pollution, by isolating within customer systems such contaminants or pollutants **that have the potential to** backflow into the District's potable water system; and
- B.** To provide for **an ongoing** program of cross-connection control which will systematically and effectively prevent the contamination or pollution of the District's potable water system; and
- C.** To meet or exceed Federal and State regulations pertaining to cross-connection control issues.

8.20.020

Legal Basis for Program

All legal authorities and references shall be current versions and revisions.

Authority

1. Code of Federal Regulations, Safe drinking Water Act most current.
2. Code of California Regulations, Titles 17 and 22
3. State of California Water Code, Chapter 1, Section 110. Chapter 8, Section 500 and Chapter 723, Sections 13553, 13554.2, and 13554.3
4. American Water Works Association Manual of Water Supply Practices M14
5. University of Southern California (USC Manual) – **latest or current edition**
6. **California** Plumbing Code (CPC)
7. Rainbow Municipal Water District Administrative Code

8.20.030**Definitions**

Whenever in this chapter or in any document where they govern, the following terms are used, they shall be defined as follows:

"Air-Gap" is a means of backflow prevention utilizing the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of said vessel. An approved air-gap shall be at least double the diameter of the supply pipe, measured vertically, above the top of the rim of the vessel; provided however, that in no case shall the air-gap be less than one inch.

"Approved" means accepted by the District as meeting an applicable specification stated or cited in this chapter suitable for the proposed use.

"Auxiliary Water Supply" means any water supply, other than the District's system available to a customer system. These **auxiliary** supplies may include water from other purveyor's public potable water supply or any natural source(s) such as a well, spring, river, stream, harbor, etc., or used waters or industrial fluids. These waters may be polluted or contaminated, or they may be objectionable, and constitute an unacceptable water source over which the District does not have control.

"Agricultural Properties" is a parcel, lot, grove or residence of any size which is used for an agrarian nature, whether for commercial purposes or not. Typical uses would include, but not be limited to, the practice of cultivating crops, the breeding and raising of livestock, aquaculture and any other form of husbandry.

"Backflow" means the reversal of flow of water or mixtures of water and other liquids, gases or other substances into the District's distribution pipes of water from any source or sources.

"Backflow Preventer" means a device or means designed to prevent backflow or backsiphonage.

"Backpressure" means any elevation of pressure in the downstream piping system (by pump, elevation of piping, or steam and/or air pressure) above the supply pressure at the point of consideration, which would cause, or tend to cause, a reversal of the normal direction of flow.

"Backsiphonage" means the flow of water (or other liquids, mixtures or substances) into the District system from any source caused by the reduction of pressure in the District system.

"Board" means Board of Directors of the Rainbow Municipal Water District.

"Certified Backflow Tester" means a person who has proven his / her ability to test backflow prevention assemblies to the satisfaction of the District and the San Diego County Department of Environmental Health.

"Contamination" means the impairment of the quality of the potable water by sewage, industrial fluids, waste liquids **or any other** compounds or other materials to a degree which creates an actual hazard to the public health through poisoning or the spreading of disease.

"Control" means the right and power over the quality of water.

"Cross-Connection" means any physical connection, or arrangement of piping or fixtures, between two otherwise separate piping systems, one of which contains potable water and the other of which contains nonpotable water, industrial fluids, or fluids of questionable safety, through which, or because of which, backflow may occur into the District's system. A water service connection between the District system and a customer system which is cross-connected to a contaminated fixture, industrial fluid system or with a potentially contaminated supply or auxiliary water system, constitutes one type of cross-connection. Other types of cross-connections include connectors such as swing connections, removable sections, four-way plug valves, spools, dummy sections of pipe, swivel or change-over devices, sliding multiport tubes, solid connections, **garden hoses**, etc.

"Cross-Connection Control by Containment" means the installation of an approved backflow prevention device in any customer system **chosen as practical for the** water service connection.

"District" means Rainbow Municipal Water District.

"Double Check-Detector Backflow Prevention Assembly" (DCDA) means a specially Designed assembly composed of a line-size approved double check valve assembly with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall register accuracy for only very low rates of flow up to 3 GPM.

"Double Check Valve Backflow Prevention Assembly" an assembly composed of two (2) independently acting, approved check valves, including tightly closing resilient seated shut-off valves attached at each end of the assembly and fitted with properly located resilient seated test cocks.

"Health Hazard" means any condition, device or practice in the **customer** system, or its operation, which **endangers**, or in the judgment of the District, **has the potential to endanger** the health and well-being of any water customer.

"Industrial Fluids System" means any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution or plumbing hazard if introduced into the District system.

"Locked-off" means any water service which has been shut off at the meter by the District.

"Manager" means General Manager of the Rainbow Municipal Water District or his/her authorized representative.

"Nonpotable Water" means water which is not safe for human consumption or which is of questionable potability.

"Plumbing Hazard" means **An internal or plumbing type cross-connection in a customer/user's potable water system that may be either a pollution or a contamination-type hazard.**

"Pollution" means the presence of any foreign substance (organic, inorganic or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

"Pollution Hazard" means an actual or potential threat to the physical properties, or to the potability, of the District system, which would constitute a nuisance or be aesthetically objectionable or could cause damage to the District system, but would not be dangerous to health.

"Potable water" means any water which, according to recognized standards is safe for human consumption.

"Potable water service connection" means the terminal end of a service connection from the District system (where the District loses control over the water at its point of delivery to the customer system), being the downstream end of the meter. There should be no unprotected tees/take-offs from the service line **upstream** of any backflow prevention device. Service connections shall also include **temporary** connections from a fire hydrant and all other temporary or emergency water service connections from the District system.

"Public Health Agency" means the **State Water Resources Control Board.**

"Reduced Pressure Principle Device" (RP) means a backflow prevention device consisting of an assembly of two independently operating approved check valves with an automatically operating differential relief valve between the two check valves, tightly closing shut-off valves on either side of the check valves, plus properly located test cocks for the testing of the check and relief valves. The entire assembly shall meet the design and performance specifications and approval of a recognized and approved testing agency for backflow prevention assemblies. The device shall operate to maintain the pressure in the zone between the two check valves at a level less than the pressure of the inlet device. At cessation of normal flow the pressure between the two check valves shall be less than the pressure at the inlet of the device. In case of leakage of either of the check valves, the differential relief valve shall operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere. To be approved, these devices must be readily accessible for inline maintenance and testing and be installed in a location where no part of the device will be submerged.

"Reduced Pressure Principle-Detector Backflow Assembly (RPDA)" means a

\\rmwd-b\Store02\DriveC\Data\Drive-E\ADMINISTRATIVE CODE\Drafts_Not Approved\Cross-Connection Control 8.20_Revised_20160601.doc\Amended and Approved 1-23-07 by Ordinance No. 07-03\Amended and Approved 11-18-14 by Ordinance No. 14-08\DRAFT

specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly. The meter shall register for only very low rates of flow up to 3 GPM and shall show a registration for all rates of flow.

“Residential Properties” is a parcel or lot with at least one residence regardless of the lot size, with a primary purpose of providing a dwelling that serves as living quarters for one or more families, and does not meet the definition of an “Agricultural Property”.

"Title 17" means California Code of Regulations, Title 17, Public Health Regulations relating to cross-connection.

“Unlocked” means any water service previously shut off by the District which has been turned back on by the District.

"Used Water" means any water supplied by the District from the District system to a customer system **that** has passed through the metered water service connection and is no longer under the control of the District.

"Water System" The water system is made up of two parts; namely, the District system and the customer systems:

The District system consists of the **storage, treatment and distribution facilities** under the complete control of the District, up to the point where the customer system begins (immediately after the water meter).

The customer systems consist of all water components beyond the water **meter**.

8.20.031

Degree of Hazard

The District’s Cross-Connection Control Specialist will evaluate the degree of potential health hazard to the public water supply as a result of conditions existing on a **customer/user’s** premises. The Cross-Connection Control Specialist will consider the **following as a non-exclusive basis for determining if a hazard exists or has the potential to exist:**

- The existence of an actual cross-connection;**
- The nature of material handled on the property;**
- The probability of a backflow occurring;**
- The degree of piping system complexity and the potential for system modification.**

Commercial:

All meters serving commercial properties are required to have District approved backflow devices installed.

Agricultural:

All meters serving Agricultural Properties are required to have District approved backflow devices installed.

Residential: A backflow device would not be required unless one or more of the following conditions apply:

- Pressure in the customers system that may exceed the water pressure in the District system (onsite pumps, elevation, etc.)
- Auxiliary water system (well, etc.)
- Storage of chemicals, fertilizers, pesticides or any other substance in sufficient quantities or in a manner that has the potential to contaminate the water system.
- For Residential Properties, the District's Cross-Connection Control Specialist may conduct an inspection of the user's property to determine if potential cross-connections have been mitigated through the use of approved measures, such as the installation of approved anti-siphon hose bibs, air gaps on swimming pool fill lines, anti-siphon backflow preventers on irrigation systems, etc.

8.20.040

Backflow prevention device - General requirements

The District is responsible for the protection of the potable water system from potential contamination or pollution due to the backflow of contaminants or pollutants through the potable water service connections.

An approved backflow prevention device is required at all potable water service connections except for the following:

- (1) Any water service connection for single or duplex Residential Properties where the connection is one inch (1") or smaller and the degree of hazard does not rise to the level requiring a backflow device as determined by the District's Cross-Connection Control Specialist.
- (2) Any water service connection which is locked off, provided however, that before water service may be unlocked the customer shall comply with all of the backflow prevention provisions of this chapter.

The Cross-Connection Control Specialist shall give notice in writing to all District customers who are required to install an approved backflow prevention device at each potable water service connection. Within the time prescribed by the General Manager or designate, which shall not be less than sixty (60) days, the customer shall install such approved device(s) at the customer's own expense; and failure or refusal or inability on the part of the customer to install said device(s) shall immediately constitute grounds for discontinuing water service to the metered water service connections until the required device(s) have been properly installed.

The District shall maintain records of all approved backflow devices installed in the water system. The District shall also keep records regarding the certification of all devices. The District shall be responsible for notifying each customer/user when a device is required to be installed or tested. Testing of backflow devices shall be done at least annually or more often as the District deems necessary, depending on the degree of hazard. It is the District's primary responsibility to ensure that all testing and record keeping conforms to State Health regulations

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relating to cross- connections.

8.20.041

Appeal procedure

Any customer wishing to appeal a determination of the requirement for installation of a backflow prevention device may do so, in writing, within forty-five (45) days of the date of the **first** written notification. There will be an **Appeal** Hearing scheduled for the customer or customer representative to present his arguments against complying with either the directives or the schedule given in the notification. The **Appeal** Hearing Panel consists of the **Engineering** Manager and the General Manager. The purpose of the hearing is to confirm, **modify or deny** the findings of the **Cross-Connection Control Specialist**. **The decision of the Appeal Hearing Panel is final.**

8.20.050

Protection required before system connection

No potable water service connection to any premises shall be placed in service by the District unless the District system is protected as required by this chapter. Service of water to any premises shall be immediately discontinued by the District if a backflow prevention device required by state laws and regulation and by this chapter is not installed, tested and maintained, or if it is found that a backflow prevention device has been removed, by-passed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

8.20.060

Backflow Prevention Device Installation, Replacement, Relocation, and Repair.

- 1. Installation:** All backflow prevention devices shall be installed directly behind and as close to the meter as practical but no more than eight (8) feet away, per Rainbow Standards Drawing number W-1. The device is to be installed before any branches, trees, valves and strainers in the water line. Two or more backflow prevention devices of the same type may be installed in parallel when approved by the District. All single device installations shall be the size of the meter or greater. Devices must be installed to the District's specifications. When the street pressure exceeds the maximum working pressure of the backflow device (150 PSI), a pressure regulator can be installed on the upstream leg of the backflow assembly. Pressure regulators can be installed on the downstream leg of the backflow assembly. The District will be the final authority in determining the required location of a backflow prevention device.

Backflow prevention devices shall be tested by a certified tester immediately after they are installed and not placed into service unless they are functioning as required.

- 2. Replacement:** A device may be removed and replaced provided the water use is discontinued until the replacement device is installed and tested. All Replacement devices must be approved by the District.

3. **Relocation:** A device may be relocated following confirmation by the District that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the device;
4. **Repair:** A device may be removed for repair; provided the water use is either discontinued until repair is completed and the device is returned to service, or the service connection is equipped with other backflow protection approved by the District. A retest will be required following the repair of the device.

8.20.070

Systems to be open for inspection, installation and testing

All customer/user systems shall be available for inspection, installation and testing at all reasonable times to authorized representatives of the District to determine whether cross-connections or other structural or sanitary hazards exist, including violations of this chapter. Refusal of an inspection will result in a mandatory requirement that the water service be locked off until a backflow device is installed or an inspection reveals that no hazard exist. When such a condition becomes known, the District shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition(s) in conformance with state laws and District ordinances relating to plumbing and water supplies and with regulations adopted pursuant thereto.

8.20.080**Backflow prevention device required**

The District will determine **which** one of the following backflow prevention devices is required: Reduced Pressure Principle Backflow Prevention Device (RP) or Reduced Pressure-Principle-Detector Backflow Assembly (RPDA). Existing nonconforming devices may remain until they need replacement. If a hazard exist an approved device will be required. The District will be the final authority in determining what type of backflow prevention is required.

When required, a reduced pressure backflow preventer shall be installed immediately after the meter at each and every potable water service connection within the District as required by this chapter.

When required, Reduced Pressure Principle Backflow Prevention Device (RP) will be installed as close to the water service connection as possible. Such backflow protection will be required for but not limited to the following conditions:

- Sewage treatment plants ;
- Manufacturing, processing or fabricating plants where toxic materials or water are pumped, processed or treated;
- Any location where the District deems the installation of a Reduced Pressure Principle Backflow Prevention Device (RP) **is** necessary.

8.20.090**Certification of backflow prevention devices**

Any backflow prevention device required by this chapter shall be of a model and size approved by the District. The term "approved backflow prevention device" means a device that has been established by the American Water Works Association, as set forth in its publication entitled, AWWA **C511-89** Standards for Reduce Pressure Principle Backflow Prevention Devices, and **meets the most current edition of the Manual of Cross-Connection Control of** the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California.

Final approval shall be evidenced by a certificate of approval issued by an approved testing laboratory, certifying full compliance with said AWWA Standards and FCC&HR Specifications.

The following testing laboratory is approved by the board to test and certify backflow preventers: Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, KAP-200 University Park MC-2531, Los Angeles, California 90089-2531.

Backflow preventers which may be subjected to back pressure or backsiphonage that have been fully tested and have been granted a certificate of approval by said approved laboratory and are listed on the laboratory's current list of approved devices may be used.

8.20.100 Existing devices

All presently installed backflow prevention devices previously approved by the District shall be deemed to comply with the requirements of this chapter provided such devices meet current performance and testing requirements. Existing devices which do not meet current performance or testing requirements shall be repaired or replaced by a backflow prevention device meeting the requirements of this chapter. Any such replacement cost will be borne by the customer/user.

Existing nonconforming devices may remain until they need replacement. If a hazard exists an approved device will be required. The District will be the final authority in determining what type of backflow prevention is required.

Any existing Double Check-Detector Backflow Prevention Assembly (DCDA) devices needing to be replaced shall be replaced with a Reduced Pressure Principal Detector Backflow Prevention Assembly. Any existing Double Check Valve Backflow Prevention Assembly needing to be replaced shall be replaced with a Reduced Pressure Principal Device (RP) if a hazard exists.

Existing devices not required by this ordinance may be:

- Maintained and tested at owners expense
- Removed at owners expense if District determines no hazard exist

It is the customer's responsibility to notify the District if they wish to withdraw from the testing program under this provision. An inspection would be required before withdrawing or removing from the program.

8.20.110 Inspections and testing responsibility

The **customer/user** is responsible for insuring the annual testing and making any necessary repairs to pass the test. **The District will maintain a record of testing performed and a calendar indicating when the next test is required. The District has retained the services of a licensed contractor to administer the testing and monitoring program. Customers may elect to be included in this monitoring group and their devices will be tested annually by the contractor. The District shall pass its actual cost for the testing on to the customer in a monthly cross-connection control fee.**

All other expenses where backflow prevention devices are installed, replaced, relocated, repaired or overhauled are the responsibility of the customer. All inspections and operational tests will be made by a certified tester. In those instances where the District deems the hazard to be great enough, it may require certified inspections at more frequent intervals. These inspections and tests shall be at the expense of the customer/user, and shall be performed by a District-approved certified tester. It shall be the duty of the District to see that these timely tests are to be undertaken so that District personnel may witness the tests if it is so desired. These devices shall be repaired, overhauled or replaced at the expense of the customer/user whenever said devices are found to be defective. Records of such tests, repairs and overhaul shall be kept on file with the District.

8.20.120

Noncompliance, penalties

In the event a customer is notified that a backflow device shall be installed or tested on the customer's service connection and a reasonable compliance time has been allowed by the District in which the customer has not complied with the District's request, then the customer's water service shall be locked off. The customer's water service shall remain locked until an approved backflow device is installed and/or tested by a certified backflow tester; and all unlock fees are paid.

If a device is found to be tampered with or any deliberate action to impede the function of the backflow device, the service will be locked immediately and the customer will be responsible for paying all costs and fines associated with the violation.

8.20.130

Monthly charges

Monthly charges will be established by the District as necessary. The purpose of such charges will be to cover the cost incurred by the District for regulation and enforcement of the cross-connection control regulations and annual testing of customer backflow devices and the repair if necessary to pass test.

8.20.140

Interpretation of provisions

This chapter and Title 17 of the California Code of Regulations shall guide the District in the implementing and functioning of its backflow prevention program. In instances where this chapter does not define the application of the backflow prevention program the District shall reply on Title 17 of the California Code of Regulations for definition. In instances where this chapter or said Title 17 does not give definition then the District shall rely on the State **Water Resources Control Board**.



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION REGARDING CALIFORNIA SPECIAL DISTRICTS ASSOCIATION (CSDA) 2016 BOARD ELECTIONS

DESCRIPTION

RMWD is in receipt of a mail ballot to utilize in voting to elect a representative to the CSDA Board of Directors in the RMWD's Region for Seat B.

Each of CSDA's six (6) networks has three seats on the Board. Each Regular Member (district) in good standing shall be entitled to vote for one (1) director to represent its network. Ballots must be received at the CSDA by 5:00 p.m. on Friday, August 5, 2016.

STAFF RECOMMENDATION

Staff supports Board direction.

A handwritten signature in black ink, appearing to read "Tom Kennedy", is written over a horizontal line.

Tom Kennedy
General Manager

June 28, 2016



**California Special
Districts Association**
Districts Stronger Together

CALIFORNIA SPECIAL DISTRICTS ASSOCIATION

2016 BOARD ELECTIONS

MAIL BALLOT INFORMATION

Dear Member:

A mail ballot has been enclosed for your district's use in voting to elect a representative to the CSDA Board of Directors in your Network for Seat B.

Each of CSDA's six (6) networks has three seats on the Board. Each of the candidates is either a board member or management-level employee of a member district located in your network. Each Regular Member (district) in good standing shall be entitled to vote for one (1) director to represent its network.

We have enclosed the candidate information for each candidate who submitted one. Please vote for **only one** candidate to represent your network in Seat B and be sure to sign, date and fill in your member district information. If any part of the ballot is not complete, the ballot will not be valid and will not be counted.

Please utilize the enclosed return envelope to return the completed ballot. Ballots must be received at the CSDA office at 1112 I Street, Suite 200, Sacramento, CA 95814 by **5:00pm on Friday, August 5, 2016**.

If you do not use the enclosed envelope, please mail in your ballot to:

California Special Districts Association

Attn: 2016 Board Elections

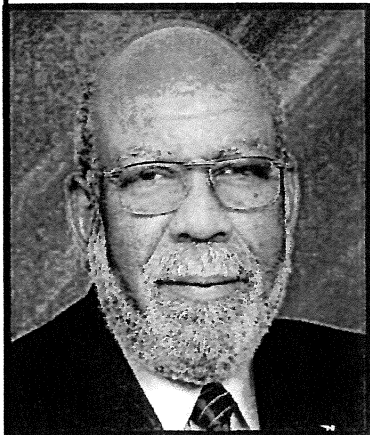
1112 I Street, Suite 200

Sacramento, CA 95814

Please contact Charlotte Lowe toll-free at 877.924.CSDA or charlottel@csga.net with any questions.

CSDA President Bill Nelson

To CSDA Board of Directors



PROVEN EXPERIENCE LEADING SPECIAL DISTRICTS

I am committed to building on CSDA's present foundation of educational programs and legislative advocacy. My enthusiasm, commitment and comprehensive knowledge of special districts bring years of experience to the CSDA Board. It would be an honor to continue serving special districts in the Southern Network.

- ✓ **EXPERIENCED LEADER**
 - ✓ **COMMITTED TO SPECIAL DISTRICTS**
 - ✓ **FISCALLY RESPONSIBLE**
 - ✓ **DEDICATED**

CSDA EXPERIENCE

- ❖ CSDA President 2016
- ❖ Served on the Board for five years
- ❖ Chair of Fiscal Committee 2014
- ❖ Membership Committee 2013-16

DISTRICT EXPERIENCE

- ❖ Appointed to Board of Trustees Orange County Cemetery District in 2003
- ❖ Chair of the Board 2006, 2010 & 2014. Currently Vice Chair
- ❖ Chair of Finance Committee 2004 to present

OTHER LEADERSHIP EXPERIENCE

- ❖ Board of Directors - California Association of Public Cemeteries 2008 to 2016
- ❖ Board of Directors – Institute for Local Government – 2016 to present
- ❖ Board of Directors - California Association of Realtors – 2004-2012
- ❖ Board of Trustees Orange County Mosquito & Vector Control – 2016 to present

❖ COMMUNITY INVOLVEMENT-

- ❖ Orange County Grand Jury 2002-2003
- ❖ Board of Directors - Orange County Grand Jurors Association 2005 to 2011
- ❖ City of Villa Park Investment Advisory Committee- 2008 to 2014 – Chair last two years
- ❖ Villa Park Community Services Foundation – Treasurer – 2010 to 2014
- ❖ Villa Park City Council Member – 2014 to present

BUSINESS EXPERIENCE

- ❖ Financial Executive for 25 years with Atlantic Richfield Company (ARCO) & Southern Calif. Gas Co.

EDUCATION

- ❖ MBA Finance University of Southern California
- ❖ BA Economics California State University Dominguez Hills



California Special
Districts Association
Districts Stronger Together

2016 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: Bill Nelson

District/Company: Orange County Cemetery District

Title: Trustee & Vice Chair of the Board

Elected/Appointed/Staff: Appointed

Length of Service with District: 13 Years

1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):

CSDA 2016 President. Chair of Fiscal Committee - 2014, Served on the Board for five years, Served on all of CSDA Committees, attended at least 10 CSDA Legislative Days and Annual Conferences, Received Special District Leadership Foundation Recognition in Special District Governance.

2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

Board of Directors - California Association of Public Cemeteries 2008 to 2016

Board of Directors - Institute For Local Government - 2016 to present

Board of Directors - California Association of Realtors - 2004 to 2012

3. List local government involvement (such as LAFCo, Association of Governments, etc.):

City Council Member - City of Villa Park - 2014 to present

Trustee - Orange County Mosquito and Vector Control District - 2016 to present

4. List civic organization involvement:

Orange County Grand Jury 2002-2003

Board of Directors - Orange County Grand Jurors Association 2005-2011

City of Villa Park Investment Advisory Committee - 2008 to 2014 - Chair last two years

Villa Park Community Services Foundation - Treasurer - 2010 to 2014

****Candidate Statement** – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. **Any statements received in the CSDA office after June 2, 2016 will not be included with the ballot.**

I am seeking election to a seat on the Board of Directors of the California Special Districts Association.

I have served on the Board of Directors of the Chino Valley Independent Fire District for ten years, elected in 2006. I am very proud to state that the Fire District is the **first** fire district to receive the District of Distinction Accreditation from the Special Districts Leadership Foundation (SDLF). We have been a District of Distinction since 2008. We also hold a District of Transparency Certificate of Excellence. I have completed the SDLF Recognition of Special District Governance.

I serve on the CSDA Legislative and the Fiscal Committees. I have previously served on the CSDA Education and Membership committees.

I am a retired Fire Chief with 33 years of Fire Service experience. I have been involved in city, county, JPAs and special districts in various capacities. I am currently on the Board of Directors of the Fire Districts Association of California and also serve on the Conference Committee. I am a Past President of the Chino Rotary Club and the current Chairman of the Chino Rotary Foundation.

I understand, and I am committed to legislative advocacy for special districts. Special Districts provide one of the most effective, efficient, and accountable forms of local service. It is vital that we continue to work together to influence and monitor policy decisions affecting California special districts.

My commitment and extensive experience, education in public service and as a special district board member & policy-maker, provides me with the ability to effectively serve as a CSDA Board Member representing all California Special Districts. I look forward to your support!

If you would like to speak with me, I can be reached at (909) 816-8396 or at jdemonaco@chofire.org

John DeMonaco



**California Special
Districts Association**
Districts Stronger Together

2016 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: John DeMonaco

District/Company: Chino Valley Independent Fire District

Title: Director

Elected/Appointed/Staff: Elected

Length of Service with District: 10 Years

1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):

I am on the Legislative and Fiscal Committees.

I have also served on the Education and Membership Committees.

2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

I am on the Board of Directors for the Fire Districts Association of California.

3. List local government involvement (such as LAFCo, Association of Governments, etc.):

N/A

4. List civic organization involvement:

I am a member and past president of the Rotary Club of Chino.

****Candidate Statement** – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. **Any statements received in the CSDA office after June 2, 2016 will not be included with the ballot.**

MY FELLOW CSDA MEMBER:

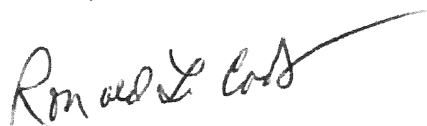
As Chairman of East Valley Water District I take great pride in the opportunity to serve my community. Prior to joining the Governing Board, I was an active public participant, and felt honored when elected in 2014. I firmly believe in the importance of transparent government and public service. With these foundational principles, I look forward to representing this region in a professional manner, as the Southern Network, Seat B, Board of Directors representative for CSDA.

I have had the opportunity to work with a number of organizations through CSDA and believe that we all benefit from interacting and sharing experiences. I am a proud lifetime member of the CSDA Leadership Foundation and have participated in a number of trainings opportunities.

At East Valley Water District, we have made a commitment to good governance and accountability. This is clearly demonstrated through the numerous awards we have received from the Government Finance Officers Association, CAPIO, CalPERS, and even CSDA. But I am proud to be a part of EVWD for more than the awards, they are an organization that delivers. As a performance based agency, we continue to achieve the impossible. Whether it is constructing a headquarters facility ahead of an already tight schedule, implementing budget based rates to provide customers with rate stability during the drought emergency, or developing a succession plan to prepare for the change in our workforce; we set our sights high to enhance the quality of life of this community.

As a CSDA Director, I will bring that passion for good governance and public service. Thank you for your consideration and for allowing me the opportunity to share my experience and perspective. I look forward to serving as a representative on the CSDA Board of Directors.

Sincerely,

A handwritten signature in black ink that reads "Ronald Coats". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

Ronald Coats
EVWD Chairman



California Special
Districts Association
Districts Stronger Together

2016 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: Ronald L. Coats

District/Company: East Valley Water District

Title: Chairman of the Board

Elected/Appointed/Staff: Elected

Length of Service with District: 2 Years

1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):

I am proud to be a lifetime member of the CSDA Leadership Foundation. Additionally, I have completed numerous CSDA webinars, including the CIDAC series on local agency finances and investments. Additionally, I have attended annual CSDA conferences.

2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

I am currently affiliated with ACWA, WaterReuse, and AWWA. I have attended every ACWA conference since my election.

3. List local government involvement (such as LAFCo, Association of Governments, etc.):

I am a member of the Association of San Bernardino County Special District's, serve on both the Citizen's Oversight Committee for the San Bernardino Community College District (3 years) and the Citizens Oversight Committee for the San Bernardino Unified School District (7 years).

4. List civic organization involvement:

Arrowhead United Way Planning and Allocations and Community Cabinet (15 years), as a member and ambassador of the San Bernardino Chamber of Commerce (17 years), Toastmasters International (10 years), American Legion (34 years), and California Sheriff's Association (27 years).

****Candidate Statement** – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. **Any statements received in the CSDA office after June 2, 2016 will not be included with the ballot.**

Agenda Packet Page 399 of 445

JOHN DeMONACO
CANDIDATE
CSDA BOARD OF DIRECTORS

My name is John DeMonaco and I am asking for your district's vote so that I may represent you on the CSDA Board of Directors. The ballots will go out to the districts the first week of June and need to be in the CSDA office by the first week of August.

I have served on the Board of Directors of the Chino Valley Independent Fire District for ten years. As a new board member, I recognized the importance of the educational programs offered by CSDA and the Special Districts Leadership Foundation (SDLF) which CSDA Staff manages. I was one of the first board members to complete and receive the Special District Leadership Foundation Recognition of Special District Governance which is a requirement to serve on the Board. I urged my fellow board members to attend the training sessions. I am very proud that in 2008, the Chino Valley Fire District was the **first** fire district in the state to receive the District of Distinction Accreditation from SDLF. My district also has the District of Transparency Certificate of Excellence.

I presently serve on the CSDA Legislative Committee and the on the Fiscal Committee. I have previously served on the CSDA Education Committee and Membership Committee. Serving on these main CSDA committees has given me the insight and understanding into the "workings" of the association. I understand CSDA'S budget and finances, the educational programs, and what CSDA needs to offer its member districts. With this experience, I will be an effective board member from the "get-go."

Serving on the Legislative Committee, I understand, and I am committed to legislative advocacy for special districts. I recognize the importance of working together to represent the common interest of all California Special Districts and the residents we serve. Special Districts provide one of the most effective, efficient, and accountable forms of local service. The California Special District Association monitors ALL legislation so that special districts can continue to deliver core services and can continue to be efficient. It is vital that the CSDA Legislative Staff with the direction of the Board of Directors continues to work to influence and monitor policy decisions affecting California special districts.

My commitment and extensive experience, education in public service and as a special district board member and policy-maker, provides me with the ability to effectively serve as a CSDA Board Member representing all California Special Districts.

I am a retired Fire Chief with 33 years of Fire Service experience. I have been involved in city, county, JPAs and special districts in various capacities. My commitment to public service and local government is demonstrated by my extensive experience in the public sector.

I am a Past President of the Chino Rotary Club and the current Chairman of the Chino Rotary Foundation. I am an At Large Director on the Fire Districts Association of California and serve on their Conference Committee.

Your district's **VOTE** will be greatly appreciated!
I can be reached at (909) 816-8396 or by email at jdemonaco@chofire.org

Thanks for your vote!

John



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO APPOINT CYNTHIA GRAY AS AN ALTERNATE MEMBER TO THE COMMUNICATIONS COMMITTEE AND VANESSA MARTINEZ AS AN ALTERATE MEMBER TO THE BUDGET AND FINANCE COMMITTEE

DESCRIPTION

In the past, there have been staff members appointed to serve as alternate members on the respective committees as a means of ensuring a quorum is present at each committee meeting. Since both the Communications Committee and Budget and Finance Committee have a low number of members at this time, both of these committees have decided to recommend the Board appoint a staff member to each until the committee membership number increases.

At their June 6, 2016 Communications Committee meeting, the committee members voted to recommend the Board of Directors appoint Cynthia Gray as an alternate member to the Communications Committee.

At their June 14, 2016 Budget and Finance Committee meeting, the committee members voted to recommend the Board of Directors appoint Vanessa Martinez as an alternate member to the Budget and Finance Committee.

POLICY

Administrative Code Section 2.09; Committees

BOARD OPTIONS/FISCAL IMPACTS

The Board may make the appointments.

STAFF RECOMMENDATION

Staff recommends the Board appoint Cynthia Gray as an alternate member to the Communications Committee and Vanessa Martinez as an alternate member to the Budget and Finance Committee.

Tom Kennedy
General Manager

June 28, 2016



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 16-15 — A RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ESTABLISHING CLASSIFICATIONS AND MONTHLY PAY RANGES FOR DISTRICT EMPLOYEES EFFECTIVE JULY 1, 2016 THROUGH JUNE 30, 2017 AND THE GENERAL MANAGER'S SALARY EFFECTIVE AUGUST 29, 2015 THROUGH AUGUST 28, 2016.

DESCRIPTION

The grade structure included in Resolution No. 16-15 is revised to reflect the changes to pay rates as a result of the 2% COLA increase effective on July 1, 2016 in accordance with the Memorandums of Understanding between the District and the Rainbow Employees Association, the Rainbow Association of Supervisors and Confidential Employees and the Exempt Employees.

Resolution No. 16-15 rescinds Resolution No. 16-10.

BACKGROUND

In compliance with state and CalPERS regulations, the District maintains a Salary Grade structure that includes all job titles, salary grade levels, and monthly salary ranges for each grade. The table is available for public review, accessible from the RMWD website, and is published on a website hosted by the California State Controller.

The 2% COLA increase was approved at the August 26, 2014, board meeting through the Memorandums of Understanding between the District and the employee associations.

On April 26, 2016, the Board approved the current salary grades in Resolution No. 16-10.

POLICY/STRATEGIC PLAN KEY FOCUS AREA

Updating this document with current information allows the District to comply with CalPERS requirements and California Code of Regulations 570.5 and 571.

BOARD OPTIONS/FISCAL IMPACTS

The fiscal impact is a 2% increase in salaries and wages and was included in the annual operating and capital budget document for fiscal year 2016/2017 that was presented to the Budget and Finance Committee on June 14, 2016.

STAFF RECOMMENDATION

Staff recommends the Board approves Resolution No. 16-15 and direct Human Resources to post a copy on the RMWD website.

Karleen Harp

Karleen Harp
Human Resources Manager

06/28/2016

RESOLUTION NO. 16-15

RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ESTABLISHING CLASSIFICATIONS AND MONTHLY RATES OF PAY FOR DISTRICT EMPLOYEES EFFECTIVE JULY 1, 2016 THROUGH JUNE 30, 2017

Job Title	Salary Grade	Monthly Salary Range
General Manager	n/a	\$17,000
Engineering Manager Finance Manager Human Resources Manager Operations Manager	120	\$10,413-\$13,663
Constr. & Maintenance Superintendent Senior Accountant Wastewater Superintendent Water Operations Superintendent	95	\$8,003-\$10,500
Associate Engineer Constr. & Maintenance Superintendent Wastewater Superintendent Water Operations Superintendent	90	\$7,617-\$9,994
Constr. & Maintenance Superintendent Senior Accountant Wastewater Superintendent Water Operations Superintendent	85	\$7,250-\$9,513
IT Administrator	80	\$6,901-\$9,054
Crew Leader Executive Assistant/Board Secretary	70	\$6,252-\$8,203
Crew Leader	65	\$5,951-\$7,808
Administrative Analyst Assistant Engineer Crew Leader	60	\$5,664-\$7,431
Accountant Accounting Specialist II Electrical/Electronic Technician II Engineering Inspector II Engineering Technician II Human Resources Technician II Senior Customer Service Representative II System Operator III	55	\$5,391-\$7,073
Electrical/Electronic Technician I Engineering Inspector I Mechanic II Water Quality Technician II	50	\$5,131-\$6,732

Accounting Specialist I Electrical/Electronic Technician I Engineering Inspector I Engineering Technician I Human Resources Technician I Purchasing/Warehouse Technician II Safety Administrator II Senior Customer Service Representative I System Operator II Utility Worker III Water Quality Technician I	45	\$4,884-\$6,408
Administrative Assistant II Purchasing/Warehouse Technician I Safety Administrator I Water Quality Technician I	40	\$4,649-\$6,099
Mechanic I Purchasing/Warehouse Technician I Safety Administrator I System Operator I Utility Worker II	35	\$4,425-\$5,805
Administrative Assistant I	30	\$4,129-\$5,417
Customer Service Representative II Utility Worker I	25	\$4,008-\$5,259
Customer Service Representative I	15	\$3,634-\$4,765

Resolution No. 16-15 rescinds Resolution No. 16-10.

PASSED, APPROVED, AND ADOPTED in Open Session at a meeting of the Board of Directors of the Rainbow Municipal Water District held on the 28th day of June, 2016 by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary



BOARD ACTION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

DISCUSSION AND POSSIBLE ACTION ON BOARD RELATED PROFESSIONAL SERVICES CONTRACTS

DESCRIPTION

At the May 2016 Board meeting, Board President Sanford requested a review of professional services contracts related to the Board of Directors. This request was made in order to ensure that our current contracts are up to date. Staff reviewed contract records for the following service providers:

Auditor
Legal Counsel
Tax Roll Billing Services

Staff reviewed each of these service providers in order to identify both the most recent contract(s) and the competitive selection process was used to select the current vendor. Each vendor's situation was slightly different.

Auditor

The most recent audits have been performed by Hosaka, Rotherham & Company (hereafter Hosaka) which is a certified public accounting firm. Hosaka first performed the 2005/2006 audit and has performed them every year since that time. The most recent agreement that we have located is from 2011 although there may have been another letter agreement that has not been filed correctly.

Recently, Hosaka was acquired by Squar Milner LLC with one of the principals from Hosaka (Mr. Rotherham) joining Squar Milner as a partner. Squar Milner has provided the District with a proposal to perform the 2015/2016 audit.

Legal Counsel

Procopio, Cory, Hargraves, and Savitch became the District's General Counsel when Greg Moser moved from his previous firm, Foley and Lardner, to Procopio in 2007. Foley and Lardner had been the District's General Counsel since at least 2003. Our records indicate that a competitive selection process was conducted in 2005 with Foley and Lardner being the successful firm. When Mr. Moser moved to Procopio, the District changed firms.

Tax Roll Billing Services

Each year the District collects certain fees from the tax rolls and a specialized consultant is used to prepare the public hearing documents and the tax roll data for presentation to the County. Since 2000 this work has been done by a local Fallbrook firm Shepherd and Staats. We have complete contract history for this work and the small value of the work was such that a formal RFP process has not been used.

POLICY

Under Water Code Section 71340, the Board of Directors must appoint a Secretary, a Treasurer, an Attorney, a General Manager, and an Auditor. At RMWD, the positions of Secretary and Treasurer are held by a Board member and then Finance Manager respectively. The positions of Legal Counsel and Auditor are under consideration herein along with the contract for Tax Roll Billing Services.

BOARD OPTIONS/FISCAL IMPACTS

The Board has several options related to these services:

- Retain the current firms for each of these services
- Issue Requests for Proposals for each of these services
- Some combination of the two

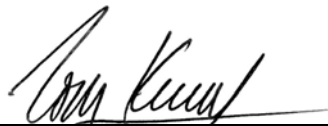
The fiscal impacts of each decision will vary. The largest cost item of the three under consideration (by far) is the Legal Counsel contract. The cost of legal services is nearly ten times the cost of the other two services combined. Legal service costs can vary from firm to firm, but can also be increased when we need to use Special Counsel for particular issues. This is an important issue for Board consideration.

The use of the same auditor for many years is also discouraged as it is preferred that staff and auditors do not become too familiar over time. Auditors are supposed to be a second set of eyes checking the books and if the same firm does the same thing over and over there is a possibility that important items will be overlooked.

STAFF RECOMMENDATION

The staff recommendations are as follows:

- Auditor – since we have only a short time before the next audit must commence, the recommendation is to proceed with Squar Milner for the FY15/16 audit and issue a RFP for auditing services in the fall of 2016.
- General Counsel – issue a RFP for General Counsel services. A draft RFP was presented to the Board in February 2016.
- Tax Roll Billing Services – since this work is a small expense and the current firm is well suited to the task, staff sees no benefit to RMWD in changing firms at this time. The cost of the RFP process would likely exceed the annual billing for this work



Tom Kennedy
General Manager

June 28, 2016

Contractor List

Date	Contractor	Description	Amount
TAX SERVICES			
1/5/2000	Shepherd & Staata, Inc.	2000/01 Tax Roll Billing Services - Improvement District No. 1 Standby Charges	\$5,000.00
1/5/2000	Shepherd & Staata, Inc.	2000/01 Tax Roll Billing Services - Improvement District No. 6 Standby Charges	\$2,300.00
2/22/2001	Shepherd & Staata, Inc.	2001/02 Tax Roll Billing Services - Improvement District No. 1 Standby Charges	\$5,000.00
2/20/2001	Shepherd & Staata, Inc.	2001/02 Tax Roll Billing Services - Improvement District No. 6 Standby Charges	\$2,300.00
1/16/2002	Shepherd & Staata, Inc.	2000/01 Tax Roll Billing Services - Improvement District No. 6 Standby Charges	\$3,500.00
2/14/2002	Shepherd & Staata, Inc.	US Census 2000 Information	\$3,500.00
1/9/2003	Shepherd & Staata, Inc.	2003/04 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
4/28/2004	Shepherd & Staata, Inc.	2004/05 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
3/2/2005	Shepherd & Staata, Inc.	2005/06 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
2/14/2006	Shepherd & Staata, Inc.	2006/07 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
3/1/2007	Shepherd & Staata, Inc.	2007/08 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
1/30/2008	Shepherd & Staata, Inc.	2008/09 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
12/8/2008	Shepherd & Staata, Inc.	2009/10 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
12/21/2009	Shepherd & Staata, Inc.	2010/11 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
1/27/2011	Shepherd & Staata, Inc.	2011/12 Tax Roll Billing Services - Improvement District No. 1 & No. 6 Standby Charges	\$7,300.00
12/3/2012	Shepherd & Staata, Inc.	2013/14 Tax Roll Billing Services - Improvement District No. 1 Standby Charges	\$5,000.00
12/9/2003	Shepherd & Staata, Inc.	2014/15 Tax Roll Billing Services - Improvement District No. 1 Standby Charges	\$5,000.00
12/4/2014	Shepherd & Staata, Inc.	2015/16 Tax Roll Billing Services - Improvement District No. 1 Standby Charges	\$5,000.00
12/22/2015	Shepherd & Staata, Inc.	2016/17 Tax Roll Billing Services - Improvement District No. 1 Standby Charges	\$5,000.00

AUDITING SERVICES

2/18/1999	Leaf & Cole, LLP	Auditing of Financial Statements FY 1998/99	Not to Exceed <u>\$25,000.00</u>
2/25/2000	Schilling & Hinzman	Auditing of Financial Statements FY 1999/2000	Not to Exceed <u>\$14,4450.00</u>
6/21/2006	Hosaka, Nagel & Company	Auditing of Financial Statements FY 2005/06, 2006/07, & 2007/08	Not to Exceed <u>\$10,350.00</u> for Each Year FY 08/09 <u>\$14,910.00</u> FY 09/10 <u>\$13,899.00</u> FY 10/11 <u>\$12,786.00</u>
2/26/2009	Hosaka, Nagel & Company	Auditing of Financial Statements FY 2008/09, 2009/10, & 2010/11	<u>\$12,786.00</u>

LEGAL SERVICES & NOTICES

6/4/2003	Foley & Lardner Procopio, Cory, Hargraves, & Savitch	Rate Changes effective 7/1/2003 - see blended rate breakdown Contract # 03-14 Greg Moser new partnership w/ PCH&S no longer w/ Foley & Lardner	N/A N/A
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MEETINGS/SEMINARS/CONFERENCES/WORKSHOPS

VARIABLE					
DATE	2016	MEETING	LOCATION	ATTENDEES	POST
July	14	SDCWA Special Board Meeting	SDCWA	GM	N/A
July	*	CSDA – San Diego Chapter	(Location to be Announced) 6:00 p.m.	GM	N/A
July	*	LAFCO Special Meeting	County Admin Center, Room 358 – 9:30am	Sanford (As Advised by GM)	N/A
July	*	Santa Margarita Watershed Council	Rancho California Water District	Sanford	N/A

* To Be Announced

MEETINGS/SEMINARS/CONFERENCES/WORKSHOPS

RECURRING					
DATE	2016	MEETING	LOCATION	ATTENDEES	POST
July	6	Engineering Committee Meeting	RMWD Board Room 3:00 p.m.	Appointed Director, General Manager	6/28
July	11	LAFCO	County Admin. Center Room 358 9:00 am	Sanford (As Advised by GM)	N/A
July	11	Communications Committee Mtg.	RMWD Board Room 3:30 p.m.	Appointed Director, General Manager	6/28
July	12	Budget & Finance Committee Mtg.	RMWD Board Room 1:00 p.m.	Appointed Director, General Manager	6/28
July	15	LAFCO Advisory Committee	LAFCO, 9335 Harzard Way, 9:30 a.m.	General Manager	N/A
July	15	NC Managers	Golden Egg 7:45 a.m.	General Manager	N/A
July	19	SDCWA GM's Meeting	SDCWA, San Diego 9:30 a.m.	General Manager	N/A
July	19	Council of Water Utilities	Stoneridge Country Club 7:15 a.m. Poway	All Directors, General Manager	7/14
July	25	San Luis Rey Watershed Council	Fallbrook Public Utility District 1:00 p.m.	Walker	N/A
July	26	RMWD General Board	RMWD Board Room (Start Time to Be Determined)	All Directors	7/20
July	27	North County Water Group	Rincon Del Diablo, Escondido 7:30 a.m.	All Directors on a Rotating Schedule, General Manager	N/A
July	28	SDCWA Full Board Meeting	SDCWA Board Room, 3-5 p.m.	General Manager	N/A

June 6, 2016

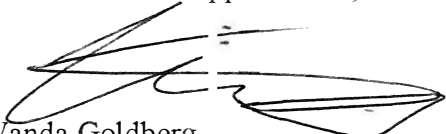
To Whom It May Concern:

Broken meters and water breaks are certainly no fun. Unless, of course, you get the pleasure of having Armando, Justin and Kyle show up to fix the problem.

About a week ago I noticed a leak right beside our water meter and called Rainbow. Within the same day someone showed up to access the problem and did a great job of repairing it until it could be fixed properly.

Today Armando, Justin and Kyle showed up to do the repair and they did an amazing job. These guys were efficient, polite and very skilled at their jobs. They were an absolute delight to work with and Rainbow Water should be proud to have these guys represent them in the field.

With thanks and appreciation,



Wanda Goldberg



STAFF TRAINING REPORT

ATTENDEES NAME(S):	Chris Hand, Brian Fonseca, Rene Del Rio
TITLE OF TRAINING/CONFERENCE/WORKSHOP/CLASS:	Air Break System, Air Flow, Recycle Vactor Technologies & Phase Assessment Strategies
DATE(S) ATTENDED:	May 18, 2016
AGENCY HOSTING TRAINING/CONFERENCE/WORKSHOP/CLASS:	Haaker Equipment Company
LOCATION:	La Verne, CA
<p>DESCRIPTION OF TOPIC(S)/LEARNING EXPERIENCE:</p> <p>We attend this Four-part training and demonstration workshop on new technologies and instruction on procedures for safely, efficiently, and properly inspecting and maintaining specialized equipment.</p> <p>In the Air Break System Review workshop we learned the necessary steps for proper equipment evaluation and assessment. We received step-by-step instructions on the proper procedure for checking fluids, conducting an air break system test, proper Governor cut-in & cut-out process, and emergency brake testing.</p> <p>The Recycle Vactor and Nozzle Technologies Training for Saving Water included information on types of nozzle technology, pressures, flows, and thrust, and types of debris in the sewer pipe.</p> <p>The Phased Assessment Strategy for Sewer (PASS) class presented a plan for understanding sewer system conditions and quicker assessment with fewer resources.</p> <p>The Dynamics of Air Flow class was an in depth training on the science behind air and vacuum conveyance covering, negative pressure, vacuum, cubic inches of mercury, how to calculate and how to use air efficiency to move material. Also there was a demonstration on how to recycle water that has been recovered and use it to flush the sewer line.</p> <p>This four hour training/workshop earned each attendee a total of (4) CWEA contact hours.</p>	



BOARD INFORMATION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

Operations Report for May 2016

DESCRIPTION

Activities for Operations & Maintenance Division

CONSTRUCTION & MAINTENANCE:

The Valve Maintenance crew exercised a total of 292 valves this month, just below their average goal of 33 per month. The crew assisted with three (3) planned shutdowns for the Construction crews. They also assisted Nobel with going mobile with Geoviewer on the new valve truck (Unit #32) in order to calculate the number of turns during valve exercising via Bluetooth onto a District-owned field tablet.

The Construction crews repaired four (4) leaks and performed three (3) planned shutdowns. They repaired four (4) plug valves and installed one (1) new 6" gate valve and one (1) new 16" gate valve to include the installation/repair of five (5) appurtenances. The Construction & Maintenance crews also completed work on the District property in preparation of upgrading the irrigation system for the upcoming Demonstration Garden.

The District's mechanic completed a total of 22 District vehicles with regular *scheduled* preventative maintenance and/or repairs. The following maintenance and/or repairs were considered *unscheduled*:

- Vehicles with Emergency Repairs (6)
- Small Equipment (1)
- Off-Road Equipment /Trailers Repairs & Maintenance (2)
- Off-Road Equipment/Trailer Emergency Repairs (0)
- Large Vehicles Maintenance/Repairs (2)
- Large Equipment Emergency Repairs (1) Diesel Particular Filter (DPF), Unit # 71

WATER OPERATIONS:

Pala Mesa Tank was cleaned by Utility Services Group (USG) which completed the washouts for the calendar year. Several tanks are scheduled for visuals by USG for the remaining calendar year.

SCADA Upgrade Projects: Huntley Pump Station upgrade project still in progress, *90% completed*; Connection 9 radio upgrade is still in progress, *50% completed*.

Morro Chlorine (CL2) Station: adding two (2) additional injection pumps as backups, *50% completed*.

May 2016 Water Quality Monthly Report:

- 22 routine samples
- 22 lead & copper samples (completed 1st round of special monitoring)
- 1 special samples (Pala Mesa Tank)
- 21 nitrification samples
- 21 special tests conducted for Total Dissolved Solids (TDS) / Chloride within the southern zone
- 1 water quality complaint (taste & odor), resolved by flushing dead-end line to clear
- 2015 CCR updated and currently being reviewed by SWRCB-DDW

WASTEWATER:

Sanitary Sewer Overflows:

May 31, 2016 – Rainbow MWD reported a Category 3 Sanitary Sewer Overflow (SSO) to the California Integrated Water Quality System. *Spill Event ID # 25128*

Re: 150 gallons of sewage overflowed from a District sewer manhole at Vista Valley Country Club Golf Course. Sewage release/spill due to buried manhole and root intrusion into sewer manhole by Vista Valley HOA.

Sewer Line Cleaning:

May 01, 2016 – May 31, 2016:

Total: 7,527'

Locations: Horse Ranch North, Horse Ranch South, I-15 Freeway, Almendra Court, Golf Club Lane

Water Loss: 4,488 Gallons used

High Frequency Cleaning:

Location: 1,410' Siphon

Water Loss: 748 Gallons used

Manhole Inspections:

May 01, 2016 – May 31, 2016:

Total: 32

Locations: Horse Ranch North, Horse Ranch South, Lake Garden, Northcliff, Lakemont Drive

CCTV:

May 01, 2016 – May 31, 2016:

5/17/2016 Video Pipe Inspection: 3,132 LF

5/18/2016 Video Pipe Inspection: 2,531 LF

5/19/2016 Video Pipe Inspection: 2,327 LF
5/24/2016 Video Pipe Inspection: 3,629 LF
5/25/2016 Video Pipe Inspection: 1,849 LF
5/26/2016 Video Pipe Inspection: 2,237 LF
5/31/2016 Video Pipe Inspection: 2,724 LF
6/01/2016 Video Pipe Inspection: 1,393 LF

Total = 19,822'

SAFETY:

Safety Training

- Industrial Truck Re-certification – 2 Employees Certified
- Confined Space Training Annual Hands-On – 9 Employees Certified

Tailgate Safety Meetings

- Biohazards and Safety
- Distracted Driving
- Eye on Safety
- Avoiding Slips and Trips

Target Safety Online Training

- Advanced Construction Safety (Mod 1)
- Advanced Construction Safety (Mod 2)
- Advanced Construction Safety (Mod 3)
- Ethics in the Workplace

Darren S. Milner

Darren S. Milner
Operations Manager

6/28/16



BOARD INFORMATION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

Engineering Report for May 2016

DESCRIPTION

CAPITAL PROJECTS:

Gird to Monserate Hill (201045): Predesign report and 60% design plans were submitted. Staff is currently reviewing the plans.

Horse Creek Lift Station (200555): Developer is working on obtaining the permit from Army Corps of Engineers.

Highway 76 East Segment (201260): Contractor has installed 9,000 feet of 18" sewerline out of 10,300 feet. All of the four casings have been installed.

Lift Station 1 (201040): Staff is working on location regarding the site for the lift station before the siphon. 60% design submittal being reviewed for LS-1B and sewer line from LS-1 to LS-2.

Water and Wastewater Asset Cost and Capacity Fee Study (201663): Consultant working on collecting and reviewing data. Consultant conducted site visit on May 16, 2016 and will present a project overview at the Engineering Committing Meeting on June 1, 2016.

Water Reclamation Plant & Recycled Water Distribution System (201672): Consultant working on the preliminary results of alternative system configurations.

Wastewater Outfall Replacement (201266): Project on hold until further evaluation from the Master Plan and the WRP study.

OTHER PROJECTS:

Moosa Creek Mitigation Bank (201459): Staff working with Consultant on easements.

San Luis Rey Ground Water Sources (201446): Report finalized and being reviewed by staff and consultant.

DEVELOPER PROJECTS:

Golf Green Estates (90100): (near Lift Station 1): 94 SFR planned across from Bonsall Elementary School. A 12" sewer main has been installed to the west of the development and the tie-in will be scheduled at a later date. Trenching for a 10" sewer main south of development has begun.

Helling Hill Run (00000): 5 Lot Subdivision with 260 foot waterline extension. Plans approved.

Horse Ranch Creek Ridge (D.R. Horton - formally Campus Park, Passerelle) (90096): 850 WMs / 850 EDUs – Off of Highway 76 and Horse Ranch Creek Road. Plan check for units 1-4, wastewater, and water complete. Caltrans approved construction of forcemain and waterline in Highway 76. Project is under review with the Army Corps of Engineers and Pala Indians.

Malabar Ranch (90061): 31 WMs / 29 EDUs – There are 17 out of 31 homes built. Contractor shall complete waterline relocation and punch list items.

Nessy Burger (00000): Nessy Burger's is proposing to install a permanent building. Plan check one completed.

Olive Hill Estates (90066): 37 WMs / 59.2 EDUs – Contractor is working on completing above ground appurtenances. All meters have been installed except for the landscape irrigation meter. Staff preparing punchlist items.

Pala Mesa Highlands (90056): 124 Lots on Old Highway 395. Plan check three completed.

OTHER:

ITEMS	NO#	ITEMS	NO#
Water Availability Letters	5	Water Meters Purchased	1
Sewer Availability Letters	1	Sewer EDUs Purchased	1
Water Commitment Letters	1	Scheduled/Emergency Shutdowns	0
Sewer Commitment Letters	1	Jobs Closed:	0

Sherry Kirkpatrick
Engineering Manager

6/28/16



BOARD INFORMATION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

Customer Service & Meter Services

DESCRIPTION

METER SERVICES:

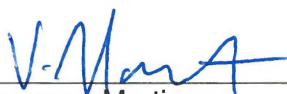
Meter Services completed 584 service orders. Here is a summary of most of the service orders.

SERVICE ORDERS	COMPLETED
Check Reads	307
Transfers	70
Locked	17
Unlocked	18
Pressure Calls	22
Meter Leaks	14

CUSTOMER SERVICE:

On May 16, 2016 we welcomed a new Customer Service Representative, Elyana Nauretz. Having previously worked at Rancho Water, she brings with her some water experience. We are excited to have her on board.

Customer Service processed 102 Meter Downsizes and 10 Meter Removals in the system. Due to our manpower, the physical downsizing and removal of the meters will be scheduled throughout the next several months.



 Vanessa Martinez
 Finance Manager
 6/28/16



 Kenny Diaz
 Meter Services Crew Leader
 6/28/16



INFORMATION

BOARD OF DIRECTORS

June 28, 2016

SUBJECT

Changes in Personnel and Reporting

DESCRIPTION

Elyana Nauretz joined the District's team effective May 16, 2016 to fill the Customer Service Representative I vacancy.

Karleen Harp joined the District's management team on May 24, 2016 as the new Human Resources Manager.

POLICY

N/A

FISCAL IMPACTS

N/A

Karleen Harp

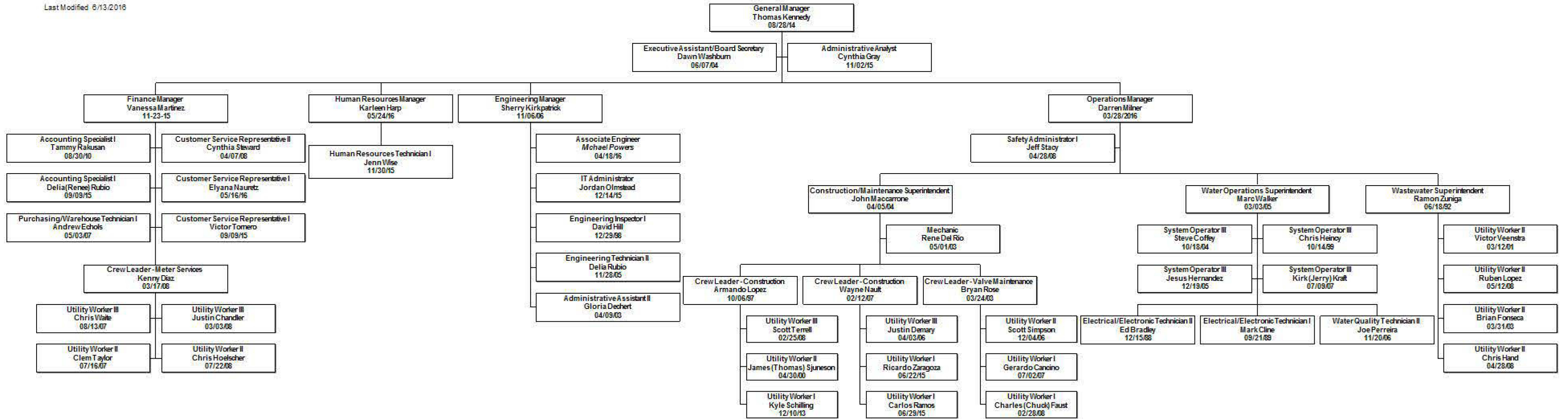
Karleen Harp
Human Resources Manager

06/28/16

RAINBOW MUNICIPAL WATER DISTRICT ORGANIZATIONAL CHART

Creation Date 8/21/2014

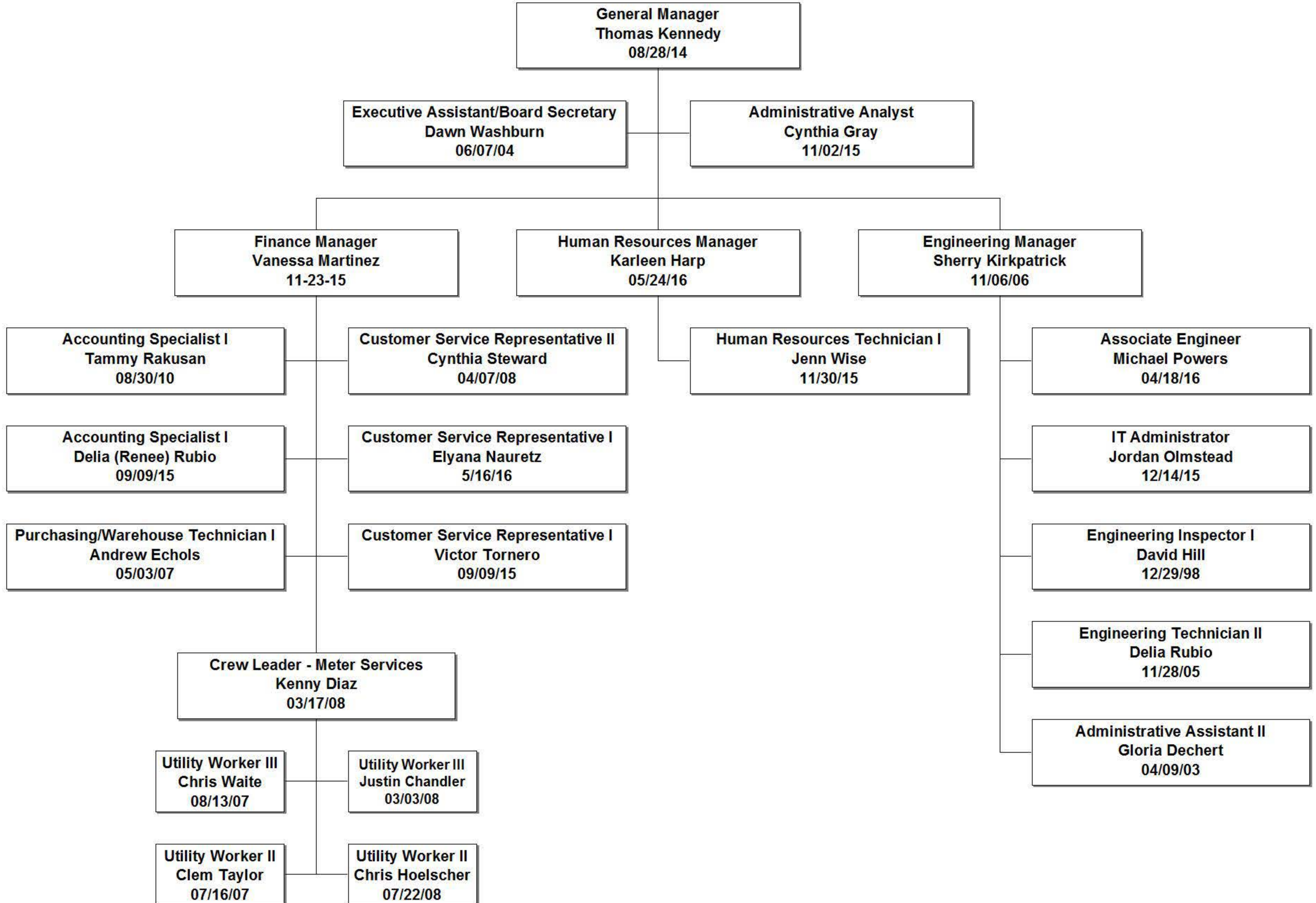
Last Modified 8/13/2016



**RAINBOW MUNICIPAL WATER DISTRICT
ORGANIZATIONAL CHART
PAGE 1 OF 2**

Creation Date 8/21/2014

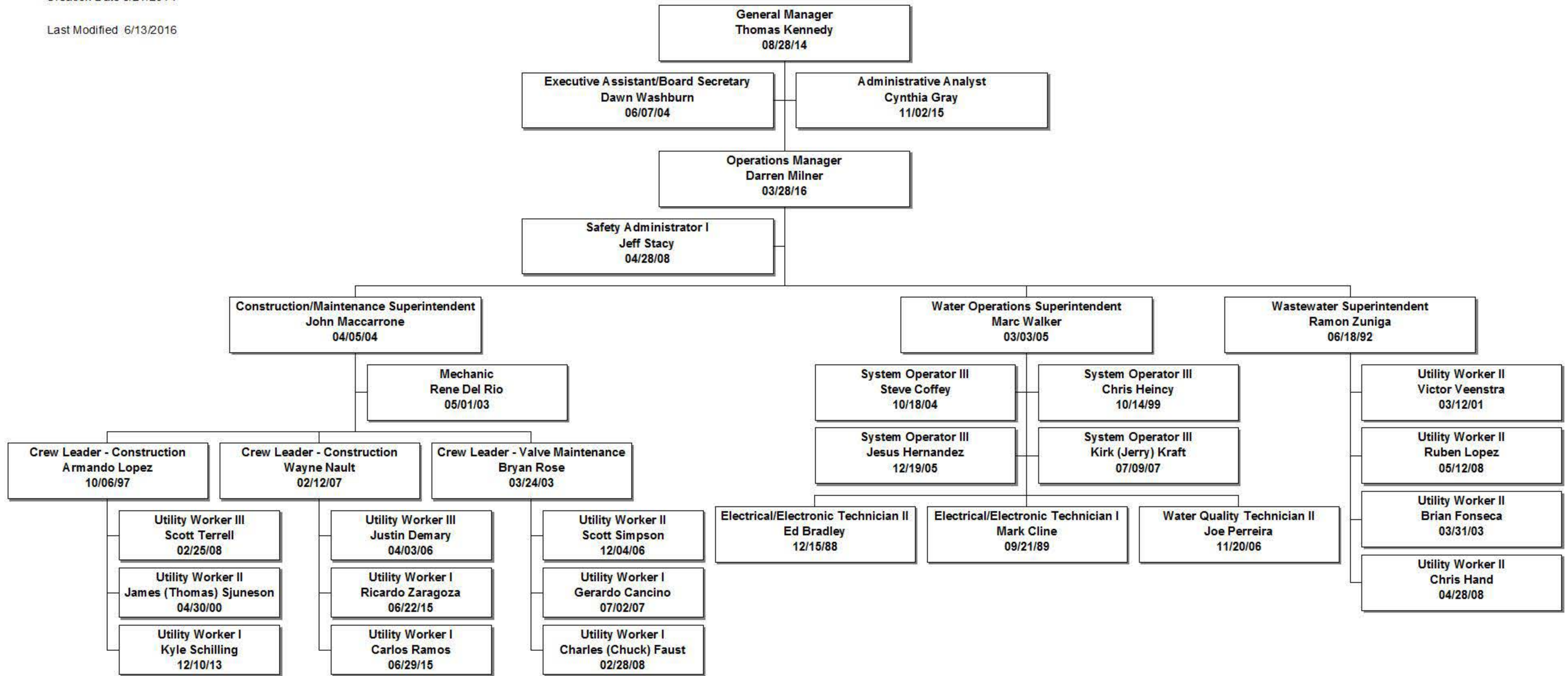
Last Modified 6/13/2016



RAINBOW MUNICIPAL WATER DISTRICT
 ORGANIZATIONAL CHART
 PAGE 2 OF 2

Creation Date 8/21/2014

Last Modified 6/13/2016



AMERICAN EXPRESS BREAKDOWN
MAY, 2016

NEW ACCOUNT

DATE OF CHARGE	AMOUNT	VENDOR & PURPOSE
05/07/16	\$ 1,123.79	ABCANA INDUSTRIES - HYPOCHLORITE
05/20/16	\$ 1,168.73	ABCANA INDUSTRIES - HYPOCHLORITE
04/30/16	\$ 23.25	AMAZON - HEAVY DUTY RUBBER PAILS
05/20/16	\$ 1,723.30	AMAZON - 2 LED SMART TV'S
05/21/16	\$ 51.22	AMAZON - 2 TV WALL MOUNTS
05/24/16	\$ 209.25	AMAZON - HEAVY DUTY RUBBER PAILS
05/06/16	\$ 210.00	ATLAS PUMPING - MONTHLY BIN RENTAL
05/09/16	\$ 2,364.55	BRADY SAND - CLASS II BASE
05/19/16	\$ 3,306.31	BRADY SAND - CLASS II BASE
05/11/16	\$ 525.00	CALIFORNIA SPECIAL DISTRICT ASSOCIATION - DAWN WASHBURN - BOARD SECRETARY CONFERENCE
05/06/16	\$ 232.50	CORELOGIC - REALQUEST MAP SEARCH, MORTGAGE DATA AND PROPERTY DETAIL DATA - APRIL
05/17/16	\$ 73.00	CULLIGAN - WATER SOFTNER
05/20/16	\$ 125.00	CALIFORNIA URBAN WATER CONSERVATION COUNCIL - CYNTHIA GRAY - TRAINING
05/09/16	\$ 140.16	W.W. GRAINGER - SPRAY PAINT, LUBRICANT
05/20/16	\$ 37.18	W.W. GRAINGER - CASTER CREEPER
05/20/16	\$ 1,697.42	W.W. GRAINGER -AIR PAVING BREAKER
05/20/16	\$ 54.89	W.W. GRAINGER -COUPLER, SAFETY CLIP, RUBBER WASHER
05/04/16	\$ 179.32	L-COM, INC - HUNTLEY PUMP STATION SCADA PANEL REPLACEMENT
05/10/16	\$ 2,432.33	MITCHELL 1 - PRO DEMAND TEAMWORKS - FLEET TRACKER AND ONLINE REPAIR SPECS
05/10/16	\$ 30,180.61	NATIONAL METER - 1" METER W/ITRON - 100WATT ERT
05/20/16	\$ 129.60	NATIONAL METER - ITRON LITE ANTENNA BASE
04/29/16	\$ 274.38	OFFICE DEPOT - CHAIR
05/07/16	\$ 256.77	OFFICE DEPOT - DRAWER ORGANIZER, POCKET FILES, TAPE DISPENSER, TONE, POS-IT, CARD HOLDER, MOUSE PAD
05/07/16	\$ (33.73)	OFFICE DEPOT - CREDIT DUE
05/20/16	\$ 1,218.70	OFFICE DEPOT - OFFICE CHAIR, NOTE PADS, POST-IT NOTES, INK, RUBBERBANDS, DESK ORGANIZER, CARTIDGES, CALCULATOR
05/09/16	\$ 283.33	PACIFIC PIPELINE - METER TAIL, GALVANIZED NIPPLE
05/19/16	\$ 2,713.99	PACIFIC PIPELINE - GATE VALVE, WELD FLANGE
05/19/16	\$ 6,948.24	PACIFIC PIPELINE - COMMERCIALFIRE HYDRANT
05/20/16	\$ 5,415.00	PROCOPIO, CORY, HARGREAVES & SAVITCH LLP - LEGAL SERVICES - WATER
05/20/16	\$ 5,554.65	PROCOPIO, CORY, HARGREAVES & SAVITCH LLP - LEGAL SERVICES - LABOR & EMPLOYMENT
05/20/16	\$ 1,738.50	PROCOPIO, CORY, HARGREAVES & SAVITCH LLP - WATER
05/20/16	\$ 5,016.00	PROCOPIO, CORY, HARGREAVES & SAVITCH LLP - WATER
05/20/16	\$ 570.00	PROCOPIO, CORY, HARGREAVES & SAVITCH LLP - WATER
05/20/16	\$ 85.50	PROCOPIO, CORY, HARGREAVES & SAVITCH LLP - WATER
05/10/16	\$ 667.66	PRUDENTIAL OVERALL - MONTHLY UNIFORMS
05/10/16	\$ 147.03	PRUDENTIAL OVERALL - MATS & MISC
05/24/16	\$ 449.53	PRUDENTIAL OVERALL - MONTHLY UNIFORMS
05/24/16	\$ 140.73	PRUDENTIAL OVERALL - MATS & MISC.
05/03/16	\$ 115.55	TOOLTOPIA.COM - TRAXION MECHANICS CREEPER
05/20/16	\$ 252.20	UNITED AIRLINES - CYNTHIA GRAY
05/08/16	\$ (75.60)	WESTERN WATER WORKS - CREDIT DUE
05/08/16	\$ 5,135.05	WESTERN WATER WORKS - FITTINGS, FLANGE, FLANGE BOLT KIT, BOLT KIT W/DOUBLE WASHERS, GRAVITY SEWER PIPE
05/08/16	\$ 404.19	WESTERN WATER WORKS - FITTINGS
05/20/16	\$ 3,466.04	WESTERN WATER WORKS - HYDRANT EXTENSION, REGULATROS, MALE ADAPTERS, SWIVEL ADAPTERS, FLANGES

CHECK #

AMOUNT \$ 86,731.12

FIRST BANKCARD BREAKDOWN
MAY, 2016

NEW ACCOUNT

DATE OF CHARGE	AMOUNT	PURPOSE
5/4/2016	\$ 162.00	POWELL OFFICE FURNITURE - BOOKSHELF
5/17/2016	\$ 23.02	AMAZON - BATTERY FOR PLANTRONICS

CHECK # 52212

AMOUNT \$ 185.02

FIRST BANKCARD BREAKDOWN
MAY, 2016

NEW ACCOUNT

DATE OF CHARGE	AMOUNT	PURPOSE
4/20/2016	\$ 47.55	BORIS TAXI - TOM KENNDEY TO AIRPORT
4/20/2016	\$ 30.00	SAN DIEGO AIRPORT PARKING - TOM KENNEDY
4/21/2016	\$ 40.00	I15 FASTTRAK REPLENISHMENT
4/28/2016	\$ 19.95	FILEMAKER HOSTING PROS - STARTER KIT
5/3/2016	\$ 21.00	MONTEREY YELLOW CAB - TOM KENNEDY
5/3/2016	\$ 43.93	ALVARADO STREET GRILL - TOM KENNEDY & BILL STEWART - ACWA
5/3/2016	\$ 753.44	MERRITT HOUSE INN - TOM KENNEDY & BILL STEWARTS ROOMS
5/5/2016	\$ 64.31	OLD FISHERMAN'S GROTTTO - TOM KENNEDY & BILL STEWART DINNER
5/6/2016	\$ 35.13	CHILP'S - TOM KENNEDY & BILL STEWART - ACWA LUNCH
5/6/2016	\$ 45.00	ALADDIN AIRPORT - TOM KENNEDY PARKING
5/6/2016	\$ 22.00	RAM GOPI - CAB TO AIRPORT
5/12/2016	\$ 89.03	RAINBOW OAKS RESTAURANT - RECRUITMENT LUNCH
5/16/2016	\$ 38.00	SITOLA - TOM KENNDEY & BILL STEWART - CAB FROM AIRPORT
5/17/2016	\$ 15.68	FEDEX - COPIES FOR LEGISTATIVE DAYS
CHECK #	52211	
AMOUNT	\$ 1,265.02	

Bank Reconciliation

Board Audit

User: trakusan
 Printed: 06/07/2016 - 1:26PM
 Date Range: 05/05/2016 - 05/31/2016
 Systems: 'AP'



Check No.	Vendor/Employee	Transaction Description	Date	Amount
Fund: 01 WATER FUND				
Department: 00				
0	CB&T / ACWA-JPIA	Monthly Health - June 2016	05/16/2016	78,277.37
0	CHARLES C. SNEED	Reimburse Retired Employee Health I	05/16/2016	363.00
0	KEVIN MILLER	Reimburse Retired Employee Health I	05/16/2016	726.00
0	SHERRY MULLENNIX	Reimburse Retired Employee Health I	05/19/2016	600.00
52091	AMERICAN EXPRESS	Meter Tails, Pipe Lubricant	05/06/2016	35,590.51
52100	ASSURANT EMPLOYEE BENEFITS	Life & Long Term Disability	05/16/2016	4,050.62
52111	FERGUSON WATERWORKS #1083	Wax Tape, Poly Ply Wrap Trenton, Wa	05/16/2016	1,707.56
52126	SAN DIEGO COUNTY WATER AUT	Shortage on Capacity Fees - 1st QTR :	05/16/2016	5,220.00
52158	FERGUSON WATERWORKS #1083	Zinc Anode Underground, Brass Screv	05/19/2016	23,998.93
52173	SHERRY YETTER	Refund on Overpayment on Account #	05/19/2016	125.80
52180	UNUM LIFE INSURANCE	Monthly Short Term Disability	05/19/2016	612.00
Total for Department: 00				151,271.79
Department: 31 PUMPING				
52122	PUMP CHECK	Pump Stations Testing	05/16/2016	1,050.00
52131	TOTAL AIR ANALYSIS, INC.	Pump Station #1 - Pumps 4 & 5 - Testi	05/16/2016	3,445.00
52138	SAN DIEGO GAS & ELECTRIC	Monthly Gas & Electric Service	05/17/2016	37,787.94
Total for Department: 31 PUMPING				42,282.94
Department: 32 OPERATIONS				
0	ACOPIAN TECHNICAL COMPANY	Power Supply	05/19/2016	462.34
52091	AMERICAN EXPRESS	Hypochlorite	05/06/2016	2,675.82
52098	AGB	Pala Mesa Tank - Yearly Service on Se	05/16/2016	1,198.63
52102	BALTIC NETWORKS USA	Huntley Pump Station - SCADA Panel	05/16/2016	986.72
52104	CAPITAL ONE COMMERCIALS	Wire Rack	05/16/2016	161.99
52109	FALLBROOK OIL CO	Fuel Deliveries	05/16/2016	479.25
52112	HACH	Chloride Test Kit, Pocket Pro TDS Kit	05/16/2016	510.02
52113	JOE'S HARDWARE	Cement ABC Lovoc	05/16/2016	16.39
52119	ONESOURCE DISTRIBUTORS, LLC	Huntley Pump SCADA	05/16/2016	345.66
52127	SAN DIEGO GAS & ELECTRIC	Monthly Electric Charge	05/16/2016	9.06
52129	SWRCB ACCOUNTING OFFICE	Annual Permits	05/16/2016	2,833.56
52132	UTILITY SERVICE CO.	Quarterly Tank Service	05/16/2016	157,305.21
52136	HOME DEPOT	Quick Link, Straight Link Stainless	05/17/2016	218.06
52138	SAN DIEGO GAS & ELECTRIC	Monthly Gas & Electric Service	05/17/2016	925.16
52145	BABCOCK LABORATORIES, INC	Monthly Water Analysis	05/19/2016	240.00
52151	COUNCIL OF WATER UTILITIES	Darren Milner's Attendance at COWU	05/19/2016	25.00
52156	FALLBROOK OIL CO	Fuel Deliveries	05/19/2016	1,199.02
52161	HACH	Water Quality Supplies	05/19/2016	663.42
52163	JOE'S HARDWARE	Mouse Bait Stations	05/19/2016	14.09
Total for Department: 32 OPERATIONS				170,269.40
Department: 33 VALVE MAINTENANCE				
0	FALLBROOK EQUIPMENT RENTA	1/2 Yard Concrete 5 Sack Mix	05/19/2016	140.40
52113	JOE'S HARDWARE	Wood Stakes	05/16/2016	274.21
52142	ART'S TRENCH PLATE &	Trench Plate Rental	05/19/2016	418.00
52148	CA-NV SECTION AWWA	Gerardo Cancino - Registration for Ba	05/19/2016	195.00

Check No.	Vendor/Employee	Transaction Description	Date	Amount
Total for Department: 33 VALVE MAINTENANCE				1,027.61
Department: 34 WATER DISTRIBUTION				
0	JOE'S PAVING CO, INC	Sarah Ann Repairs	05/16/2016	4,307.76
0	JOE'S PAVING CO, INC	Flowerwood Lane & Spa Haven Road	05/19/2016	22,318.36
0	UNDERGROUND SERVICE ALERT	Locate Utilities	05/16/2016	129.00
52091	AMERICAN EXPRESS	Class II Base	05/06/2016	2,014.92
52107	DRAVES PIPELINE, INC	Repair 1" Service Lateral on Gopher C	05/16/2016	11,909.78
52120	PETERS PAVING & GRADING, INC	Asphalt Repairs on Pala Mesa & Pala	05/16/2016	3,510.00
52142	ART'S TRENCH PLATE &	Trench Plate Rental	05/19/2016	834.00
52150	CO'S TRAFFIC CONTROL, INC.	Rice Canyon - Traffic Control	05/19/2016	7,479.00
52163	JOE'S HARDWARE	Outdoor Extension Cord	05/19/2016	41.03
52181	WEST COAST GEOTECHNICAL, IN	Review and Sign Letters of Test Resul	05/19/2016	306.00
Total for Department: 34 WATER DISTRIBUTION				52,849.85
Department: 35 METER SERVICES				
0	PALOMAR BACKFLOW	Backflow Certifications	05/19/2016	13,512.00
52091	AMERICAN EXPRESS	Backflow Certifications	05/06/2016	28,430.74
52095	FIRST BANKCARD	Ridge Tool Company - Frecze Machin	05/06/2016	522.31
52099	AIRGAS USA, LLC	Acetylene, Oxygen	05/16/2016	79.90
52136	HOME DEPOT	Fiberglass Hammer, Screwdriver Set, 1	05/17/2016	118.67
Total for Department: 35 METER SERVICES				42,663.62
Total for Fund:01 WATER FUND				460,365.21

Check No.	Vendor/Employee	Transaction Description	Date	Amount
Fund: 02 SEWER FUND				
Department: 61 WASTEWATER				
52091	AMERICAN EXPRESS	Lift Station 1 - Pilot Light	05/06/2016	2,751.15
52113	JOE'S HARDWARE	Credit Due	05/16/2016	15.38
52124	RHO MONSERATE C.C.H.A.	Electric Charge	05/16/2016	348.00
52127	SAN DIEGO GAS & ELECTRIC	Monthly Electric Charge	05/16/2016	12.00
52138	SAN DIEGO GAS & ELECTRIC	Monthly Gas & Electric Service	05/17/2016	3,685.37
52141	AIRGAS USA, LLC	Monthly Agreement	05/19/2016	118.17
52145	BABCOCK LABORATORIES, INC	Monthly Water Analysis	05/19/2016	155.00
52160	HAAKER EQUIPMENT CO.	Wire for Sewer Line Cleaning Operati	05/19/2016	306.50
52162	HOUSTON AND HARRIS	Sewer Line - Video Pipe Inspections	05/19/2016	6,092.25
52165	MCMASTER-CARR SUPPLY COMP	Low Pressure Gauge	05/19/2016	397.48
52170	R.J. SAFETY SUPPLY CO, INC.	Recertify Confined Space Winch	05/19/2016	1,058.40
Total for Department: 61 WASTEWATER				14,939.70
Total for Fund:02 SEWER FUND				14,939.70

Check No.	Vendor/Employee	Transaction Description	Date	Amount
Fund: 03 GENERAL FUND				
Department: 00				
0	CB&T / ACWA-JPIA	Monthly Health & Vision - June 2016	05/16/2016	3,103.42
52095	FIRST BANKCARD	San Diego County Recorder Fees	05/06/2016	24.50
Total for Department: 00				3,127.92
Department: 20 BOARD				
52151	COUNCIL OF WATER UTILITIES	Tory Walker's Attendance at COWU M	05/19/2016	25.00
Total for Department: 20 BOARD				25.00
Department: 36 GARAGE				
0	PARKHOUSE TIRE, INC.	Unit #12 - Tires	05/19/2016	1,369.33
52091	AMERICAN EXPRESS	Battery	05/06/2016	294.35
52092	DEPT. OF MOTOR VEHICLES	Duplicate Motor Carriers Unit, Carrier	05/06/2016	20.00
52109	FALLBROOK OIL CO	Fuel Deliveries	05/16/2016	2,371.46
52115	KONECRANES, INC.	Quarterly Service Agreement	05/16/2016	900.00
52117	NETWORK FLEET, INC.	Monthly Airtime Charges for GPS Tra	05/16/2016	780.00
52135	FALLBROOK AUTO PARTS	Unit #28 - Lights	05/17/2016	937.08
52147	BP BATTERY	Unit #14 - Battery	05/19/2016	109.30
52153	CROP PRODUCTION SVC INC,	Unit #320 - Air Cleaner Element, Hou	05/19/2016	50.66
52156	FALLBROOK OIL CO	Fuel Deliveries	05/19/2016	2,402.86
52169	QUALITY CHEVROLET	Unit #23 - Hose, Booster	05/19/2016	1,208.35
52171	SAFETY-CHEVROLET	Waste Oil Pick-up	05/19/2016	200.65
52175	SoCal Wax Shop	Fleet Supplies	05/19/2016	419.58
52177	THE LIGHTHOUSE	Unit #4 & #31 - LED Lightbar	05/19/2016	494.64
52179	TOP DOG TOWING	Unit #5 - Towing to RMWD Yard	05/19/2016	75.00
Total for Department: 36 GARAGE				11,633.26
Department: 41-ADMINISTRATION/HR				
0	DATAPROSE INC.	Monthly Mailing of Water Bills and N	05/19/2016	920.19
0	RAFTELIS FINANCIAL CONSULTA	Professional Services - April 2016	05/19/2016	1,295.45
0	RUTAN & TUCKER, LLP	Legal Services	05/19/2016	4,283.13
52091	AMERICAN EXPRESS	Ink Refill	05/06/2016	12,288.24
52093	FIRST BANKCARD	Filemaker Hosting Pros - Starter Kit	05/06/2016	2,093.15
52094	FIRST BANKCARD	Craigslist - Employment Ad	05/06/2016	140.00
52095	FIRST BANKCARD	ID Zone - Badge Design Software	05/06/2016	263.10
52105	CDW GOVERNMENT, INC.	Board Room Projector	05/16/2016	5,986.65
52106	COVERALL NORTH AMERICA, INC	Monthly Service	05/16/2016	995.00
52108	ED SHOBE PLUMBING	Valve on Urinal	05/16/2016	95.00
52110	FALLBROOK WASTE AND RECYC	Monthly Refuse & Recycle	05/16/2016	335.55
52118	OCCUPATIONAL HEALTH CENTE	DOT Physical Recertification, Pre-Em	05/16/2016	288.50
52123	REM MECHANICAL, INC	Preventative Maintenance	05/16/2016	534.00
52125	SAN DIEGO COUNTY ASSESSOR/F	Acct #01-5821-2 & 01-5821-3 - Recor	05/16/2016	26.00
52127	SAN DIEGO GAS & ELECTRIC	Monthly Electric Charge	05/16/2016	2,969.54
52133	WESTERN LANDSCAPE MAINT PI	Landscape Maintenance Service	05/16/2016	483.00
52134	XEROX CORP.	Monthly Lease	05/16/2016	3,418.58
52136	HOME DEPOT	11" Matches, 5th Ave., Square Ceiling	05/17/2016	111.97
52137	OFFICE TEAM	Human Resources Temporary Help	05/17/2016	10,245.60
52139	SECRETARY OF STATE	Filing of Statement of Information for	05/17/2016	20.00
52143	AT&T	Monthly Phone Service	05/19/2016	167.58
52146	BONSALL PEST CONTROL	Monthly Pest Control	05/19/2016	90.00
52154	CYNTHIA GRAY	Cynthia Gray - Reimbursement for Me	05/19/2016	203.39
52157	FEDEX	Delivery Service	05/19/2016	35.26
52163	JOE'S HARDWARE	Coupling Repair PVC	05/19/2016	9.22
52166	MITEL LEASING	Lease Agreement	05/19/2016	575.70
52167	MODULAR BUILDING CONCEPTS	Rental Agreement	05/19/2016	726.84
52168	OCCUPATIONAL HEALTH CENTE	Pre-Employment Exam - Office	05/19/2016	123.00
52172	SHEPHERD & STAATS, INC.	Administrative Services	05/19/2016	146.55

Check No.	Vendor/Employee	Transaction Description	Date	Amount
52174	SHRED-IT USA LLC	Monthly Service Agreement	05/19/2016	145.73
52176	SOUTHWEST ANSWERING SERVICE	Monthly Answering Service	05/19/2016	1,233.79
52178	TIME WARNER CABLE	Monthly Internet Connection	05/19/2016	1,250.00
52182	XEROX FINANCIAL SERVICES	Monthly Lease	05/19/2016	567.14
Total for Department: 41 ADMINISTRATION/HR				52,066.85
Department: 43 SAFETY				
52091	AMERICAN EXPRESS	Employee Relations - Safety Day	05/06/2016	1,597.16
52103	CALIFORNIA COMMERCIAL SECURITY	Quarterly Service Agreement	05/16/2016	368.04
52114	KNIGHT SECURITY & FIRE SYSTEMS	Repair to Broken Security Window Sw	05/16/2016	139.00
52130	T.R.Y. ENTERPRISES, INC.	Patrol Services - District Yard & Hun	05/16/2016	985.00
52140	A&A MOLD AND ALLERGY INVESTMENTS	Mold Inspection and Samples in Build	05/19/2016	399.00
52149	CITY OF SAN DIEGO FIRE/EMS	Annual Contract for Program Mgmt. o	05/19/2016	125.00
52164	JUSTIN DEMARY	10 Year Anniversary	05/19/2016	150.00
52170	R.J. SAFETY SUPPLY CO, INC.	Gas Monitors.	05/19/2016	1,857.60
Total for Department: 43 SAFETY				5,620.80
Department: 51 FINANCE				
0	DATAPROSE INC.	Monthly Mailing of Water Bills and N	05/19/2016	2,757.57
Total for Department: 51 FINANCE				2,757.57
Department: 52 CUSTOMER SERVICE				
0	DATAPROSE INC.	Monthly Mailing of Water Bills and N	05/19/2016	2,671.51
0	TCN, INC	Monthly 48 Hour Notice Calls	05/16/2016	16.14
52116	MISSION RESOURCE CONSERVATION	Home Water Use Evaluations - April 2	05/16/2016	62.50
Total for Department: 52 CUSTOMER SERVICE				2,750.15
Department: 91 ENGINEERING				
0	NOBEL SYSTEMS	Geo Viewer Mobile for iPad Dig Alert	05/16/2016	1,521.00
0	NOBEL SYSTEMS	Golf Green Estates	05/19/2016	2,345.00
52091	AMERICAN EXPRESS	Realquest Map Search, Mortgage Data	05/06/2016	1,214.50
52095	FIRST BANKCARD	Fred Pryor Seminar - Sherry Kirkpatri	05/06/2016	687.00
52101	ATKINS NORTH AMERICA, INC	Water/Wasterwater MAster Plan Hydr	05/16/2016	1,187.63
52121	PSOMAS	Gird/Monserate Hill Waterline Design	05/16/2016	3,935.60
52128	STONE-MILLER CONSULTANTS,	As-Needed Hydrogeologist Services	05/16/2016	4,446.75
52152	COUNTY OF SAN DIEGO-DPW	Knottwood Way Waterline Loop Impr	05/19/2016	2,718.00
52159	FUSCOE ENGINEERING	Professional Services - March 2016	05/19/2016	450.00
Total for Department: 91 ENGINEERING				18,505.48
Total for Fund:03 GENERAL FUND				96,487.03

Check No.	Vendor/Employee	Transaction Description	Date	Amount
Fund: 52 SEWER CAPITAL REPLACEMENT				
Department: 00				
52101	ATKINS NORTH AMERICA, INC	Water/Wasterwater MAster Plan Hydr:	05/16/2016	1,187.63
Total for Department: 00				1,187.63
Total for Fund:52 SEWER CAPITAL REPLACEMEN				1,187.63

Check No.	Vendor/Employee	Transaction Description	Date	Amount
Fund: 53 SEWER CAPITAL EXPANSION				
Department: 00				
0	NOBEL SYSTEMS	Sanitary Sewer Plan	05/19/2016	3,042.00
0	TETRA TECH, INC.	As-Needed Construction Support Serv	05/16/2016	24,992.64
Total for Department: 00				28,034.64
Total for Fund:53 SEWER CAPITAL EXPANSION				28,034.64

Check No.	Vendor/Employee	Transaction Description	Date	Amount
Fund: 60 WTR CAP EXPANSION/REPLACEMENT				
Department: 00				
0	FALLBROOK EQUIPMENT RENTA	3/4 Yard Concrete 6 Sack Mix	05/19/2016	334.80
0	NOBEL SYSTEMS	Afton Farms	05/19/2016	338.00
52136	HOME DEPOT	Lumber, Rebar, Rebar Wire Dobie Blc	05/17/2016	52.51
52144	B & C CRANE SERVICE, INC.	Crane Rental - Lake Vista Estates Pres	05/19/2016	435.00
52155	DUDEK	Water Reclamation Plant & Recycled '	05/19/2016	7,015.00
52163	JOE'S HARDWARE	Caulk Gun, Epoxym Screws and Bolts	05/19/2016	61.44
Total for Department: 00				8,236.75
Total for Fund:60 WTR CAP EXPANSION/REPLAC				8,236.75

Check No.	Vendor/Employee	Transaction Description	Date	Amount
Grand Total				609,250.96



**SEWER EQUIVALENT DWELLING UNITS (EDUs) STATUS REPORT
MAY 2016**

STATUS SUMMARY	EDUs
Total Treatment Capacity Purchased from Oceanside	8,333.33
Less 5% Contractual Allowance	416.67
EDUs Set Aside by Board for Emergencies	60.00
EDUs Connected	3,897.80
EDUs Unconnected	1,307.24
Total EDUs Available for Purchase:	2,651.63

DEVELOPMENTS WITH UNCONNECTED EDUs	EDUs	CAPACITY FEES PAID
Others (Misc. SFR)	18.40	\$ 270,009
Horse Creek Ridge/ Passarelle	850.57	\$ -
Palomar College	100.00	\$ -
Polo Club (Vista Valley Dev.)	59.85	\$ 1,022,775
Pala Mesa Highlands (Beazer Homes)	124.00	\$ 965,007 *
Golf Green Estates (Dev. Solutions)	102.46	\$ 1,743,180
Lake Vista Estates (Arestad)	2.76	\$ 27,195
Vista Valley Country Club	5.00	\$ 85,450
Silver Holdings	9.00	\$ 153,810
Olive Hill Estates (Pardee Homes)	35.20	\$ 755,378
TOTAL UNCONNECTED:	1,307.24	\$ 5,022,804

*Deferred Total Payment until Building Permits are Issued.