

Notice is hereby given that the Rainbow Municipal Water District Board of Directors will hold Closed Session at 12:00 p.m. and Open Session at 1:00 p.m. Wednesday, September 16, 2015, 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. **ROLL CALL: Sanford____ Griffiths____ Lucy____ Walker____ Brazier____**
 3. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**
 4. **ORAL/WRITTEN COMMUNICATIONS FROM THE PUBLIC
OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING
CLOSED SESSION AGENDA ITEMS (Government Code § 54954.2).**
Under Oral Communications, any person wishing to address the Board on matters regarding the Closed Session agenda should indicate their desire to speak by filling out and submitting a "Speaker's Slip" to the Board Secretary before the meeting begins. *Speaking time shall generally be limited to three minutes, unless a longer period is permitted by the Board President.*
 5. **CLOSED SESSION**
 - A. Appointment; Employment; Evaluation of Performance – General Manager (Government Code §54957)
 - B. *Conference with Legal Counsel - Anticipated Litigation (Government Code 54956.9(d)(4))
- One potential matter*
 6. **REPORT ON POTENTIAL ACTION FROM CLOSED SESSION**
- Time Certain: 1:00 p.m.
7. **PLEDGE OF ALLEGIANCE**
 8. **REPEAT REPORT ON POTENTIAL ACTION FROM CLOSED SESSION**
 9. **REPEAT ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**
 10. **ACKNOWLEDGEMENTS AND RECOGNITIONS**
 - A. Tammy Rakusan (5 Years)

(*) - Asterisk indicates a report is attached.

**11. 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.*

***12. APPROVAL OF MINUTES**

- A. August 25, 2015 - Regular Board Meeting
- B. September 2, 2015 – Special Board Meeting

13. 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
 - 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

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

- A. Budget and Finance Committee
- B. Communications Committee
- C. Engineering Committee
 - 1. August 5, 2015 Minutes

BOARD ACTION ITEMS

***15. CONSIDER REVIEW OF FIRST PHASE OF MASTER PLAN, APPROVE A PROJECT TO CONTINUE DEVELOPMENT OF A LOCAL WATER RECLAMATION PLANT AND RECYCLED WATER DISTRIBUTION SYSTEM, AND APPROPRIATE \$200,000 FROM CAPITAL RESERVES FOR ADDITIONAL DETAILED ENGINEERING STUDIES**

(On January 27, 2015, the RMWD Board approved a contract with Atkins for the development of a Water and Wastewater Master Plan. As a part of the Wastewater Master Plan, Atkins determined the feasibility of a water reclamation plant to develop a drought proof supply of recycled water. This agenda item is a formal decision on the part of the Board to approve the further and more detailed studies to validate the information from the Master Plan.)

(Staff Recommendation: Approval of the policy items listed in the agenda Board Action Letter.)

(*) - Asterisk indicates a report is attached.

- *16. DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 15-15 AUTHORIZING THE GENERAL MANAGER TO APPLY FOR THE WATER RECYCLING PLANNING GRANT**
(The water reclamation plant study and recycled water distribution system is eligible for the recycling planning grant. To apply for the grant, a complete application package must be submitted to the State including a resolution designating an authorized representative to apply for the grant.)
(Staff Recommendation: Approve Resolution No. 15-15 to authorize General Manager to apply for the water recycling planning grant.)
- *17. DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 15-13-A RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ESTABLISHING CLASSIFICATIONS AND MONTHLY RATES OF PAY FOR DISTRICT EMPLOYEES EFFECTIVE JULY 3, 2015 THROUGH JUNE 30, 2016**
(In compliance with state and CalPers regulations, the District maintains a table of all job titles, salary grades and salary ranges. The table is available for public review, accessible from our web site, and is published on a web site hosted by the California State Controller. Resolution 15-13 rescinds Resolution 14-26.)
(Staff Recommendation: The Board approves Resolution No. 15-13 and direct the Human Resources Manager to post a copy on our website.)
- 17A. DISCUSSION AND POSSIBLE ACTION REGARDING THE APPOINTMENT; EMPLOYMENT, EVALUATION OF PERFORMANCE: GENERAL MANAGER**
 (The Board may take action regarding the appointment, employment, performance or compensation of the General Manager.)
- 18. DISCUSSION AND POSSIBLE ACTION REGARDING MATTERS RELATED TO THE FPUD REORGANIZATION AND DISSOLUTION APPLICATION TO LAFCO**
- A. Ad Hoc Committee Update
- *19. RECEIVE AND FILE INFORMATION ITEMS FOR AUGUST 2015**
- A. **General Manager Comments**
1. Meetings, Conferences and Seminar Calendar
- B. **Construction & Maintenance Comments**
1. Construction and Maintenance Report
 2. Valve Maintenance Report
 3. Garage/Shop Repair
- C. **Water Operations Comments**
1. Water Operations Report
 2. Electrical/Telemetry Report
- D. **Wastewater Comments**
1. Wastewater Report
- E. **Operations Comments**
1. Water Quality Report
 2. Cross Connection Control Program Report
- F. **Engineering Comments**
1. Engineering Report
- G. **Customer Service**
1. Field Customer Service Report
 2. Meters Report
- H. **Human Resource & Safety Comments**
1. Changes in Personnel and Reporting
 2. Organizational Chart
 3. Safety Report

(*) - Asterisk indicates a report is attached.

***20. RECEIVE AND FILE FINANCIAL STATEMENTS AND INFORMATION FOR AUGUST 2015**

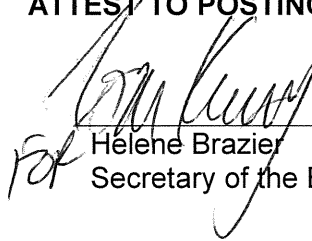
A. Finance Manager Comments

1. Visa Breakdown
2. Directors' Expense
3. Check Register
4. Water Purchases & Sales Summary
5. Projected CIP Cash Flow Report

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

22. ADJOURNMENT - To Tuesday, October 27, 2015 at 1:00 p.m.

ATTEST TO POSTING:



for Helene Brazier
Secretary of the Board

9-10-15 @ 1:50 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 OF THE
RAINBOW MUNICIPAL WATER DISTRICT
AUGUST 25, 2015**

1. **CALL TO ORDER** - The Regular Meeting of the Board of Directors of the Rainbow Municipal Water District on August 25, 2015 was called to order by President Sanford at 12:07 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. President Sanford presiding.

2. **ROLL CALL**

Present: Director Walker
Director Sanford
Director Brazier
Director Griffiths (*Arrived at 12:11 p.m.*)
Director Lucy

Absent: None

Also Present: General Manager Kennedy
Executive Assistant/Board Secretary Washburn
Legal Counsel Ochoa
Finance Manager Thomas
Operations Manager Atilano
Engineering Manager Kirkpatrick
Superintendent Maccarrone
Superintendent Zuniga

No members of the public were present before for Open Session. Seven members of the public were present for Open Session.

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

Legal Counsel suggested the conservation order be discussed at a Special Board meeting.

4. **ORAL/WRITTEN COMMUNICATIONS FROM THE PUBLIC
OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD REGARDING
CLOSED SESSION AGENDA ITEMS (Government Code § 54954.2).**

There were no comments.

The meeting adjourned to Closed Session at 12:08 p.m.

(*) - Asterisk indicates a report is attached.

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5. CLOSED SESSION

- A. Appointment; Employment; Evaluation of Performance – General Manager (Government Code §54957)

The meeting reconvened at 1:04 p.m.

6. REPORT ON POTENTIAL ACTION FROM CLOSED SESSION

This item was addressed under Item #8.

Time Certain: 1:00 p.m.

7. PLEDGE OF ALLEGIANCE

8. REPEAT REPORT ON POTENTIAL ACTION FROM CLOSED SESSION

President Sanford said there was nothing official to report from Closed Session, he wanted to mention the Board is very pleased with the work Mr. Kennedy has done over the past year and will continue discussion his performance at the next meeting.

9. REPEAT ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)

There were no additions, deletions, amendments to the agenda.

10. 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).

Catherine Dickerson expressed her passion for gardening and concerns she has with the absolute graying of the RMWD neighborhoods. She talked about how acres of trees die even though in the fourth year of the drought it is written everywhere that San Diego has no shortage of water supply. She acknowledged this took a great deal of vision and independence to keep people independent of the weather; however, everyone is proposing deprivation when in fact it is technology that has made San Diego's water independence possible. She stressed concern with not seeing any agency talking about this, but rather to expecting to take extreme measures to get reclaimed water when they should be able to just turn on the tap. She encouraged the Board to continue with the courage, independence, and vision to proclaim San Diego as an example to the whole country of how to be independent of the weather and tell the Governor to get off RMWD's back.

Ms. Dickerson stressed there was no amount of cutback that would be sufficient for this Governor and his advisors; therefore, if the districts do not stand up and tell him no he will continue to steam roll over everything and force everyone to live in a desert which is what he wants.

President Sanford confirmed for Mrs. Meadows the State reported water savings percentages would be discussed later in this meeting.

***11. APPROVAL OF MINUTES**

A. July 28, 2015 - Regular Board Meeting

Director Walker referenced Page #11A-9 as he pointed out "Mrs. Kirkpatrick" should replace "she" and in the third paragraph "what" should be replaced with "how".

Action:

Moved by Director Lucy to approve the July 28, 2015 minutes as revised. Seconded by Director Walker.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

12. BOARD OF DIRECTORS' COMMENTS/REPORTS

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A. President's Report (Director Sanford)

President Sanford mentioned the Board will be discussing many topics of interest throughout this meeting.

B. Representative Report (Appointed Representative)

1. SDCWA

Mr. Kennedy reported SDCWA would be meeting later this week at which time discussions will take place regarding the drought situation. He confirmed RMWD's water rates from SDCWA will go up 6% effective in January to cover RMWD's cost of the desalination plant which will provide water resources to RMWD in the event of an emergency.

2. CSDA

Mr. Kennedy reported Chief Metcalf from North County Fire spoke about the upcoming fire season.

Mr. Kennedy reminded everyone the RMWD September Board meeting has been moved up to September 16th to allow for his and President Sanford's attendance at the CSDA conference. President Sanford mentioned RMWD had submitted a nomination for Mr. Kennedy's for the state wide competition for General Manager of the Year award; however Mr. Kennedy was not selected.

(*) - Asterisk indicates a report is attached.

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Mr. Kennedy announced RMWD was one of the three agencies statewide to take advantage of a new web hosting service he and President Sanford met when they were in Sacramento for a CSDA meeting. He stated the new website was up and running. Public members expressed concern the new website was not user friendly on the mobile device and links do not work on mobile or desktop devices. It was suggested this may be a browser issue.

3. LAFCO

This item was addressed under Items #21.

4. San Luis Rey Watershed Council

Director Walker reported the August meeting was cancelled.

Mr. Kennedy mentioned the Chairman of the Board for San Luis Rey Watershed Council was at the San Luis Rey River Watershed Groundwater Sustainability Agency meeting earlier today. Discussion followed.

5. Santa Margarita Watershed Council

President Sanford reported there was no meeting.

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

There were no reports given.

D. Directors Comments

Director Lucy acknowledged the various projects engineering was currently working on as well as the positions referenced in the June 3, 2015 minutes. He expressed his appreciation of the maps being provided in the agenda packet.

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

A. Budget and Finance Committee

1. July 14, 2015 Minutes

Mr. Kennedy reported the committee participated in the strategic planning process.

B. Communications Committee

1. June 1, 2015 Minutes

Mr. Kennedy reported the committee participated in the strategic planning process. He also added the Board will be considering appointing a new member to this committee later in this meeting.

C. Engineering Committee

1. June 3, 2015 Minutes
2. July 1, 2015 Minutes

(*) - Asterisk indicates a report is attached.

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Mrs. Kirkpatrick reported the committee participated in the strategic planning process. She also noted the committee will also be looking into revising RMWD's sewer policy.

Mr. Kennedy added this committee will also be considering some basic information related to the outcome of master plan. He explained once the committee reviews this information, their recommendations and possible resolutions would be brought to the Board to take action.

BOARD ACTION ITEMS

***14. RESOLUTION NO. 15-14 – RESOLUTION OF OBJECTION OF THE BOARD OF DIRECTORS OF THE RAINBOW MUNICIPAL WATER DISTRICT TO THE FALLBROOK PUBLIC UTILITY DISTRICT'S RESOLUTION AND APPLICATION FOR REORGANIZATION TO THE SAN DIEGO COUNTY LOCAL AGENCY FORMATION COMMISSION**

President Sanford explained the Board would review this new Resolution today to make sure everyone understands it before approving or rejecting it prior to it being submitted to LAFCO.

Director Brazier clarified Resolution No. 15-14 would not replace RMWD's first Resolution of Objection, but rather be in addition to it.

Mr. Kennedy noted how at the July 6, 2015 LAFCO hearing, Supervisor Diane Jacob asked that LAFCO staff review the financial information provided in FPUD's application. He mentioned this was something RMWD had been arguing to have happen for some time and was pleased see it come about. He said over the next series of weeks there were some very short term deadline requests for information from LAFCO to which both RMWD and FPUD replied, reviewed, and resubmitted comments over a three-stage process between July 6, 2015-July 21, 2015. He stated as part of this request, RMWD had a third party independent review of the financial information presented in FPUD's application by Raftelis Financial Consultants who took a look at to see if the financial data could be substantiated. He pointed out the basic claim was that a great deal of money could be saved without any service impacts; however, the reality is that if it is decided to fire a numerous people there will be service impacts.

Mr. Kennedy continued to explain the purpose of the resolution which is to tell the commissioners there are certain legal requirements for the commission to make and the information provided to them needs to have credible substantial information to back up the claims made. He noted RMWD was finding the reports provided to LAFCO do not provide substantial evidence to support the claims for both savings or no serve related impacts. He pointed out there were some very specific language in the resolution by Legal Counsel to ensure it was appropriate and correct to send a message to the LAFCO commissioners. He referenced the very specific findings addressed in this document.

Legal Counsel said the important thing to take from this resolution is this is similar to RMWD's first Resolution of Objection, but much more specific with analyses conducted which enhance the original to assist the commissioners when making their decision. She reiterated there are going to be impacts to service if this merge moves forward and financial benefits are not as grand as FPUD claims. She noted there was a great deal of legal language included in this document; however, there will be an easier version given at the LAFCO hearing on September 14th.

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Mrs. Meadows pointed out some of the last responses provided to LAFCO from both RMWD and FPUD (drop box or attachments) were not accessible to the public on LAFCO's website.

Discussion ensued regarding the letters ratepayers sent to LAFCO on this matter.

Mr. Kennedy confirmed once the Board approves a final resolution, it will be prepared for signature and immediate submittal to LAFCO.

Director Lucy suggested the key points be put into a press release to the public.

Director Griffiths reiterated he wanted to see the numbers provided to LAFCO by FPUD. It was noted this information was provided on LAFCO's website.

Action:

Moved by Director Lucy to adopt supplementary Resolution of Objection - Resolution No. 15-14. Seconded by Director Brazier.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

***15. DISCUSSION AND POSSIBLE ACTION REGARDING EXECUTION OF A JOINT USE AGREEMENT (JUA) WITH THE COUNTY OF SAN DIEGO FOR PALA MESA HIGHLANDS TM 5187-1**

Mrs. Kirkpatrick pointed out vicinity maps would be included in all future agenda packets for items related to engineering projects.

Mrs. Kirkpatrick confirmed any changes will be paid for by the entity requesting such changes.

Action:

Moved by Director Brazier the Board authorize the General Manager to execute the Joint Use Agreement with the County for TM5187-1. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Director Brazier, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	Director Griffiths
ABSENT:	None

(*) - Asterisk indicates a report is attached.

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***16. DISCUSSION AND POSSIBLE ACTION ON A REQUEST TO QUITCLAIM AN EASEMENT FOR PALA MESA HIGHLANDS DEVELOPMENT TM 5187-1**

Mrs. Kirkpatrick referenced the map provided on Page #16-4. She explained because the existing water line goes through parcels that will be created with the final map, the development is requesting assurances that it will be quit claimed once they meet all the terms specified. She noted this item to consider vacating an easement once all RMWD's terms are met.

Director Walker asked where the water lines would be placed. Mrs. Kirkpatrick pointed out the location on the map provided.

Director Walker noted his concern regarding storm water systems and geotechnical failures from these systems. He urged RMWD's engineers keep this in mind when reviewing plans.

Action:

Moved by Director Griffiths to approve Option 1 - Authorize the General Manager to execute the Quitclaim Deed once facilities are relocated out of the easement and a new waterline and easement is dedicated to the District and accepted. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

- AYES:** Directors Brazier, Griffiths, Lucy, Sanford, and Walker
- NOES:** None
- ABSTAINED:** None
- ABSENT:** None

***17. DISCUSSION AND POSSIBLE ACTION REGARDING EXECUTION OF A FIRST AMENDMENT TO JOINT AGREEMENT TO IMPROVE SUBDIVISION, JOINT LIEN CONTRACT AND HOLDING AGREEMENT FOR SAN DIEGO TRACT NO. 4750-1**

Mrs. Kirkpatrick noted this development was new to her due to the fact the last time it was going through the District process was in 2002. She referenced the vicinity map as she talked about the location of the project.

Director Lucy found it surprising this subdivision would not be connected to sewer.

Mrs. Kirkpatrick pointed out the only engineering involved with this project was verifying the amounts for their bonds. She confirmed the completion date was two years once the documents are fully executed by all parties; however, before the development even starts anything close to construction, they have to go through the plan checking process with RMWD.

Legal Counsel said their firm looked at this pretty closely and conferred with Mrs. Kirkpatrick. She noted they found this to be fine.

It was noted all the cost of development would be paid for by the developer.

(*) - Asterisk indicates a report is attached.

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Action:

Moved by Director Walker to approve staff recommendation Option 1 – Authorize the General Manager to execute Joint Agreement to Improve Subdivision, Joint Lien Contract and Holding Agreement for San Diego Tract No. 4750-1. Seconded by Director Griffiths.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

***18. DISCUSSION AND POSSIBLE ACTION REGARDING EXECUTION OF PURCHASE AGREEMENT FOR THE AFTON FARMS PIPELINE EASEMENTS**

Mrs. Kirkpatrick mentioned this project has been in the consideration process for approximately one year. She recalled the Afton Farms project involved moving a water line down in RMWD’s south zone that will eliminate the need for the District to spend thousands of dollars during SDCWA shutdowns.

Mr. Kennedy confirms this purchase benefits RMWD and how important this was to the District’s system.

Action:

Moved by Director Lucy to approve Option 1 – Authorize the General Manager to execute Purchase Agreement with John K. Haskett Living Trust. Seconded by Director Brazier.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

19. DISCUSSION AND POSSIBLE ACTION TO APPOINT NEW COMMUNICATIONS COMMITTEE MEMBER

Mr. Kennedy mentioned at their last meeting, the committee recommended the appointment of Elysian Kurnik to serve as one of their members. He briefed the Board of Ms. Kurnik’s background and noted she would be a welcomed addition to the committee.

Action:

Moved by Director Brazier to approve the appointment of Elysian Kurnik as a member of the Communications Committee. Seconded by Director Lucy.

(*) - Asterisk indicates a report is attached.

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After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

***20 CONSIDER BALLOT FOR ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) REGION 10 BOARD OF DIRECTORS ELECTION**

Mr. Kennedy pointed out RMWD may choose to concur with the entire slate as presented, select individuals from the list, or decide not to participate in this election. Discussion ensued.

Action:

Moved by Director Lucy to vote for Cathy Green for Vice Chair and Hal J. Martin, Richard L. Vasquez, and DeAna Verbeke for Board Members. Seconded by Director Brazier.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

***21 CONSIDER CALL FOR NOMINATIONS FOR POSITIONS ON THE SAN DIEGO LAFCO AGENCY FORMATION COMMISSION (LAFCO) AND ON THE LAFCO SPECIAL DISTRICT ADVISORY COMMITTEE**

Mr. Kennedy pointed out LAFCO was trying to fill the special district vacant position on their Commission. He pointed out the Board would be considering nominating someone for both the commission as well as the advisory committee.

President Sanford solicited for feedback regarding RMWD Board Members or staff serving at LAFCO in these capacities. Discussion ensued.

Action:

Moved by Director Brazier to submit the name of Dennis Sanford for LAFCO commissioner. Seconded by Director Griffiths.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, and Walker
NOES: None
ABSTAINED: Director Sanford
ABSENT: None

Discussion ensued regarding the LAFCO Special District Advisory Committee seat.

(*) - Asterisk indicates a report is attached.

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Action:

Moved by Director Brazier to submit the name of Tom Kennedy to LAFCO's Special District Advisory Committee. Seconded by Director Lucy.

After consideration, the motion CARRIED by the following roll call vote:

AYES: Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES: None
ABSTAINED: None
ABSENT: None

22. DISCUSSION AND POSSIBLE ACTION REGARDING MATTERS RELATED TO THE FPUD REORGANIZATION AND DISSOLUTION APPLICATION TO LAFCO

A. Ad Hoc Committee Update

President Sanford encouraged everyone to notify others there will be bus leaving RMWD at 7:30 a.m. on Monday, September 14, 2015. He clarified this transportation was being provided by an independent third party and was not being paid for by RMWD.

President Sanford also announced there would be two informational meetings for the community to attend from 6:00-8:00 p.m. on both September 1, 2015 at the Rainbow Valley Grange and September 2, 2015 at the Bonsall Community Center.

***23. RECEIVE AND FILE INFORMATION ITEMS FOR JULY 2015**

- A. General Manager Comments**
 - 1. Meetings, Conferences and Seminar Calendar
- B. Construction & Maintenance Comments**
 - 1. Construction and Maintenance Report
 - 2. Valve Maintenance Report
 - 3. Garage/Shop Repair
- C. Water Operations Comments**
 - 1. Water Operations Report
 - 2. Electrical/Telemetry Report
- D. Wastewater Comments**
 - 1. Wastewater Report
- E. Operations Comments**
 - 1. Water Quality Report
 - 2. Cross Connection Control Program Report
- F. Engineering Comments**
 - 1. Engineering Report
- G. Customer Service**
 - 1. Field Customer Service Report
 - 2. Meters Report
- H. Human Resource & Safety Comments**
 - 1. Human Resources Department
 - 2. Safety Report

(*) - Asterisk indicates a report is attached.

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Mr. Kennedy talked about the State Water Regional Control Board (SWRCB) issuing RMWD a Notice of Violation for June 2015 which may need to be discussed at a Special Board meeting. He reported out some of the requirements being made by the SWRCB and how they wanted responses by this coming Thursday. Discussion followed.

Mrs. Meadows mentioned how FPUD at their meeting yesterday they were being allowed to negotiate the amount of water usage and how it is calculated. She asked RMWD to look into this further due to the fact she pressed them hard but was not able to get specific answers.

Director Walker stated RMWD must deal with SWRCB very carefully.

Action:

Moved by Director Lucy to receive and file information items. Seconded by Director Brazier.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

***24. RECEIVE AND FILE FINANCIAL STATEMENTS AND INFORMATION FOR JULY 2015**

A. Finance Manager Comments

1. Interim Financial Statement
2. Monthly Investment Report
3. Visa Breakdown
4. Directors' Expense
5. Check Register
7. Water Usage Report
8. Projected CIP Cash Flow Report
9. RMWD Sewer Equivalent Dwelling Units (EDU's) Status

Discussion ensued regarding Item #24A8.

Action:

Moved by Director Brazier to receive and file financial statements and information. Seconded by Director Walker.

After consideration, the motion CARRIED by the following roll call vote:

AYES:	Directors Brazier, Griffiths, Lucy, Sanford, and Walker
NOES:	None
ABSTAINED:	None
ABSENT:	None

(*) - Asterisk indicates a report is attached.

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

Director Lucy requested an update on the Morro Tank project.

President Sanford noted there will be Closed Session for the General Manager Performance Evaluation.

26. ADJOURNMENT - To Tuesday, September 16, 2015 at 1:00 p.m.

The meeting was adjourned with a motion made by President Sanford to a regular meeting on September 16, 2015 at 1:00 p.m.

The meeting was adjourned at 2:37 p.m.

Dennis Sanford, Board President

Dawn M. Washburn, Board Secretary

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**MINUTES OF THE SPECIAL BOARD MEETING
OF THE BOARD OF DIRECTORS OF THE
RAINBOW MUNICIPAL WATER DISTRICT
SEPTEMBER 2, 2015**

CALL TO ORDER - The Special Meeting of the Board of Directors of the Rainbow Municipal Water District on September 2, 2015 was called to order by President Sanford at 6:06 p.m. at the Bonsall Community Center, 31555 Old River Road, Bonsall, CA 92003. President Sanford presiding.

Present: Director Lucy
Director Sanford
Director Brazier
Director Griffiths

Absent: Director Walker

Also Present: General Manager Kennedy
Executive Assistant/Board Secretary Washburn
Operations Manager Atilano
Superintendent Maccarrone
FPUD Director Wolk
FPUD General Manager Brady

Thirty-five members of the public were present.

The business to be considered at this special meeting is an informational discussion regarding the current drought conditions and Fallbrook Public Utility District's application with LAFCO to dissolve Rainbow Municipal Water District and annex the entire district into Fallbrook Public Utility District.

President Sanford made a brief introduction. Mr. Kennedy gave a presentation which was followed by a question and answer period.

The meeting was adjourned at 7:36 p.m.

Dennis Sanford, Board President

Dawn M. Washburn, Board Secretary

(*) - Asterisk indicates a report is attached.

1213

**MINUTES OF THE ENGINEERING COMMITTEE MEETING
OF THE RAINBOW MUNICIPAL WATER DISTRICT
AUGUST 5, 2015**

1. **CALL TO ORDER** – The Engineering Committee Meeting of the Rainbow Municipal Water District on August 5, 2015 was called to order by Chairperson Prince at 3:03 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 Brazier
Member Taufer
Member Stitle
Member Prince
Member Kirby
Member Murray
Member Ratican
Alternate Robertson
Alternate Kirkpatrick

Absent: None

Also Present: General Manager Kennedy, Director Walker and Assistant Rubio

Public members present were Ms. Tamayo and Mr. Marmett.

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

There were no public comments.

COMMITTEE ACTION ITEMS

*5. **APPROVAL OF MINUTES**

- A. June 3, 2015
- B. July 1, 2015

ACTION:

Moved by Member Brazier to approve the June 3, 2015 and July 1, 2015 minutes as written. Seconded by Member Stitle.

After consideration, the motion **CARRIED** by the following vote:

AYES: Member Prince, Member Brazier, Member Stitle, Member Taufer, Member Murray, Member Kirby and Member Ratican
NOES: None
ABSTAINED: None
ABSENT: None

1461-1

6. SEWER POLICY DISTRIBUTION

Ms. Kirkpatrick provided a copy of the District’s Sewer Policy, Section 9.05.010 regarding Terms and Permits. She said the District has experienced some issues with this policy and has discussed revising it to bring it up to standard practice. She asked the committee to review the policy and provide feedback next month.

Mr. Kennedy said the challenge with the policy was defining the sewer rights and whether these rights could be transferred. He mentioned by reevaluating the sewer policy and conducting round table discussions to improve the policy would benefit the District, developers and rate payers. Discussion ensued.

7. GENERAL MANAGER UPDATES

Mr. Kennedy said the LAFCO meeting was extended until September 14, 2015. He announced there are two town hall meetings scheduled for September 1st and 2nd, 2015.

Mr. Kennedy said the Drought Ordinance report sent to the state was revised to show a more realistic report of the District’s Ag customers, although the state would not accept the revised report. He explained the state did not have the District’s email and when the deadline notifications were sent out to all the Districts, Rainbow did not receive the notice. Discussion ensued.

Mr. Ratican asked if the District provided new information to LAFCO. Mr. Kennedy responded yes. He said the updated financial data was analyzed by a professional financial consultant and staff also included service considerations. He pointed out discrepancies provided in FPUD’s initial report were also addressed. Discussion ensued.

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

The following agenda items were suggested for the next scheduled Engineering Committee Meeting: Sewer Policy and LAFCO Update.

9. ADJOURNMENT

The meeting adjourned with a motion made by Member Brazier and seconded by Member Stitle.

The meeting adjourned at 3:36 p.m.

Timothy Prince, Committee Chairperson

Dawn M. Washburn, Board Secretary

1461-2

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

CONSIDER REVIEW OF FIRST PHASE OF MASTER PLAN, APPROVE A PROJECT TO CONTINUE DEVELOPMENT OF A LOCAL WATER RECLAMATION PLANT AND RECYCLED WATER DISTRIBUTION SYSTEM, AND APPROPRIATE \$200,000 FROM CAPITAL RESERVES FOR ADDITIONAL DETAILED ENGINEERING STUDIES.

DESCRIPTION

On January 27, 2015 the RMWD Board approved a contract with Atkins, a professional engineering firm, for the development of a Water and Wastewater Master Plan. Since that date, staff as well as the Engineering Committee has been working with Atkins on the project. The first question that needed to be answered was whether or not it was feasible to construct a water reclamation plant within the District boundaries to develop a local, drought proof supply of recycled water. This question needed to be answered first as the rest of the Master Plan studies will be impacted by the direction the District decides to go with respect to water reclamation.

Atkins has presented to the Engineering Committee on multiple occasions, most recently on September 2, 2015. They have reviewed several potential locations for a water reclamation plant as well as methods of storing and distributing the resulting recycled water. Of the many options studied, two potential projects have been identified.

The first would consist of the construction of a water reclamation plant at or near the District headquarters site. This project would produce about 0.9 MGD of recycled water at build out (with perhaps 0.2 MGD more if the Warner Ranch project is approved). The remaining wastewater to the west of this site would continue to be conveyed to the San Luis Rey treatment plant operated by Oceanside.

The second project would consist of the construction of a water reclamation plant near the location of our current Lift Station 2 at the intersection of Old River Road and Little Gopher Canyon Road. This project would produce about 1.6 MGD of recycled water (again, with an additional 0.2 MGD if Warner Ranch is included). This project would capture over 99% of all wastewater in the District for reuse.

The report by Atkins, which is attached, outlines the outcome of very careful financial modeling of the costs associated with each project. As a reference, each of these options is compared to the cost of continuing to send wastewater to Oceanside which would include the purchase of additional capacity as we near build out.

The study demonstrates that the 0.9 MGD project has costs that are nearly identical as the “do nothing” project, yet provides for a drought proof supply of over 1000 AF per year. This year, that amount would be about 7% of our total supply. The 1.6 MGD project would cost more than the 0.9 MGD project but would produce nearly 1800 AF per year, which is over 11% of our demands for this year. If the Warner Ranch project comes in, these numbers increase to 1232 AF and 2016 AF per year respectively.

The recycled water distribution system would use Beck Reservoir as a wet weather storage pond as well as a raw water blending reservoir. This would allow us to enhance the capacity of a non-potable water distribution system to deliver lower cost raw water to agricultural customers should our demands exceed the amount of recycled water available. Wet weather storage is a crucial part of any water reclamation plant and the Beck reservoir is very well suited in terms of size and location to serve the needs of the system.

The Master Planning team has evaluated the use of Beck Reservoir for potable water storage versus recycled water storage. A full report on this analysis will be included in the final Master Plan, but the result of the analysis shows that the storage capacity in Beck is not required for any operational scenario, including emergency operations, of the potable water system. Therefore the use of the Beck Reservoir for recycled purposes is the most cost effective use of the asset, since the District would be required to construct a new wet weather storage reservoir if Beck was not available. The cost of such a reservoir would put a water reclamation project out of the realm of possibility.

It should be noted here that the planning study attached was conducted at a “master planning” level of accuracy. There are a significant amount of assumptions that could have errors which could drive the costs up or down. The Master Plan was never intended to serve as any sort of design document but simply to give a first look at feasibility. The study has concluded that the projects are feasible and Board direction is required to take this project further.

POLICY

This agenda item is not to approve the construction of a water reclamation plant. This agenda item is a formal decision on the part of the Board to approve more detailed studies required to validate the information from the Master Plan.

The Engineering Committee voted unanimously on September 2, 2015 to recommend that the Board proceed with the more detailed analysis of the water reclamation plant and recycled water system.

The Board is being asked to take the following actions:

1. Determine that the development of a local water reclamation plant and recycled water system has the potential to provide a drought proof local supply of water for RMWD ratepayers.
2. Determine that the development of a local water reclamation plant and recycled water system is potentially feasible, but that additional information is needed.
3. Determine that should additional studies demonstrate the feasibility of a water reclamation plant and recycled water system, it is the Board’s intention to pursue the construction of the facilities necessary to operate such a system.
4. Determine that all work on the Beck Reservoir UV Project be stopped and the project be put on indefinite hold until the final decision on the development of a recycled water system is reached.
5. Authorize the General Manager and Engineering Manager to develop a Request for Proposal for additional engineering services necessary to bring the project through to the completion of a Pre-Design Report
6. Authorize the General Manager and Engineering Manager to begin the process of preparing environmental review documents required under the California Environmental Quality Act.
7. Authorize the General Manager and Engineering Manager to apply for Planning Grants and other grants that are available for water reclamation projects from State and Federal Sources.

8. Appropriate \$200,000 from the Master Planning Project for the cost of the development of the Pre-Design Report.

BOARD OPTIONS/FISCAL IMPACTS

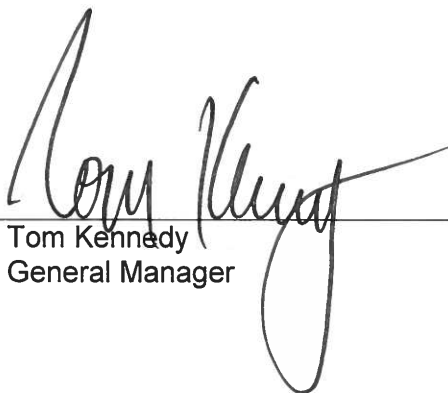
This project was not specifically included in the FY16 budget but there are funds available in the Master Planning Project budget to cover the anticipated cost of the study and staff time. The scope of work for the preliminary design will include multiple checkpoints where a go/no-go decision will be made to ensure that costs will be controlled if the feasibility of the project is not proven out. Staff will not work through to the end of the pre-design process if information generated in the process indicates that the project is infeasible.

Please note that the cost analysis provided by Atkins does not place a dollar value on having up to about 14% of our supply come from a local, reliable source. The Board may choose to select a more costly option that provides more local supply if you determine that the long term benefit of local supplies offset the cost of the initial project.

It should be noted that a great deal of the costs associated with this project can be part of development capacity fees, limiting the exposure of current wastewater ratepayers to the cost of the project. The exact costs and distribution of those costs is not under consideration at this time but will be presented to the Board once a more detailed analysis is completed.

STAFF RECOMMENDATION

Staff recommends approval of the policy items listed above



Tom Kennedy
General Manager

September 16, 2015

Draft

**Rainbow Municipal Water District
Wastewater Treatment /
Reclamation Alternatives Study**

June 2015

15-4

15-5

DRAFT

RAINBOW MUNICIPAL WATER DISTRICT

**Wastewater Treatment /
Reclamation Alternatives Study**

June 2015

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

Prepared by:

ATKINS

3570 Carmel Mountain Road, Suite 300
San Diego, California 92130
Atkins Project No.: 100044880

in association with:
Dudek
Gillingham Water
West Coast Civil

Mark B. Elliott, P.E.
Project Engineer

15-6

15-7

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Abbreviations

AFY	acre feet per year
ASP	activated sludge processes
CIP	Capital Improvement Program
City	City of Oceanside
CWA	San Diego County Water Authority
District	Rainbow Municipal Water District
EDU	equivalent dwelling units
gpm	gallons per minute
I-15	Interstate 15
IPR/DPR	Indirect Potable Reuse/Direct Potable Reuse
LS 1	Lift Station 1
MBR	Membrane Bioreactors
mg/L	milligram per liter
mgd	million gallons per day
MLSS	mixed liquor concentrations
MWD	Metropolitan Water District of Southern California
O&M	operations and maintenance
RO	reverse osmosis
SLRWRF	San Luis Rey Waste Reclamation Facility
SR-76	State Route 76
SWP	State Water Project
TDS	Total Dissolved Solids
TM	Technical Memorandum
WRF	water recycling facility

1.0 Introduction

Rainbow Municipal Water District (District) is embarking on a 2015 Water and Sewer Master Plan Update during a period of remarkable challenge and opportunity for the District. The decline in water demands and wastewater generation rates, increasing wholesale water rates and wastewater disposal costs, new residential and commercial development poised along the Interstate 15 (I-15) corridor at State Route 76 (SR-76), and heightened scrutiny of the efficiency of the District's operations and charges, together set the stage for the 2015 Master Plan Update.

There is potential for a District-controlled wastewater reclamation plant that economically off-loads the District's reliance on treatment in the City of Oceanside, while simultaneously producing a beneficial new local water supply. There is also the potential for up to \$100 million in new water and sewer capacity fees from proposed San Diego County development to help fund a new treatment plant and develop new local water supplies.

This Technical Memorandum (TM No. 1) evaluates these inter-related wastewater and water supply issues and sets the course for planning a new long range Capital Improvement Program (CIP) for wastewater, water, and recycled water infrastructure.



1.1 Summary

Two fundamental wastewater treatment and disposal alternatives are compared:

- **No Project Alternative:** All wastewater generation (current + new developments) is conveyed to Oceanside, with the District continuing to pay Oceanside's billed costs for operations, maintenance, and capital replacement, and additional treatment capacity is acquired at San Luis Rey Water Reclamation Facility (SLRWRF). No recycled water is supplied to the District.
- **District Plant Alternative(s):** All or a portion of the future wastewater flows are collected at a District-controlled wastewater reclamation plant, producing a new local supply of recycled water for service to agriculture users and nurseries. District reliance on Oceanside facilities is reduced or eliminated.

A summary of capital and annual operating costs is provided in Table 1-1 below, including a brief synopsis of the District's exposure to risk and uncertainties in implementing each alternative. The District-controlled preferred alternative includes a 0.9 mgd plant located near the District office at I-15 and SR-76.

Detailed cost analysis of each alternative, cost assumptions, and cost sensitivity analyses are presented in Section 5.0.

Alternative	Capital Cost (Million \$)	Annual Cost (Million \$)	Present Worth Cost (Million \$)	Risk Elements
No Project	27	1.6	63	<ul style="list-style-type: none"> • Potential unknown future cost liability • No local water supply developed • Future Ocean Outfall constraints • Costly land outfall upgrades • May require acquisition of future capacity
District Plant	24	1.2	51	<ul style="list-style-type: none"> • Potential higher capital costs • Will require blending or reverse osmosis • Treatment facility to operate and maintain • Relies on strong housing market • Environmental impacts with siting a wastewater plant • Expensive recycled water system to fund

1.2 Study Objectives

The District staff and consultant team collaborated early on to develop key success factors and benefits for the Wastewater Treatment/Reclamation Alternatives Study. These include:

1. **Serve as key a North San Diego County Environmental Steward in sustainability.** Reduce treatments costs to Oceanside and reduce ocean disposal.
2. **Provide for a new short-term Recycled Water Supply.** Develop reliable source of local water supply and future plan for Indirect Potable Reuse/Direct Potable Reuse (IPR/DPR).
3. **Save key local Agriculture Businesses due to rising water costs.** Provide drought-proof supply for major agriculture users and nurseries.
4. **Support the County's General Plan and Building Industry during the drought with a water supply offset program.** Serve as a possible water supply offset mitigation plan.

These objectives will serve to guide the team through the initial feasibility planning effort. The following section describes our detailed scope of services for the Wastewater Treatment/Reclamation Alternative Study (TM No. 1).

1.3 Wastewater Treatment/Reclamation Alternatives Study

TM No. 1 consists of the following scope elements:

- Review existing studies/reports on water supply and water and wastewater master planning for studies that have been completed and projects that have been constructed since 2006. Focus will be given to Addendum 1, Wastewater System Expansion Alternatives Analysis, in the 2006 Master Plan (*Dudek*).
- Review projected development within the District and its surrounding areas of influence. The development review is critical to projecting wastewater flows for use in the wastewater treatment study and the water and wastewater models that will support the 2015 Master Plan Update.

- Prepare a thorough evaluation of the potential demand for recycled water within the District. The assessment will involve quantitative and spatial analysis of existing irrigation and agricultural customers that would be eligible to participate in a recycled water system. The assessment will also address the role of development in potential recycled water demands and will propose alternative backbone systems for providing recycled water to potential customers.
- Prepare a feasibility analysis of a District-owned wastewater reclamation plant. The analysis will include an estimate of logical plant capacities, a brief evaluation of sites to optimize wastewater flows collected, a conceptual facilities layout, identification of reuse opportunities, and estimate of construction and operation and maintenance costs.
- Develop a maximum of three treatment capacity scenarios based upon potential development within and adjacent to the District. Compare the alternatives available based on a preliminary life-costs analysis and provide a recommendation regarding a District-owned reclamation plant and City of Oceanside treatment and disposal for the 2015 Master Plan Update.

2.0 Wastewater System Overview

The District is responsible for providing sewer service to over 1,900 customers throughout its sewer service area. The sewer service area is a small portion of the overall service area which encompasses over 6,800 potable water customers, with large agricultural water demands. The sewer service area along with the District boundary is shown on **Figure 2-1**.

Sewer customers currently generate an average dry weather wastewater flow of approximately 0.7 million gallons per day (mgd). Sewer flows are conveyed through a gravity collection system of pipes, six sewer lift stations and nearly two miles of force main, located throughout the sewer service area. This collection system conveys wastewater west out of the District and ultimately to the SLRWRF, located in Oceanside.

Several alternative locations throughout the District have been analyzed for potential wastewater reclamation plant sites based on the ability to collect existing and future flows. Those sites primarily include an area near I-15 and SR-76, including both the Meadowood development plant site and one near the District offices. A plant site was also considered downstream near Lift Station 1. Sizing of the initial plant capacity is dependent upon the amount of wastewater available for collection and treatment. Total existing wastewater flow tributary to each of the potential reclamation plant sites are presented below in **Table 2-1**. The existing flows represent a potential design flow at start-up assuming no major development activity has occurred. Location of each of the potential plant locations is included in **Section 3.0** and shown on **Figures 3-1** through **3-5**.

Tributary Location	Average Daily Water Flow (gpm)	Average Daily Water Flow (mgd) ⁽²⁾
Meadowood Site	47	0.07
Near District Office	138	0.20
Lift Station 1	440	0.63
Lift Station 2 ⁽¹⁾	468	0.67

⁽¹⁾ Lift Station 2 is also considered for pumping flow back to a potential plant
⁽²⁾ Average flow for the entire system is currently 0.69 mgd

In addition to the quantity of flow currently available for initial phase of a reclamation plant, quality of the wastewater available is also essential to the feasibility. Wastewater quality will directly impact the quality of the effluent of the reclamation plant. The majority of recycled water customers within the District are agricultural customers, many of whom have critical thresholds for certain water quality constituents. Of particular concern with many nurseries and growers is Total Dissolved Solids (TDS). Total dissolved solids in irrigation supply can impact crop production, specifically avocados. TDS is also of concern because traditional treatment methods do not substantially reduce the TDS concentration.

The District receives its water supply from the Metropolitan Water District of Southern California (MWD) and San Diego County Water Authority (CWA) aqueduct systems. Filtered potable water from the Lake Skinner filtration plant is delivered to the District through multiple pipeline systems. The sources of the water treated at the Lake Skinner filtration plant are from the State Water Project (SWP) and from the Colorado River. Due to ongoing severe drought currently affecting the State of California, deliveries to MWD and CWA have consisted primarily of Colorado River water, which contains a much higher TDS level than does the SWP supply. **Table 2-2** presents annual average TDS levels for the District's supply and for the District's wastewater for the past six years.

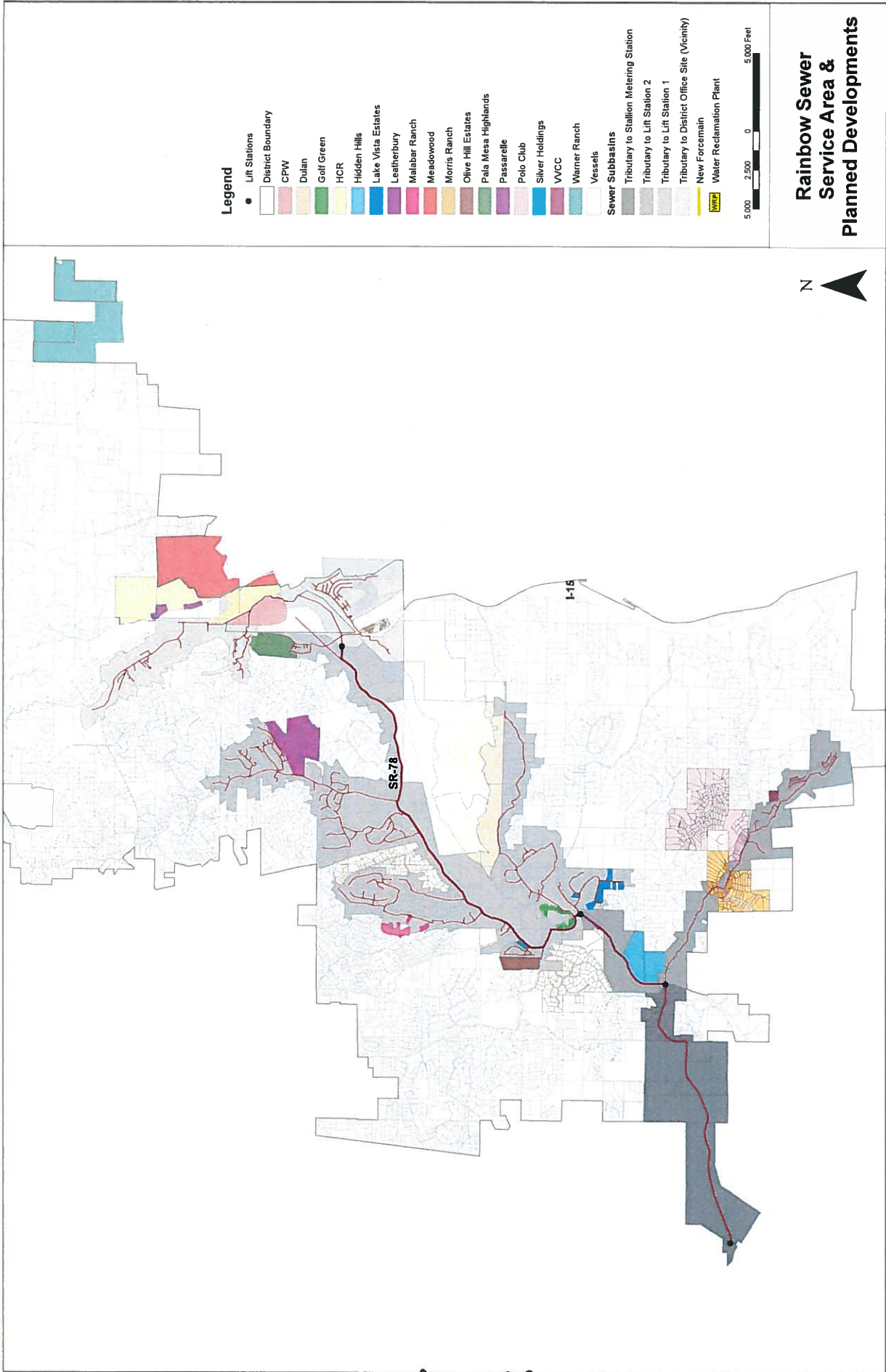
Calendar Year	Potable Water TDS (mg/L)	Wastewater TDS (mg/L)	TDS Increase (mg/L)
2008	541	981	440
2009	596	998	402
2010	563	954	391
2011	413	905	492
2012	386	807	421
2013	477	871	394
Average	496	919	423

TDS = total dissolved solids, mg/L = milligram per liter

As the table shows, typical TDS increases from potable water to wastewater range from 400 to 500 mg/L. Additionally, as mentioned previously, the more recent deliveries have been primarily Colorado River water and TDS of those deliveries has been consistently above 600 mg/L, meaning wastewater TDS levels may be well above 1000 mg/L.

2.1 Existing System Capacity, Conveyance and Pumping

The 2006 Wastewater System Master Plan (*Dudek*) and updates to that plan completed since then have all recognized that there are existing and potential additional future capacity constraints within the District's wastewater conveyance system. Capacity constraints exist both within the gravity system as well as the lift stations. In recent years the District has begun addressing these issues, upsizing two sections of trunk sewer totaling 2.3 miles in length and upgrading capacity at Lift Station 2. Several additional upgrades to the system have been identified for either the near or long term capacity of the system. Upgrades recommended that have not yet been completed are detailed in **Table 2-3**.



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Table 2-3 shows the need for an estimated 8.3 miles of gravity sewer upgrades. Additional upgrades to sewer mains and smaller trunks have also been recommended and are not included in **Table 2-3**. The District estimates that the cost to upgrade the remaining Outfall Sewer system to Oceanside to be approximately \$14 million dollars including soft costs and contingencies.

Table 2-3 Recommended Pipeline and Lift Station Capacity Upgrades

Pipeline/Facility	Capacity Constraint	Capacity Constraint Timeframe	Detail
Lift Station 1	PWWF	Existing	Increase to 2,700 gpm capacity
Lift Station 1 Force Main	PWWF	Existing	Upsize from 10-inch to 12-inch force main
Trunk Sewer from Sweetgrass Lane to Lift Station 1	PDWF	Existing	Upsize approximately 10,000 feet of pipe from 12-inch to 18-inch
Trunk Sewer from Lift Station 1 to Lift Station 2	PWWF	Existing	Upsize approximately 7,500 feet of pipe from 12-inch to 18-inch
Outfall Sewer from Lift Station 2 to Stallion Meter	PWWF	Existing	Upsize approximately 14,000 feet of pipe from 15/18-inch to 21-inch
Plant B Lift Station ⁽¹⁾	PWWF	Existing	Upgrade by Developers
Plant B Force Main	PWWF	Existing	Upgrade by Developers
Trunk Sewer North and East of Lift Station 1	PDWF	Future	Upsize approximately 4,400 feet of pipe from 8/10/12-inch to 12/15-inch
Sewer Main North of Plant B Lift Station	PDWF	Future	Upsize approximately 7,700 feet of 12-inch to 15-inch

⁽¹⁾ Campus Park developer designed new lift station at SR-76 and Parkway Road to replace Plant B Lift Station.

2.2 Oceanside Agreement

The District has rights to 1.5 mgd of sewer treatment and disposal capacity at the SLRWRF, a plant owned and operated by the City of Oceanside. The District's rights to said capacity are defined by an agreement between the City of Oceanside and the District from 2006. The purpose of that agreement is to provide for the construction, operation, maintenance and replacement of the wastewater system serving the respective parties, and to define financial obligations of the two parties relative to those capital and annual costs.

The City of Oceanside is the defined owner of the wastewater facilities, including any future additions or other facilities constructed as a result of the agreement. All decisions with respect to planning, design, construction, operation and maintenance of the facilities are under the sole purview of the City. The District only retains the contractual right to use the system in accordance with the said agreement. The City is obligated to operate the facilities in an economical and efficient manner, maintain the facilities in good repair, and comply with existing and future regulatory requirements.

At present, the District has rights to 1.5 mgd of the 13.5 mgd plant capacity (11.1 percent). As such, the District is responsible for 11.1 percent of the City's construction cost for plant improvements and betterment, including the collection system, pump stations, land outfall, and ocean outfall associated with the plant. The defined 1.5 mgd capacity right applies to all facilities equally. Within the collection system, there are a series of reaches with defined capacity rights based on tributary flow. The District maintains rights to 10 percent of the first reach and 58.25 percent of the second reach. The District has rights to 100 percent of the third reach. The Stallion Metering Station is the point of delivery between the District and City collection systems.

The agreement defines the limitations on the type and quality of wastewater that can be discharged to the SLRWRF and associated facilities. In general, these limitations include a Biological Oxygen Demand of less than 250 mg/L, Total Dissolved Solids of less than 1,200 mg/L, and Total Suspended Solids of less than 250 mg/L. Discharge of volatile organic compounds, heavy metals and other chemical constituents are also limited by the agreement. The quantity of wastewater is limited to a maximum of 1.5 million gallons in a 24-hour period, as measured over a ten day or more period for any three consecutive calendar days. The District is required to pay a penalty of 7.5 times the current unit cost for capacity, transmission and treatment if flows exceed the agreement limitations.

The agreement defines the various means and methods used to compute District cost on a monthly basis. The costs include both fixed and variable cost components. Billing to the District is projected at the beginning of each year based on the City's projected capital and operational costs. The District pays these costs on a monthly basis, with a reconciliation based on actual costs at the end of each fiscal year. In most years, the District receives a credit at the end of the year for overpayment of cost based on the initial cost projections. However, in the event of unforeseen cost events, the District is obligated to participate in all costs incurred at the end of the fiscal year. Interest charges are accrued at a rate of 10 percent per year on any unpaid balance. The City also charges the District an administrative cost of 2.7 percent of the District's identified charges.

2.3 Provisions for District Recycling and for Sell Back of Surplus Capacity

The agreement does not restrict the District from recycling its wastewater nor mandate any discharge quantity from the District. However, as the agreement is based on capacity rights, the District remains responsible for all capital costs based on its capacity right percentage, regardless of the amount of wastewater that is discharged. The aforementioned administrative cost also applies, as well as certain fixed operational costs. At present, based on current capacity rights and discharges, the District is experiencing an average operational cost of approximately \$72,000 per month and approximate annual capital costs of approximately \$500,000 per year.

The agreement does not address any rights of the District or procedures by which the District could see back surplus capacity to the City or other parties. This issue is addressed further in **Section 3.2.5**.

2.4 Planned Development

Significant development is anticipated to occur within the I-15 corridor within and directly adjacent to the District's boundaries, largely within the I-15 and SR-76 corridor. Much of this development will be large scale production of single and multi-family homes as well as various commercial developments to support the new residential developments. Much of the District is characterized by low-density development in sparsely populated areas which necessitates the use of septic tanks for treatment of wastewater generated. Much of the new development, however, is anticipated to be higher density, and therefore will be required to be sewered. **Table 2-4** shows the current list of planned or entitled developments, including the type of development and the number of equivalent dwelling units (EDUs) anticipated from each development. Timeframes for the developments listed will vary, however, the majority of those listed are anticipated to be constructed by 2030.

Many of the larger developments noted in **Table 2-4** may require recycled water service were the District to build a reclamation plant and produce recycled water. Additional information regarding the requirements and availability of recycled water to the proposed developments is included in **Section 4.0**.

Table 2-4 Planned Developments and Sewer Flows by Basin

Proposed Reclamation Plant Site Basin ⁽¹⁾	Proposed Development	Proposed EDUs	Development Type	Projected Sewer Flow
District Office (I-15/SR-76)	Meadowood ⁽²⁾	850	Single Family	0.28
	Horse Creek Ridge	751	Single Family	0.14
	Campus Park West	538	Mixed	0.19
	Pala Mesa Highlands (Beazer)	130	Single Family	0.03
	Horse Creek Ridge Business Center	100	Commercial	0.05
	Palomar College	100	Commercial	0.05
	Dulan	51	Single Family	0.01
	Subtotal	2,520		0.73
Lift Station 1	Vessels	400	Single Family	0.09
	Golf Green Estates	94	Single Family	0.02
	Leatherbury	85	Single Family	0.02
	Olive Hill Estates	57	Single Family	0.01
	Subtotal	636		0.14
Lift Station 2	Polo Club	156	Single Family	0.03
	Morris Ranch	89	Single Family	0.02
	Bonsall Condos	76	Single Family	0.01
	Hidden Hills	53	Single Family	0.01
Subtotal	374		0.08	
Total	3,470		0.95	
Warner Ranch ⁽³⁾		780	Mixed	0.31

EDU = equivalent dwelling units

⁽¹⁾ The "Basin" for each proposed plant site includes those developments tributary directly to only that location. All developments tributary to the District Office site are also tributary to the Lift Station 1 site, but reach the District Office first and directly.

⁽²⁾ The Meadowood development is within the Valley Center Municipal Water District and pending final annexation.

⁽³⁾ Warner Ranch is not currently an approved land use and is not included in the analysis.

2.5 Future Sewer Flows

Upgrades and expansions to the wastewater system will be required as planned development comes online, and water demands and sewer flows within the system increase significantly. Sewer flows are of particular concern because the anticipated increases represent as much as a doubling of the current level of flow, whereas the increase in flow through the water infrastructure is small in comparison to the current flow. As shown in **Table 2-3** and already discussed, the District is already aware of a substantial number of upgrades to their existing infrastructure that are needed currently or will be triggered by development. **Table 2-4** includes the anticipated developments and their projected sewer flow, organized by the proposed reclamation plant basin locations. The total increases in flow anticipated in each reclamation plant basin as well as the total future flow in each basin are shown included in **Table 2-5**.

Warner Ranch, a large development outside of the District's service area, which is included above in **Table 2-4**, is not included in the feasibility analysis due to uncertainties in the development being entitled.

Proposed Reclamation Plant Site Basin	Project Flow Increase (mgd)	Projected Total Flow
District Office (I-15/SR-76)	0.73	0.93
Lift Station 1	0.14	1.49
Lift Station 2	0.08	1.62

mgd = million gallons per day

3.0 Wastewater Treatment Plan Scenarios

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. Conveyance of wastewater to the City is governed by an inter-agency agreement prepared in February of 2006 titled *"An Agreement between the City of Oceanside, California and the Rainbow Municipal Water District for the Construction, Use, Maintenance, and Operation of Wastewater, Transmission, Treatment and Disposal Facilities."* The details of this agreement were discussed further in **Section 2.2** of this report.

In light of recent and ongoing drought conditions within southern California, the District has contemplated whether construction of its own water recycling facility (WRF) would be more cost effective than continued conveyance of wastewater flows to the City. A similar study was completed in the early 2000's, in which it was determined that the District would benefit substantially from recycling its wastewater and developing a drought-tolerant local water supply. Since that time, water demand has decreased significantly, and wastewater flows have decreased similarly. Therefore, the District must reevaluate the issue under current and future flow conditions (defined in **Section 2.0** of this report). Current wastewater generation combined with identified new development within the District forms the basis upon which the wastewater recycling analysis is completed.

3.1 Wastewater Treatment & Disposal Alternatives

As stated, the District currently conveys all of its wastewater to the City for treatment and ultimate disposal. As such, the District received no residual value from the wastewater stream as a local water resource. Wastewater conveyed to the City is subsequently available for recycling at the SLRWRF, thereby available for downstream uses. Under this operations scenario, the District loses its rights to a potential recycled water resource.

A series of available wastewater treatment and disposal alternatives were defined through discussions with District staff. These alternatives comprise wastewater treatment options available to the District, ranging from continuing to convey wastewater to the City to full treatment and use of the water resource within the District service area. The following alternatives were defined for further evaluation:

- **Alternative No. 1: No Project Alternative.** Under this alternative, the District would continue to convey wastewater generated within its service area to the SLRWRF for treatment and disposal.

This alternative continues to be governed by the terms and conditions of the 2006 inter-agency agreement, thereby eliminating the potential for a local recycled water resource for revenue generation and reduction of imported water volumes (Figure 3-1).

- **Alternative No. 2: Construction of a New Treatment Facility near the District Office Site (I-15/SR-76).** Under this alternative, the District could construct a 0.9-mgd WRF either on District property adjacent to its current office location or on a suitable site in the vicinity thereof. Construction of such a facility would reduce conveyance to the SLRWRF to approximately 0.72 mgd, thereby reducing capital, operation and maintenance obligations under the inter-agency agreement (Figure 3-2).
- **Alternative No. 3: Construction of a New Treatment Facility near the existing Lift Station 1 Site.** Under this alternative, the District could construct a 1.5-mgd WRF at or near the District's existing Lift Station 1 (LS 1) site. Construction of such a facility would reduce conveyance to the SLRWRF to approximately 0.12 mgd, thereby significantly reducing capital, operation and maintenance obligations under the inter-agency agreement (Figure 3-3).
- **Alternative No. 4: Construction of a New Treatment Facility near the District Office Site with Conveyance of LS 1 flows to the WRF.** Under this alternative, the District could construct a 1.5-mgd WRF at or near the District office site, with a companion 0.6-mgd lift station at the LS 1 site. Wastewater flow tributary to the LS 1 site is pumped to the new WRF for treatment. Construction of these facilities would reduce conveyance to the SLRWRF to approximately 0.12 mgd, thereby reducing capital, operation and maintenance obligations under the inter-agency agreement (Figure 3-4).
- **Alternative No. 5: Construction of a New Treatment Facility near the District Office Site with Conveyance of LS 1 and LS 2 Flows to the WRF.** Under this alternative, the District could construct a 1.62-mgd WRF at or near the District office site, with companion 0.72-mgd and 0.12-mgd lift stations at or near the LS 1 and LS 2 sites, respectively. Wastewater flow tributary to the LS 2 site would be conveyed to the LS 1 site, and all flows tributary to the LS 1 site would be conveyed to the WRF for treatment. Construction of these facilities would eliminate conveyance to the SLRWRF, thereby eliminating capital, operation and maintenance obligations under the inter-agency agreement (Figure 3-5).

It is noted that these alternative define a series of progressive steps or phases by which the District may reduce or eliminate the need to continue its obligations under the 2006 inter-agency agreement with the City. As currently written, the 2006 inter-agency agreement defines the District's cost obligations based on the District's allocated capacity rights at the SLRWRF and the District's tributary wastewater flow and strength. As such, it will be necessary to renegotiate the terms of that agreement under Alternative 2 through 5 to realize reduced costs relative to the agreement. If the District continues to maintain its current 1.5-mgd capacity rights, cost obligations under the agreement will remain unchanged with the exception of reduce flow and strength calculations. Reducing the District's capacity rights at the SLRWRF through renegotiation of the 2006 agreement may result in avoided costs that can be subsequently applied to funding construction of its own WRF.

3.2 Wastewater Analysis Assumptions

As can be derived from the aforementioned alternatives, a variety of assumptions are required for analysis of each alternative. These assumptions, applied proportionately between the various alternative, form the basis of a comparative analysis between the various options. Renegotiation of the 2006 Agreement with the City, future preliminary design efforts and other project refinements will further define project details. For the purposes of this analysis, the following assumptions were applied proportionately to evaluation of each of the previously identified wastewater treatment and disposal alternatives.

3.2.1 Treatment Plant Process

For treatment capacities up to approximately 2.0 mgd, two treatment processes are primarily applicable and found to be most cost effective including Membrane Bioreactor Systems and the Aero-Mod Treatment System. Although other treatment process options are available, the District has expressed a preference for these treatment processes based on past experience and the performance of other local treatment facilities of similar capacity. Selection of the preferred process between these two identified options depends on a variety of factors. The following discussions identify key considerations that differentiate the two treatment processes.

- Membrane Bioreactors (MBRs):** The facilities operate on the same principle of other extended aeration activated sludge processes (ASPs). The difference between MBRs and conventional ASPs is in the design of the clarifiers. In the MBR facility, the conventional clarifier is replaced with membranes. The membranes act as a physical barrier, separating resulting treatment solids (sludge) from the treated wastewater. The MBR process does not rely on sludge settleability, which allows mixed liquor concentrations (MLSS) to be increased. Operating at higher MLSS concentration, coupled with the absence of large clarifiers, reduces the footprint of an MBR facility compared to that of a conventional ASP of equivalent capacity. MBRs require careful pretreatment to protect the sensitive membranes from damage. Operating costs are often higher for MBRs compared to conventional ASPs, and membrane replacement adds an additional cost component. However, MBRs produce very high quality effluent (no TSS, by definition) which makes this the preferable technology when contemplating recycling of the effluent for the purposes of creating a local water resource.
- Aero-Mod System:** These facilities are also extended aeration ASPs. Aero-Mod facilities claim reduced footprint compared to conventional ASPs, primarily associated with its shared-wall design. The process requires no submersible pumps, with flow controlled by weirs and air-lift facilities. Aero-Mod employs an aeration scheme that allows for nitrification-denitrification in the same basin. Aero-Mod systems produce secondary effluent that is suitable for further treatment if reuse is desired. An Aero-Mod facility would likely be a less costly alternative to an MBR system, both in capital and operations and maintenance (O&M), but would require a significantly larger footprint.

After considering the merits of both options, it was determined to use the MBR process for the purposes of this analysis. This decision was primarily associated with the smaller footprint of the resulting facility and the ability to avoid potential odor production from a more conventional treatment process. Therefore, the MBR process was assumed in the evaluation of all identified treatment alternatives.

15-23

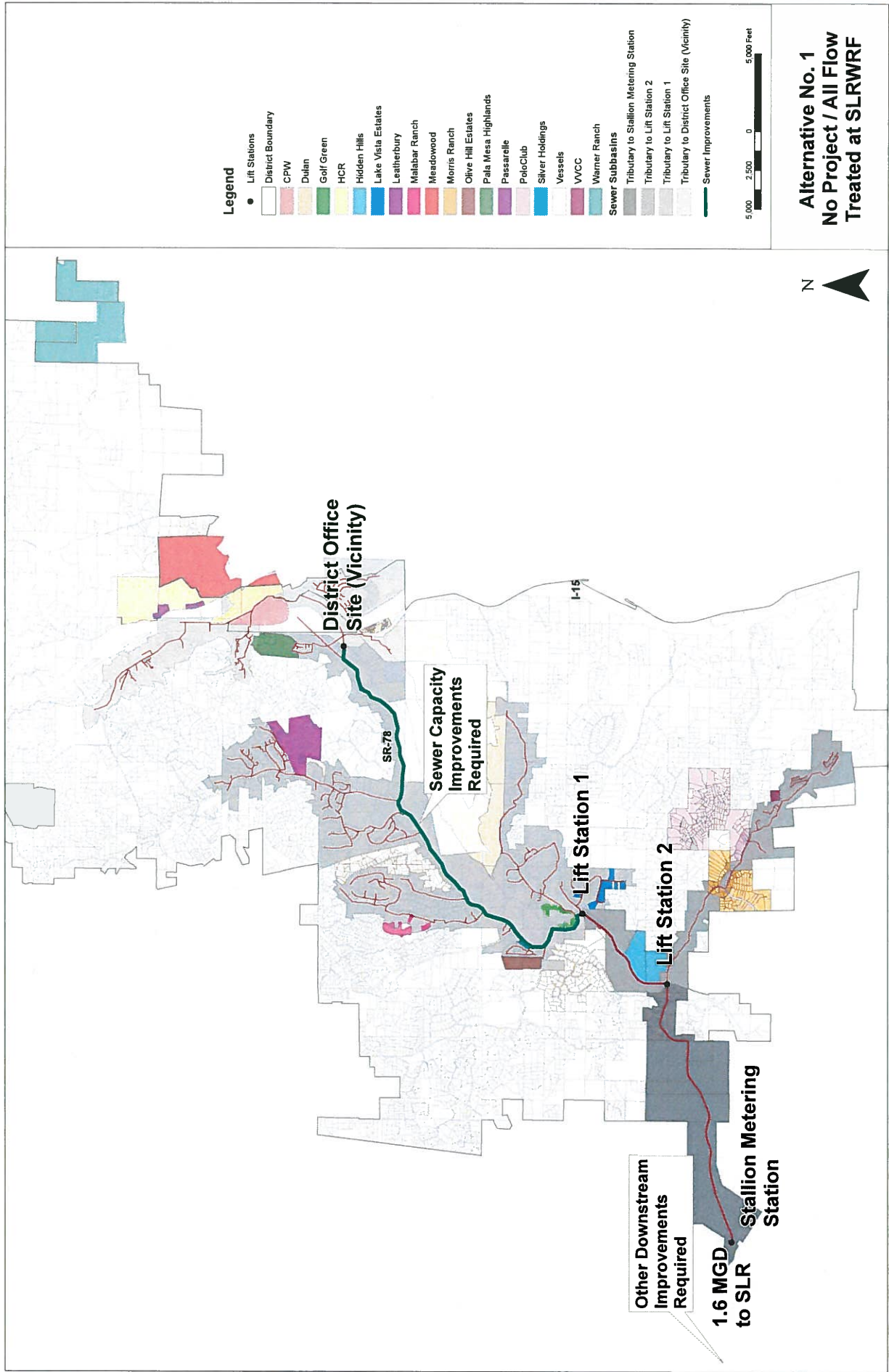


Figure 3-1

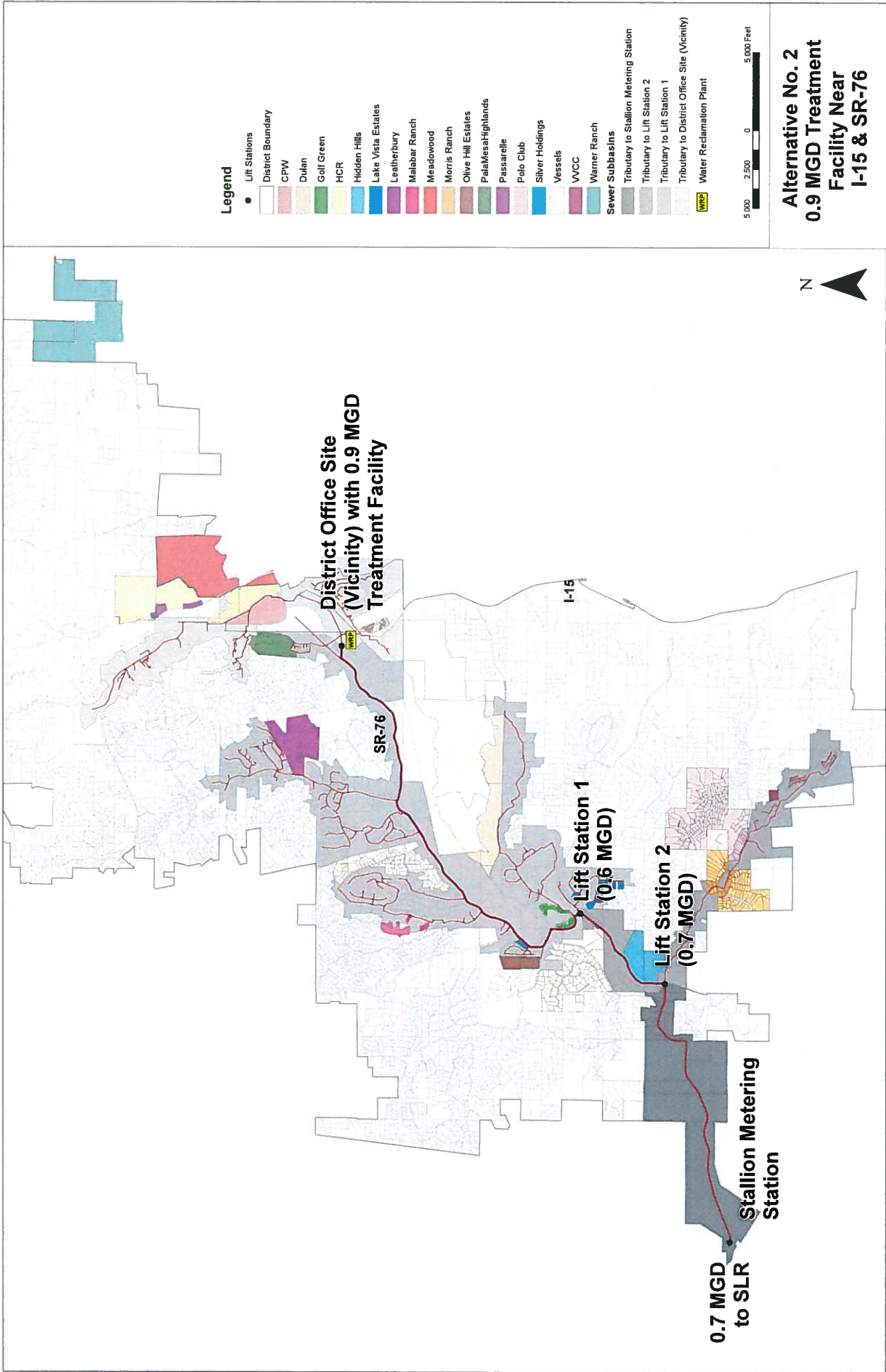


Figure 3-2

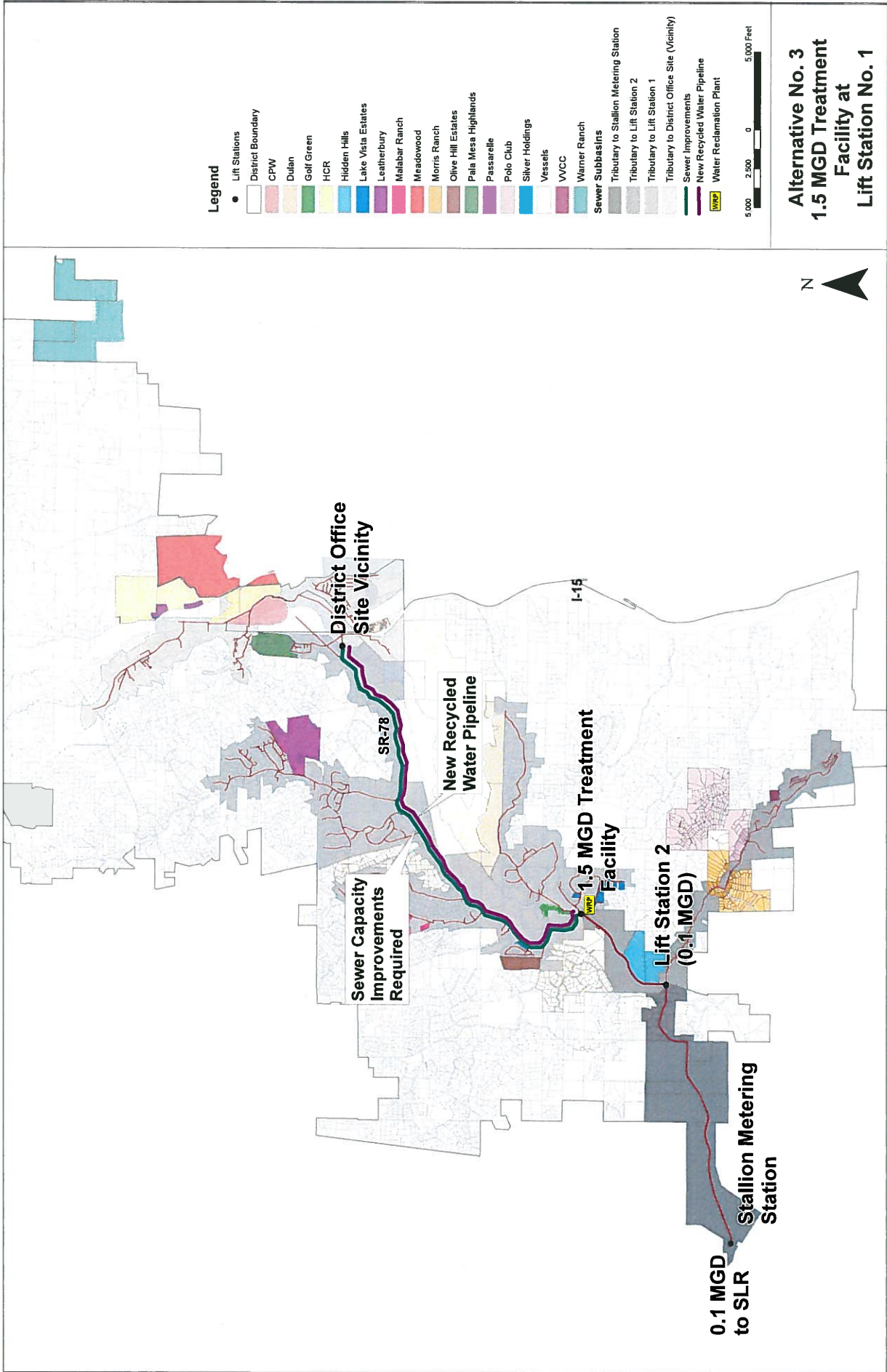


Figure 3-3

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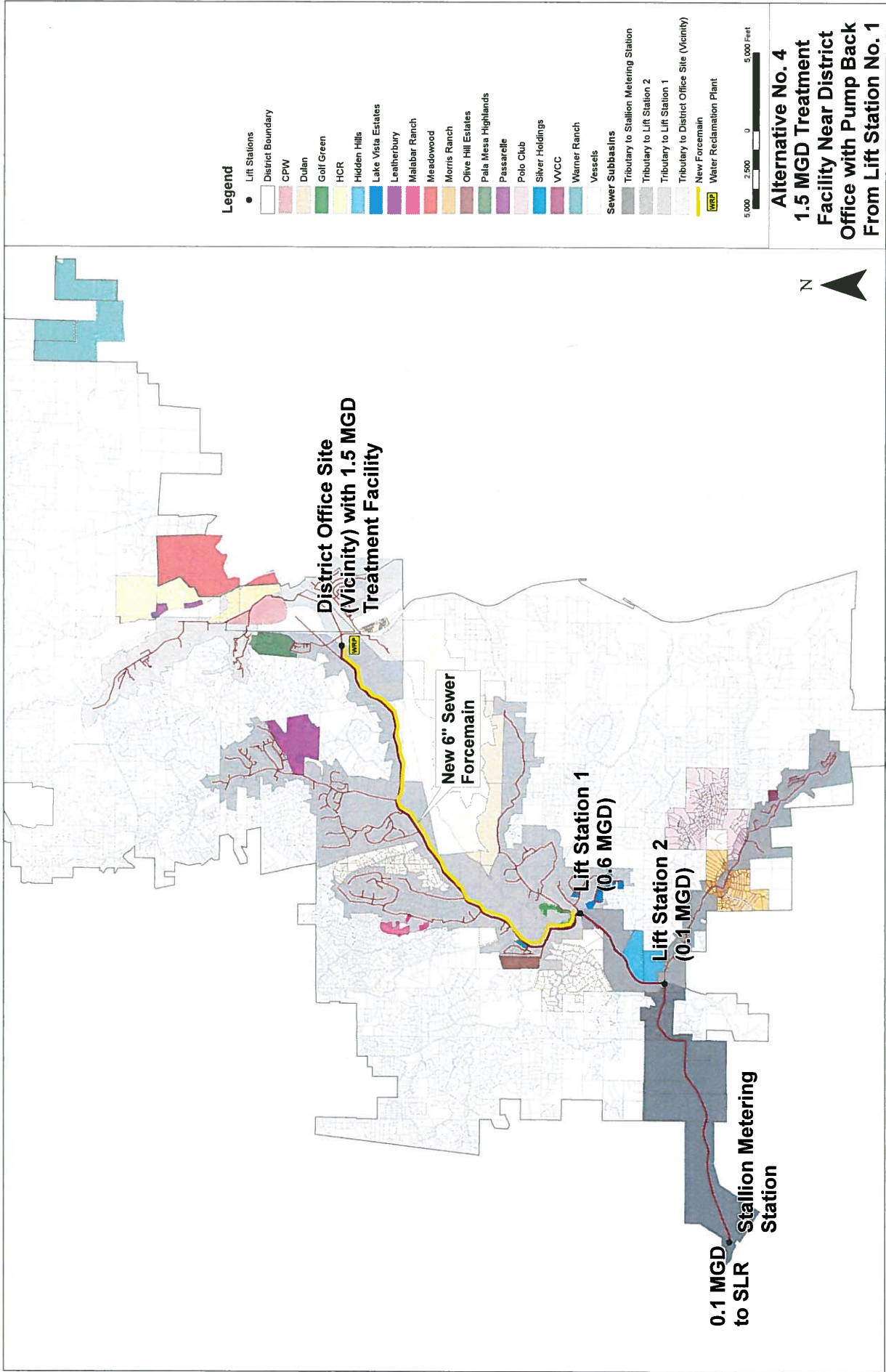


Figure 3-4

15-26

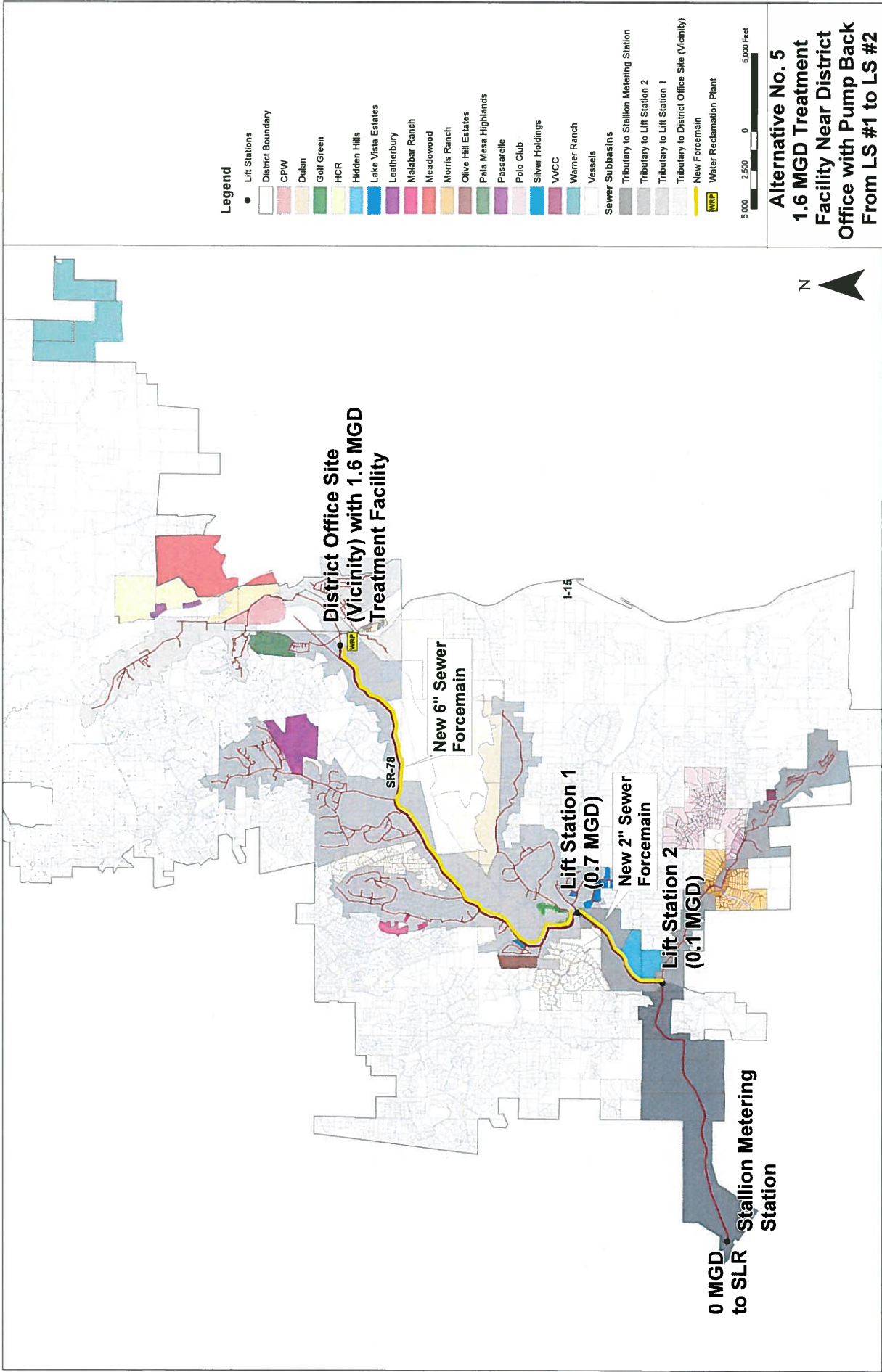


Figure 3-5

15-27

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3.2.2 Solids Handling

Under current operations, solids resulting from the treatment process are handled at the SLRWRF. If the District constructs its own WRF, treatment and disposal of solids may be handled in primarily two ways.

- **SLRWRF Solids Handling:** The first method of handling solids could include continuing to discharge treatment solids to the existing conveyance system and continue to pay the City to treat and dispose of the solids. This option would require that the City maintain a proportionate capacity right within the SLRWRF based on the flow and strength discharged. Under this scenario, the flow tributary to SLRWRF would be very low and the strength would be very high.
- **District Solids Handling:** Alternatively, the District could construct solids handling at its new WRF, thereby eliminating the need for maintenance of such capacity at the SLRWRF. The smaller volume of solids produced at the District WRF would result in use of aerobic digestion for treatment of solids, minimizing the potential for odor production. The treated solids would be trucked off for disposal at an appropriate landfill site.

For the purposes of this analysis, it is assumed that the District will provide for solids handling at its new WRF, thereby eliminating the need for continued capacity at the SLRWRF for solids handling.

3.2.3 Capital, Operation & Maintenance Costs

The District has an extensive history of ongoing wastewater treatment and disposal costs under its agreement with the City. For the purposes of this analysis, these historical costs were assumed in the evaluation of alternatives involving continued conveyance to the SLRWRF. Capital improvement and betterment costs are projected based on historical costs based on recent City invoicing to the District.

With respect to a new WRF constructed by the District, local treatment plants of a similar capacity were consulted to define the annual capital and O&M costs associated with the proposed plant. Capital construction costs were derived from recent bidding results for plants of similar capacity and process.

3.2.4 Conveyance Requirements

The existing District conveyance facilities have a design capacity of approximately 1.0 mgd. Recent studies completed by the District identify required improvements to both pipeline and pump station facilities to accommodate the District's existing capacity right of 1.5 mgd at the SLRWRF. Therefore, for the purposes of this analysis, those recent studies were used to define needed improvements and costs relative to the existing conveyance. Similarly, where conveyance flows were found to not exceed a capacity of 1.0 mgd, the existing conveyance system was assumed to be adequate. With respect to LS 1 and LS 2, recent studies were used to define both capacity increase and O&M needs. Where capacity increases were not required, the O&M improvements were included, where appropriate. In some alternatives, LS 1 and LS 2 are no longer required, and were treated appropriately.

3.2.5 Cost Recovery at SLRWRF

As discussed previously, the existing inter-agency agreement establishes cost obligations to the District based on capacity rights at the SLRWRF. Therefore, where the District is reducing conveyance to the SLRWRF, the District would not realize a cost savings if the same capacity right was maintained at SLRWRF. It was assumed that the District would renegotiate its agreement with the City to reduce its capacity right at SLRWRF, and further assumed that such a renegotiation would result in the City

purchasing back that capacity from the District. The cost per gallon associated with City purchasing back capacity was reduced relative to new plant construction costs, but was included to account for potential cost recovery that would benefit the District relative to construction of its own WRF.

3.2.6 Recycled Water Production

As the primary purpose of this analysis is to evaluate the production of a new local water resource, tertiary treatment facilities were assumed to be included in the District WRF, and a recycled water pump station was included to convey the resulting water off-site to local users and storage. For the purposes of this analysis, recycled water production was assumed to be 90 percent of the identified WRF treatment capacity.

4.0 Conceptual Recycled Water System

A conceptual backbone recycled water system was developed to provide recycled water to potential agricultural customers. Potential recycled water demands along a conceptual piping system were identified by pressure zone. Seasonal storage and supplemental raw water to improve water quality were evaluated to assess the benefits of Beck Reservoir becoming part of a recycled water system. The conceptual recycled water system was sized and a cost opinions were developed.

4.1 Recycled Water Conceptual Piping System

The conceptual piping system was developed based on a spatial analysis of existing irrigation and agricultural customers, as well as the role of development in potential recycled water demands. **Figure 4-1** presents the average annual demand in million gallons per day of the known future development projects and existing irrigation and agricultural customers that may potentially be served by a recycled water system.

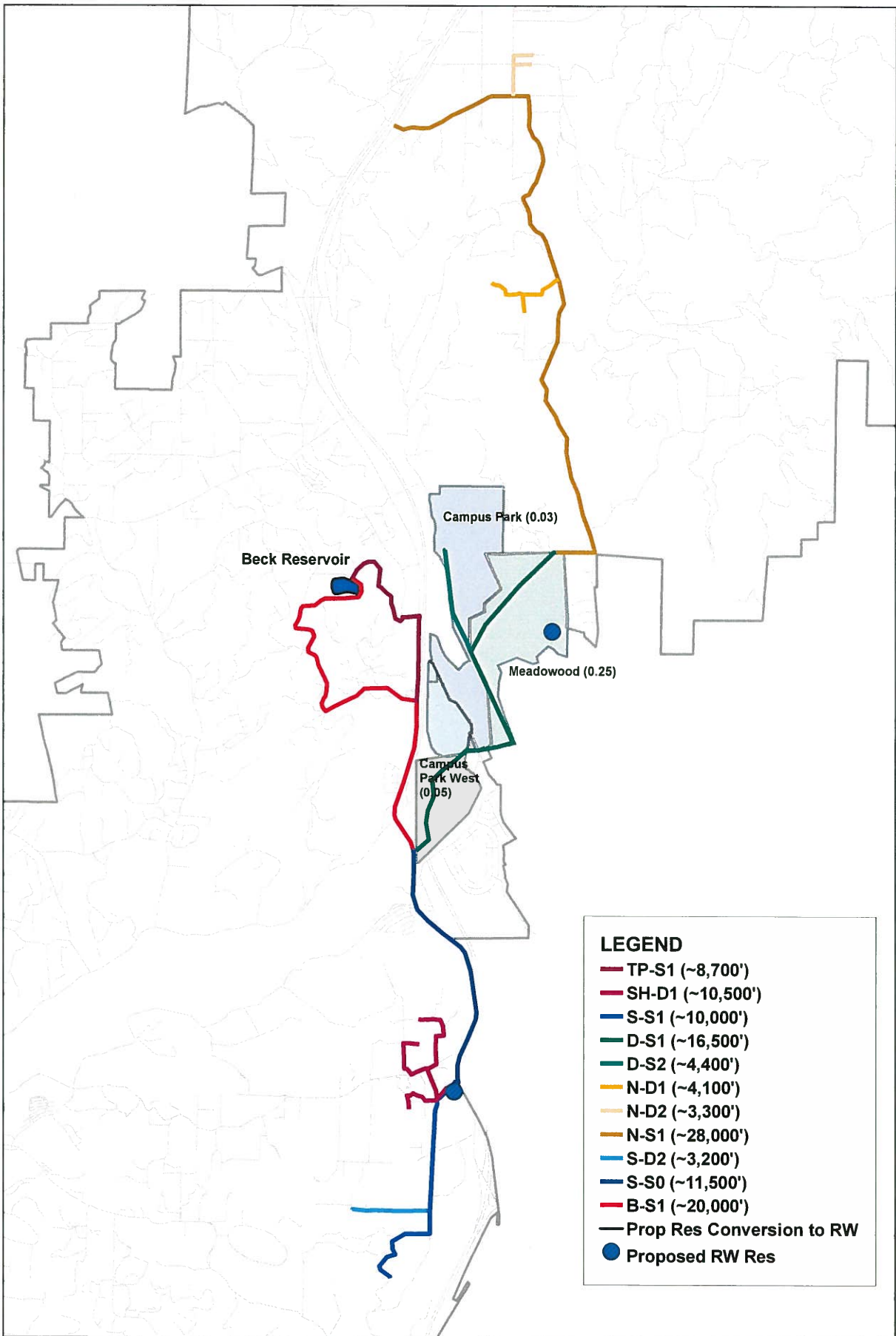
Based on the concentration of demands and topography, the conceptual recycled water piping system was laid out to include supplying Beck Reservoir with Title 22 effluent, servicing demands south of SR-76 and west of I-15 in a first phase of the recycled system, and servicing the new development projects west of I-15 and northern demands in the Rainbow Valley via Rice Canyon Road. Reservoir include the benefits of Beck Reservoir include both blending and seasonal storage. **Figure 4-2** presents the conceptual recycled water piping system.

Based on the topography, it is anticipated that four pressure zones would be needed to service the conceptual recycled water system. **Figure 4-3** presents a schematic hydraulic grade line profile.

4.2 Potential Recycled Water Demands

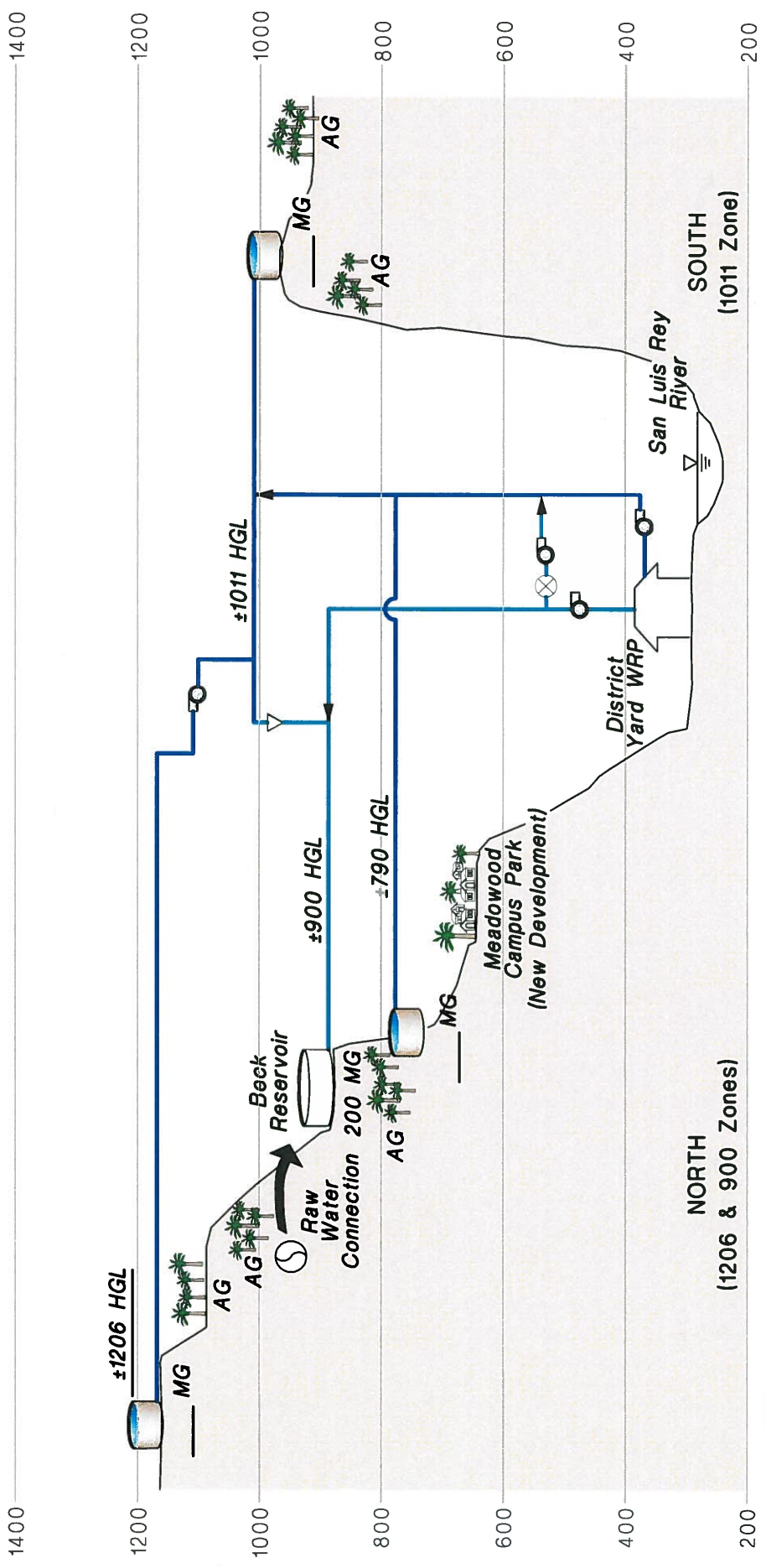
From the conceptual piping layout, 73 existing irrigation or agriculture customers were identified as potential recycled water demands along with the known future developments. **Table 4-1** provides a summary of the potential recycled water demands by pressure zone.

It is anticipated that the initial phase of the conceptual recycled water system would include serving the 893 Beck and 1011 Southern (Closed) pressure zones serving approximately 1.1 mgd of average annual demand. The second phase would include the 790 Developer and 1206 North pressure zones serving approximately 1.6 mgd of average annual demand.



TM #1 - Figure 4-2
 Wastewater Treatment / Reclamation Alternatives Study
 Existing Large Irrigation and Agricultural Customers
 June 2015

15-33



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**CONCEPTUAL
RECYCLED WATER - HYDRAULIC PROFILE**

FIGURE 4-3

Rainbow Municipal Water District
June 2015

H:\Clients\Rainbow MWD\100044880 2015 MP Update\CAD\44880 RW Prelim-Profile June-2015.dwg 6-2-15



-  Proposed RW Tank
-  Proposed RW PS
-  Proposed PRS

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Pressure Zone	Description	Demand (AFY)	Demand (mgd)
893 PZ	Beck	918	0.8
1011 PZ	Southern (Closed)	294	0.3
790 PZ	Developer	112	0.4
1206 PZ	North	136	1.2
TOTAL		1,460	2.7

AFY = acre feet per year, mgd = million gallons per day

Source:

Existing Demands based on Fiscal Year 2014 demands provided by the District
 Projected Demands taken from October 2010 County of San Diego Fallbrook Projects Recycled Water Feasibility Study

4.3 Seasonal Storage and Supplemental Raw Water

Beck Reservoir offers the benefit of providing seasonal storage while also allowing the District the opportunity to lower TDS concentration by blending the Title 22 effluent with raw water. Seasonal fluctuations in demand may dictate operations at Beck Reservoir as well as raw water blending ratios, which may affect the end user. Provided below is a summary of seasonal demands, required seasonal storage, and an evaluation of the expected blend ratios and expected product water TDS.

Seasonal demands were evaluated from the 73 identified potential recycled water conversion customers to assess seasonal trends and patterns. **Figure 4-4** presents the minimum, average, and maximum demands by month over the last 10 years. Monthly average demands vary by season largely dictated by climatic conditions. Under average annual conditions, the recycled water system can be expected to supply a minimum month demand of approximately 1.0 mgd and a maximum month demand of approximately 4.0 mgd.

Seasonal storage requirements at Beck Reservoir will largely be dictated by prolonged periods of minimum demand. The California Department of Public Health requires 84 days of emergency storage for recycled water system that do not have a fail-safe. While this doesn't necessarily apply to the proposed recycled water system, it is a benchmark to assess whether the 203 million gallon Beck Reservoir has adequate capacity. **Figure 4-5** presents the seasonal storage required assuming 1.5 mgd of treated effluent is continuously conveyed to Beck Reservoir over the minimum, average, and maximum month demands from the past 10 years. The figure shows that the Beck Reservoir has the capacity to weather prolonged periods of minimum demand.

For the purpose of sizing, the recycled water system it has been initially assumed the District will require a 50/50 blend of recycled water and raw water to reduce the TDS to acceptable levels for agricultural uses, in particular avocado groves. Based on the proximity to Beck Reservoir from a preferred site near I-15 and SR-76, a dedicated effluent pipeline was assumed from the plant to Beck Reservoir, with raw water blending to occur at Beck Reservoir. Further analysis is recommended on the target TDS level for local growers as the possibility of adding reverse osmosis (RO) to the plant may want to be considered as a cost saving alternative.

Figure 4-4 Observed Seasonal Demands

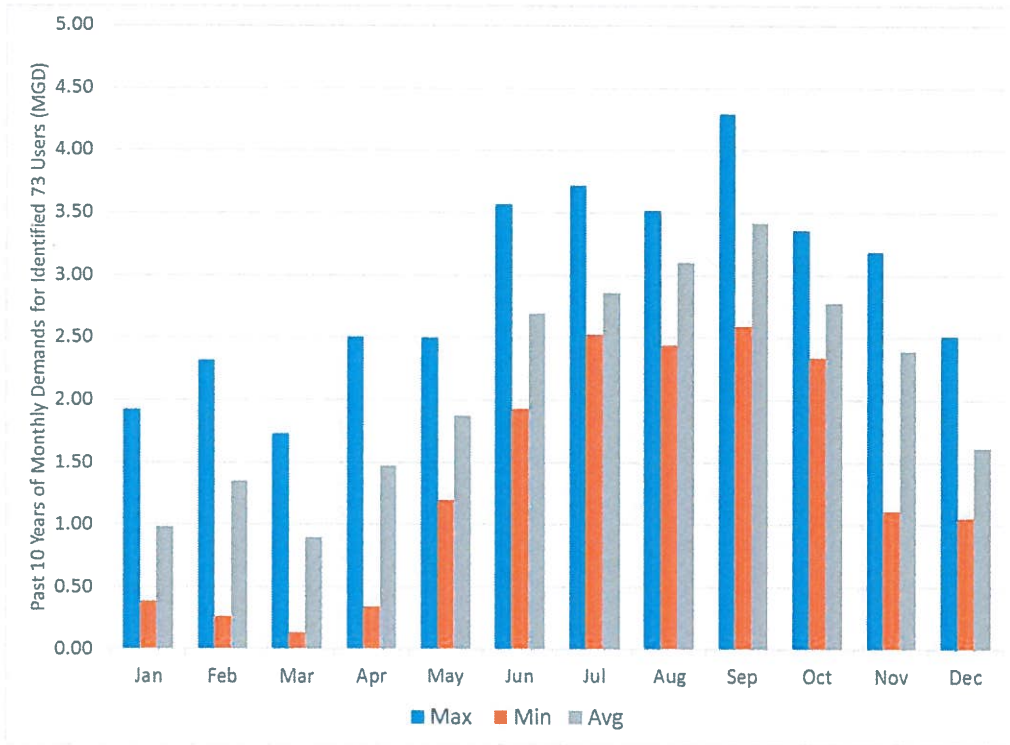
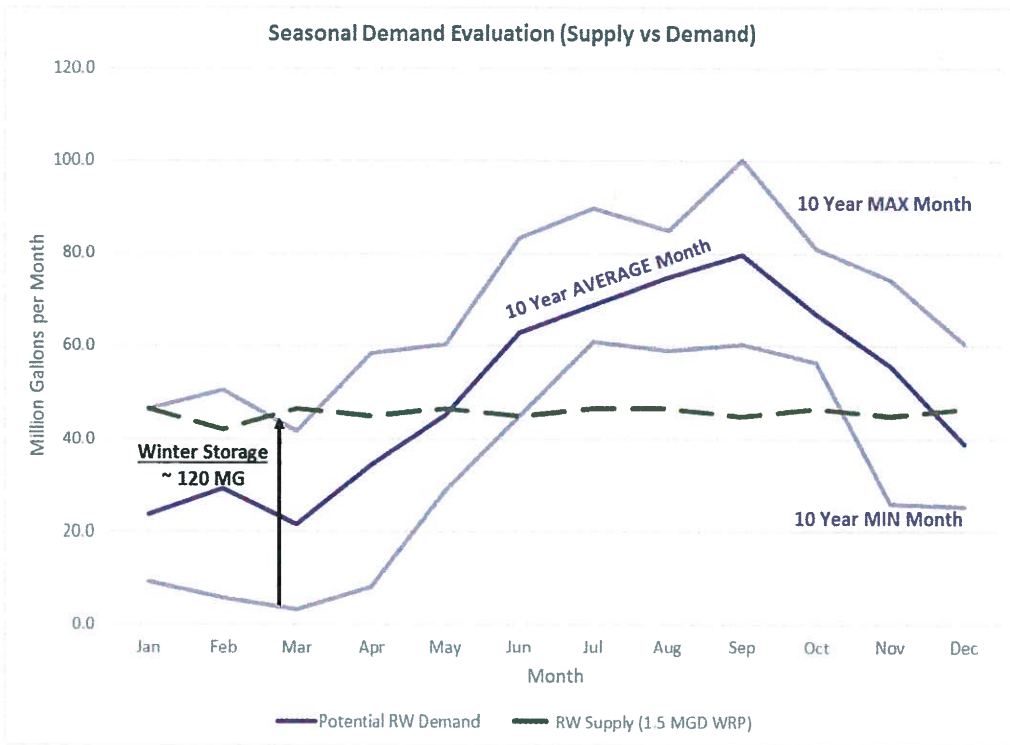


Figure 4-5 Seasonal Storage Evaluation



4.4 System Sizing & Cost Opinion

To develop preliminary level cost opinions, the conceptual recycled water backbone system was sized using planning level criteria and then costs were estimated for individual components. Preliminary system sizing was based on limiting headloss through an extensive piping system while providing the operational storage and pumping capacity needed to supply projected maximum day and peak hour demands, where needed. The cost opinion was developed based on typical unit facility, operation and maintenance, including power costs. **Table 4-2** presents a summary of the anticipated facilities and their respective capital and O&M costs.

Table 4-2 Recycled Water System Cost Summary

Pump Stations									
\$1.50 per gallon (Capital)									
\$0.18 per kWh Power Cost									
75% Assumed Energy Efficiency									
1.5% of Capital Cost - Assumed O&M for Pump Station									
Name	AAD	Head	Capital Cost	Power Cost	Other O&M	Total O&M	MDD	HP	kWh/yr
South Upper	0.31	136	\$1,650,000	\$11,457	\$24,750	\$36,200	1.1	35	63,651
North	1.96	410	\$7,350,000	\$215,990	\$110,250	\$326,200	4.9	468	1,199,942
Total			\$9,000,000	\$227,447	\$135,000	\$362,400		503	1,263,594
Per MGD (ADD)			\$3,284,672	\$83,010	\$49,270	\$132,263		184	461,166
Pipelines									
\$12.00 per inch Dia per ft-Length (Capital)									
1.0% of Capital Cost - Assumed O&M for Pipelines									
Name	Dia		Length		Capital Cost				
TP-S1	12		0		\$0				
B-S1	20		20,005		\$4,801,200				
S-S0	16		11,357		\$2,180,544				
S-S1	12		10,150		\$1,461,600				
S-D2	4		3,242		\$155,616				
SH-D1	12		13,379		\$1,926,576				
D-S1	20		16,624		\$3,989,760				
D-S2	4		4,397		\$211,056				
N-S1	16		28,317		\$5,436,864				
N-D1	8		4,149		\$398,304				
N-D2	12		3,272		\$471,168				
Total			114,892		\$21,032,688				
Tanks / Reservoirs									
\$1.00 per gallon (Capital)									
1.0% of Capital Cost - Assumed O&M for Reservoirs									
Name	MG		Capital Cost						
897 South	1.4		\$1,400,000						
790 Dev	3.6		\$3,600,000						
1206 North	1.8		\$1,800,000						
Total	6.8		\$6,800,000						
Per MGD (ADD)	2.5		\$2,481,752						

5.0 Life Cycle Cost Analysis

A preliminary life cycle cost analysis was prepared for each wastewater treatment plant alternative. **Table 5-1** presents our initial finding, based on treatment plant capacity and O&M costs, avoided to Oceanside and other required District sewer upgrades.

The comparison of No Project to a District-controlled plant alternative is highly sensitive to assumptions about SLR system capacity sell back prices, the unit cost of the District's WRP, and other factors as presented in the spreadsheet. **Nevertheless, it appears reasonable to conclude, at a concept level, that the WRP Project alternatives offer real opportunities for life-cycle cost savings in comparison to the No Project alternative.**

Table 5-2 summarizes the recycled water analysis. There are many challenges with funding an expansive recycled system. The revenues and avoided purchase costs that accrue to the recycled system fund only approximately 40 percent of the system's life-cycle costs of construction and operation. Not surprising given the length, pumping and storage needed to construct. The recycled system will require additional funding or subsidies to reach break-even, and the amount is in excess of the potential savings (ability to pay) on the WRP side. Accordingly, the recycled system will need to be funded through grants, new supply offset fees (capacity fees), other sources, or a combination of these to be economically sound.

Therefore, an important funding source for the District may reside with future development and capacity/connection fees. A portion of the recycled water system in and around a new plant site near the District office may be partially be funded by new development. The initial cost and flow analysis assumes 3,500 new EDUs connected to the District's sewer system. Potential revenue streams include water capacity fees being approximately \$46 million (\$13,000 per EDU x 3,500 EDUs) and wastewater capacity fees being approximately \$60 million (\$17,000 per EDU x 3,500 EDUs).

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Table 5-1 Rainbow MWD Water Reclamation Plant -- Preliminary Cost Analysis 1

Project Alternative:	(1)		(2)		(4)		(5)		(3)	
	Alt. 1 No Project (All flow to Oceanside)	Alt. 2 Baseline WRP @ Vicinity I-15/76 No pump-back	Alt. 2L Larger WRP @ Vicinity I-15/76 w/ pump-back from LS#1	Alt. 2XL Largest WRP @ Vicinity I-15/76 w/ pump-back from LS#1 + #2	Alt. 3 WRP @ LS#1 @ LS#1 No pump-back					
Flow Parameters										
Total Wastewater Flow, 2030 (MGD)	1.62	1.62	1.62	1.62	1.62					
District WRP Capacity (MGD)	0.00	0.90	1.50	1.62	1.50					
Remaining Flow to SLR (MGD)	1.62	0.72	0.12	0.00	0.12					
District Existing SLR Capacity Right (MGD)	1.50	1.50	1.50	1.50	1.50					
Addtl. Capacity Required at SLR (MGD)	0.12									
Surplus Capacity Available for Sell-back²		0.78	1.38	1.50	1.38					
District Share of SLR Existing Capacity	12.0%	5.3%	0.9%	0.0%	0.9%					
District Share of SLR Future Capacity	9.3%	4.1%	0.7%	0.0%	0.7%					
Life-Cycle Cost Summary										
N (yrs):	30	i (%/yr):		4.50%	District WRP Cost (pre-markups)		SLR System Capacity Sell-Back Price		Annual Maintenance / Replace. Funds (as % of \$Constr.)	
				2.50%						
f (escalation rate) (%/yr):										
Amortization Factor (A/P, i, N):		0.0614								
Capitalization Factor ³ (P/A, i, j, N):		22.0								
Equivalent Annual Costs Analysis										
Total Capital	\$ 27,000,000	\$ 24,000,000	\$ 39,000,000	\$ 43,000,000	\$ 50,000,000					
Amortized Capital	\$ 1,660,000	\$ 1,470,000	\$ 2,390,000	\$ 2,640,000	\$ 3,070,000					
Total Annual Costs	\$ 1,620,000	\$ 1,210,000	\$ 940,000	\$ 890,000	\$ 940,000					
Total Equivalent Annual Costs (rounded)	\$ 3,300,000	\$ 2,700,000	\$ 3,300,000	\$ 3,500,000	\$ 4,000,000					
Present-Worth Cost Analysis										
Total Annual O&M	\$ 1,620,000	\$ 1,210,000	\$ 940,000	\$ 890,000	\$ 940,000					
Present-Worth of Annual Costs	\$ 35,600,000	\$ 26,600,000	\$ 20,700,000	\$ 19,600,000	\$ 20,700,000					
Total Capital	\$ 27,000,000	\$ 24,000,000	\$ 39,000,000	\$ 43,000,000	\$ 50,000,000					
Total Present-Worth Costs	\$ 62,600,000	\$ 50,600,000	\$ 59,700,000	\$ 62,600,000	\$ 70,700,000					

15.39

Capital Costs										
District WRP @	\$25 /gpd	\$25/gpd								
District Outfall Expansion (pre-mark-up)		\$14 MM	\$ 8,970,000							\$ 8,970,000
Lift Station Upgrades and Force Mains										
LS#1 Upgrades	(cost basis to be added)									
LS#1 Forcemain	28,200 ft. 10 in. \$12 in./ft.		\$ 2,230,000	\$ 450,000	\$ 2,010,000	\$ 2,230,000	\$ 2,230,000	\$ 2,230,000	\$ 2,230,000	\$ 2,230,000
LS#2 Upgrades	(cost basis to be added)									
LS#2 Forcemain	7,770 ft. 6 in. \$15 in./ft.		\$ 450,000	\$ 110,000	\$ 220,000	\$ 220,000	\$ 450,000	\$ 450,000	\$ 220,000	\$ 220,000
Recycled (fallsafe) Conveyance & Storage										
Pump Station	(cost basis to be added)									
Pipeline to District Site (same as LS#1 forcemain)										
Pipeline to Beck	8,900 ft. 12 in. \$15 in./ft.		\$ 1,600,000	\$ 1,600,000	\$ 1,600,000	\$ 1,600,000	\$ 1,600,000	\$ 1,600,000	\$ 1,600,000	\$ 1,600,000
Beck Improvements	\$1.0 MM		\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Beck Raw Water Connect. Rehab.	\$0.5 MM		\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Subtotal (rounded)			\$11,700,000	\$26,600,000	\$47,000,000	\$47,000,000	\$51,300,000	\$51,300,000	\$54,000,000	\$54,000,000
Contingency	@ 30%		\$3,500,000	\$8,000,000	\$14,100,000	\$14,100,000	\$15,400,000	\$15,400,000	\$16,200,000	\$16,200,000
Subtotal Construction			\$15,200,000	\$34,600,000	\$61,100,000	\$61,100,000	\$66,700,000	\$66,700,000	\$70,200,000	\$70,200,000
Design/Permitting/Admin.	@ 20%		\$3,000,000	\$6,900,000	\$12,200,000	\$12,200,000	\$13,300,000	\$13,300,000	\$14,000,000	\$14,000,000
Subtotal Capital Cost			\$18,200,000	\$41,500,000	\$73,300,000	\$73,300,000	\$80,000,000	\$80,000,000	\$84,200,000	\$84,200,000
Purchase of Additional SLR Capacity	\$40/gpd		\$ 4,800,000							
Seil-back of SLR System Capacity	\$25/gpd									
District Share of SLR CIP	\$200/MM									
@ assumed betterment percentage = 20%										
TOTAL CAPITAL COSTS (rounded)			\$ 27,000,000	\$ 1,700,000	\$ 300,000	\$ 300,000	\$ 39,000,000	\$ 43,000,000	\$ 50,000,000	\$ 50,000,000
Annual Costs										
District WRP Contract O&M	\$ 7,000 /mn./mgd		\$ 80,000	\$ 80,000	\$ 130,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 130,000	\$ 130,000
Maint./Replace. Fund, as % WRP Constr.	1.0%		\$ -	\$ 230,000	\$ 380,000	\$ 410,000	\$ 410,000	\$ 410,000	\$ 380,000	\$ 380,000
Power	e=75% \$0.18 /kWh									
Pumping to SLR	(Q varies) @TDH= 120 ft.		\$ 52,000	\$ 23,000	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ 4,000	\$ 4,000
Pump-back	(Q varies) @TDH= 120 ft.				\$ 19,000	\$ 23,000	\$ 19,000	\$ 23,000	\$ 19,000	\$ 19,000
Recycled PS	(WRP Cap.) @TDH= 725 ft.				\$ 290,000	\$ 320,000	\$ 320,000	\$ 320,000	\$ 290,000	\$ 290,000
SLR Usage Charges (1.5 mgd cap.)	\$85,000 /mn.		\$ 1,100,000	\$ 490,000	\$ 80,000	\$ -	\$ -	\$ -	\$ 80,000	\$ 80,000
SLR System Maint./Repl. Fund, District share										
WWTP, as % of Constr. Cost	\$435 MM		\$ 410,000	\$ 180,000	\$ 30,000	\$ -	\$ -	\$ -	\$ 30,000	\$ 30,000
Outfalls, as % of Constr. Cost	\$60 MM		\$ 56,000	\$ 25,000	\$ 4,000	\$ -	\$ -	\$ -	\$ 4,000	\$ 4,000
TOTAL ANNUAL O&M COSTS (rounded)			\$ 1,620,000	\$ 1,210,000	\$ 940,000	\$ 890,000	\$ 940,000	\$ 940,000	\$ 940,000	\$ 940,000

Notes:

- 1) PRELIMINARY COSTS: Preliminary cost analysis, subject to review and revision
- 2) SLR CAPACITY SELL-BACK ASSUMPTIONS: The analysis assumes the sell-back of its unneeded SLR system capacity rights is achievable, and that the District's ownership share and financial responsibility for SLR system costs would decrease proportionate with its decrease in capacity right.
- 3) CAPITALIZATION FACTOR: The capitalization factor is a percentage gradient series present worth factor, with future annual costs escalating at the rate specified.



15-40

DRAFT 6/02/15**Table 5-2 Rainbow Recycled Water System Concept Study – Preliminary Cost Analysis****COST SUMMARY – FACILITIES**

		Capital Cost	Power Cost	Annual O&M	Total O&M
Pipelines		\$21,000,000	\$0	\$210,000	\$210,000
Pump Stations		\$9,000,000	\$230,000	\$140,000	\$370,000
Reservoirs		\$7,000,000	\$0	\$70,000	\$70,000
Customer Retrofit Assistance		\$2,000,000	\$0	\$0	\$0
System Ops (inc. T22 compliance)		\$0	\$0	\$200,000	\$200,000
Subtotal		\$39,000,000	\$230,000	\$620,000	\$850,000
Contingency @	25%	\$10,000,000	\$0	\$0	\$0
Subtotal		\$49,000,000	\$230,000	\$620,000	\$850,000
Design/Permitting/Admin.	15%	\$7,000,000	\$0	\$0	\$0
Total		\$56,000,000	\$230,000	\$620,000	\$850,000
Per MGD (ADD)	2.74	\$20,000,000	\$80,000	\$230,000	\$310,000
Per AF/yr	3,072	\$17,800	\$70	\$210	\$280

LIFECYCLE COSTS

Finance Terms	30 yrs	4.5%
	P/A=	0.0614

	Amortized Cap.	Total O&M	Equiv. Annual
Facilities	\$1,090	\$280	\$1,370
Net Purchase Costs (\$/AF)		Blend Ratio	Unit Cost (\$/AF)
Raw Water Blend %:	45%		
Avoided Treated Wtr. All-In Cost:	-\$1,439/AF	1.00	-\$1,440
Raw Water All-In Cost:	\$1,159/AF	0.45	\$520
Recycled Purchase Cost	\$0/AF	0.55	\$0
Sales Price Discount vs. Potable	\$300/AF	1.00	\$300
Lost Water Revenue for System o/h	\$250/AF	1.00	\$250
Total			-\$370

Subsidy Required from WRP to Reach Break-Even

Remaining Unfunded Unit Life-Cycle Cost (\$/AF)	\$1,000
Capitalized Value (\$/AF-c)	\$16,300
Capitalized Value (\$/mgd)	\$18,000,000
Amount at System ADD	\$49,000,000
Amount per MGD of WRP Capacity, at Specified Blend (\$/mgd)	\$33,000,000

DISCUSSION – LIFE-CYCLE COSTS AND SUBSIDY REQUIREMENTS

- **Recycled System Cost Deficit:** The revenues and avoided purchase costs that accrue to the recycled system fund only 40 percent of the system's life-cycle costs of construction and operation.
- **Subsidy Requirement to Reach Break-Even:** The recycled system will require large subsidies to reach break-even . . . not counting the indirect benefits of local supply.
- **Subsidy amount is beyond the reach of the WRP:** The recycled system would need to be funded through grants, new supply offset fees (capacity fees), other sources, or a combination of these.

Table 1-1 Comparison of Wastewater Treatment Alternatives				
Alternative	Capital Cost (Million \$)	Annual Cost (Million \$)	Present Worth Cost (Million \$)	Risk Elements
No Project	32	1.72	76	<ul style="list-style-type: none"> • Potential future cost liability for SLR Plant, land outfall, and ocean outfall improvements • No local water supply developed • Requires acquisition of additional future capacity
District Plant	36	1.88	84	<ul style="list-style-type: none"> • Higher capital costs • Treatment facility staff to operate and maintain • Relies on strong housing market for new revenues • Environmental impacts with siting a wastewater plant • Recycled water system requires grant and/or subsidy funding to be cost-feasible to District.

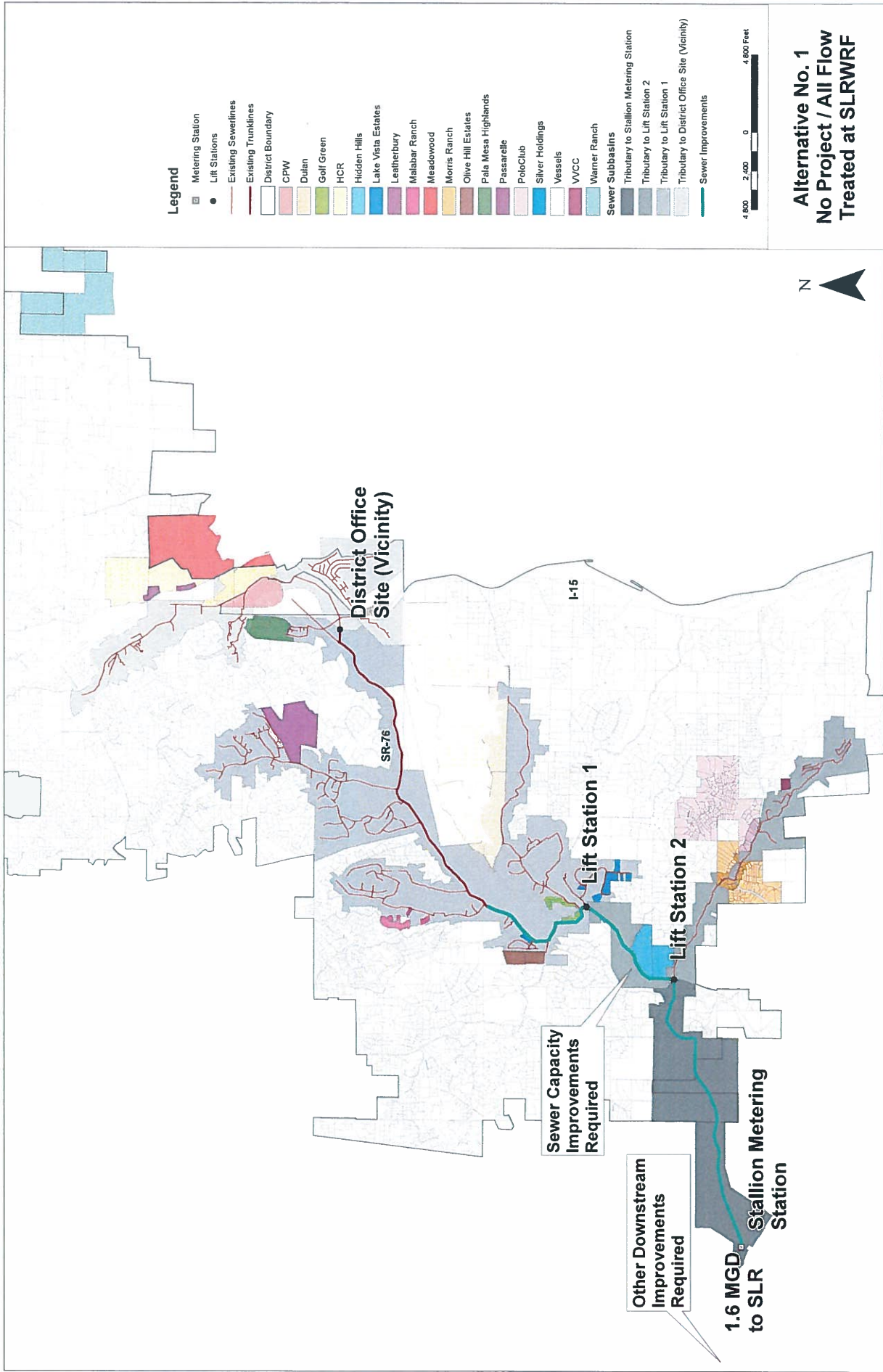
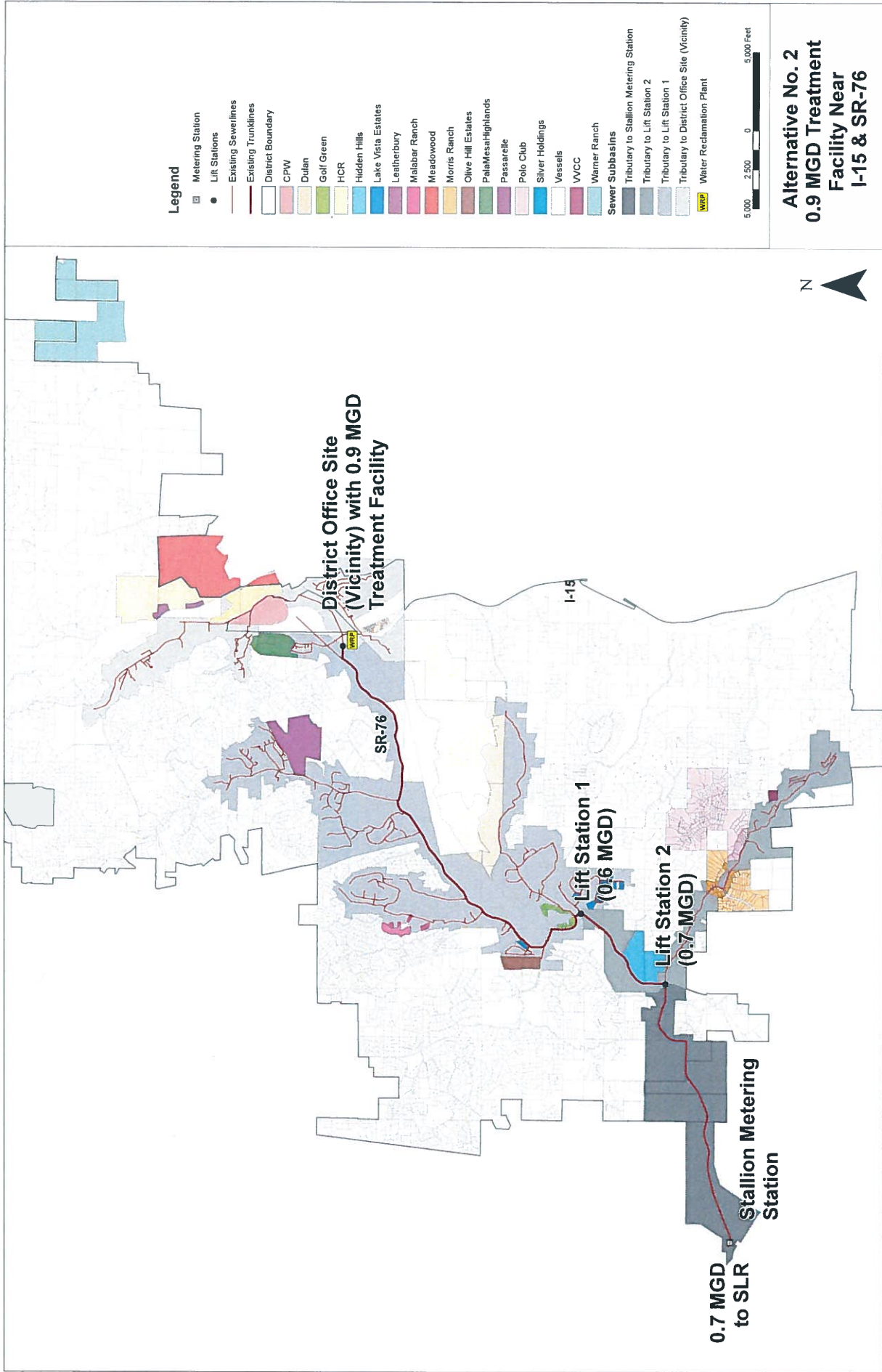


Figure 3-1
August 2015

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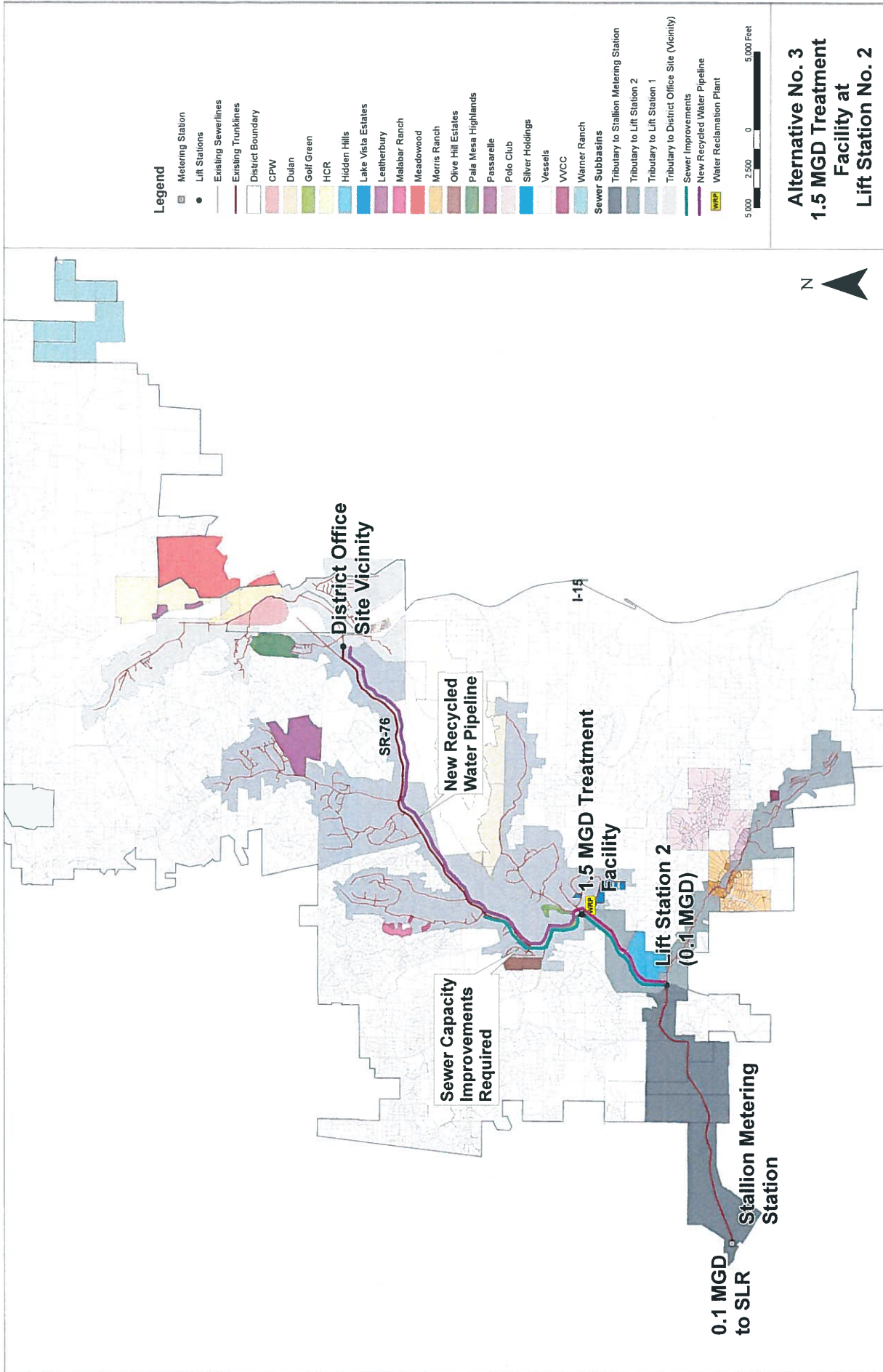


Figure 3-3
August 2015

Table 4-2 Recycled Water System Cost Summary

DRAFT 9/02/15

Pipelines

\$12.00 per inch Dia per ft-Length (Capital)
 1.0% of Capital Cost - Assumed O&M for Pipelines

Name	Dia	Length	Capital Cost	Power Cost	Annual O&M	Total O&M
TP-S1	12	0	\$0	\$0	\$0	\$0
B-S1	20	20,005	\$4,801,000	\$0	\$48,010	\$48,010
S-S0	16	11,357	\$2,181,000	\$0	\$21,810	\$21,810
S-S1	12	10,150	\$1,462,000	\$0	\$14,620	\$14,620
S-D2	4	3,242	\$156,000	\$0	\$1,560	\$1,560
SH-D1	12	13,379	\$1,927,000	\$0	\$19,270	\$19,270
D-S1	20	16,624	\$3,990,000	\$0	\$39,900	\$39,900
D-S2	4	4,397	\$211,000	\$0	\$2,110	\$2,110
N-S1	16	28,317	\$5,437,000	\$0	\$54,370	\$54,370
N-D1	8	4,149	\$398,000	\$0	\$3,980	\$3,980
N-D2	12	3,272	\$471,000	\$0	\$4,710	\$4,710
Total		114,892	\$21,034,000	\$0	\$210,340	\$210,340

Pump Stations

\$1.50 per gallon (Capital)
 \$0.18 per kWh Power Cost
 75% Assumed Energy Efficiency
 1.5% of Capital Cost - Assumed O&M for Pump Station

Name	AAD	Head	Capital Cost	Power Cost	Other O&M	Total O&M	MDD	HP	kWh/yr
Supply									
South Upper	0.31	136	\$1,650,000	\$12,000	\$25,000	\$37,000	1.1	35	63,651
North	1.96	410	\$7,350,000	\$216,000	\$110,000	\$326,000	4.9	468	1,199,942
Total			\$9,000,000	\$228,000	\$135,000	\$363,000		503	1,263,594
Per MGD (ADD)			\$3,284,672	\$83,212	\$49,270	\$132,482		184	461,166

Tanks / Reservoirs

\$1.00 per gallon (Capital)
 1.0% of Capital Cost - Assumed O&M for Reservoirs

Name	MG	Capital Cost	Power Cost	Annual O&M	Total O&M
Beck					
897 South	1.4	\$1,400,000	\$0	\$14,000	\$14,000
790 Dev	3.6	\$3,600,000	\$0	\$36,000	\$36,000
1206 North	1.8	\$1,800,000	\$0	\$18,000	\$18,000
Total	6.8	\$6,800,000	\$0	\$68,000	\$68,000
Per MGD (ADD)	2.5	\$2,481,752	\$0	\$24,818	\$24,818

15-46

Table 5-1 Rainbow Water Reclamation Plant – Preliminary Cost Analysis¹

Draft 9/2/15

Project Alternative:	Alt. 1 No Project (All flow to Oceanside)	Alt. 2 Baseline WRP @ Vicinity I-15/76 No pump-back	Alt. 3 (revised) WRP @ LS#2 No pump-back
Flow Parameters			
Total Wastewater Flow, 2030 (MGD)	1.62	1.62	1.62
District WRP Capacity (MGD)	0.00	0.90	1.62
Remaining Flow to SLR (MGD)	1.62	0.72	0.00
District Existing SLR Capacity Right (MGD)	1.50	1.50	1.50
Flow @ PS1 (MGD)	1.50	0.60	1.50
Flow @ PS2 (MGD)	1.62	0.72	-
Addtl. Capacity Required at SLR (MGD)	0.12	-	-
Surplus Capacity Available for Sell-back*	-	0.78	1.50
District Share of SLR Existing Capacity	13.5 MGD	12.0%	5.3%
District Share of SLR Future Capacity	17.4 MGD	9.3%	4.1%

Life-Cycle Cost Summary		For SLR Capacity Sell-Back Price = \$10 /gpd		
N (yrs):	30	i (%/yr):	3.50%	
j (escalation rate) (%/yr):	2.50%			
Amortization Factor (A/P, i, N):	0.0544			
Capitalization Factor ³ (P/A, i, j, N):	25.3			
Present-Worth Cost Analysis				
Total Annual O&M		\$ 1,720,000	\$ 1,880,000	\$ 1,790,000
Present-Worth of Annual Costs	Pj = 25.3	\$ 43,500,000	\$ 47,500,000	\$ 45,200,000
Total Capital		\$ 32,000,000	\$ 36,000,000	\$ 79,000,000
Total Present Worth Costs (rounded)		\$ 76,000,000	\$ 84,000,000	\$ 124,000,000
Equivalent Annual Costs ⁽¹⁾⁽²⁾	A/P = 0.0544	\$ 4,100,000	\$ 4,600,000	\$ 6,700,000

Capital Costs				
District WRP (pre mark-up)	\$25 /gpd		\$ 22,500,000	\$ 40,500,000
RO Equipment	Q= 27% Y= 95% \$4.00/gpd		\$ 1,000,000	\$ 1,700,000
Lift Station and Sewer Main Upgrades				
<i>District Outfall Expansion</i>				
Mission Rd. to LS2	14,000 ft. 18 in.	\$15 in./ft.	\$ 3,780,000	\$ 3,780,000
LS#1 Upgrades	per mgd flow at LS1	\$3.5 MM	\$ 5,250,000	\$ 2,100,000
Forcemain (pump back)	28,200 ft. 10 in.	\$12 in./ft.	\$ 650,000	\$ 290,000
LS#2 Upgrades	per mgd flow at LS2	\$0.4 MM		
Forcemain (pump back)	7,770 ft. 6 in.	\$15 in./ft.		
Recycled (Failsafe) Conveyance & Storage				
Pump Station	per mgd flow at plant	\$0.6 MM	\$ 540,000	\$ 970,000
Pipeline to District Site	35,970 ft. 12 in.	\$15 in./ft.		\$ 6,470,000
Pipeline to Beck	0 ft. 12 in.	\$15 in./ft.		
Beck Improvements		\$1.0 MM	\$ 1,000,000	\$ 1,000,000
Beck Raw Water Connect. Rehab.		\$0.5 MM	\$ 500,000	\$ 500,000
Subtotal (rounded)			\$18,700,000	\$27,900,000
Contingency	@ 30%		\$5,600,000	\$8,400,000
Subtotal Construction			\$24,300,000	\$36,300,000
Design/Permitting/Admin.	@ 20%		\$4,900,000	\$7,300,000
Subtotal Capital Cost			\$29,200,000	\$43,600,000
Purchase of Additional SLR Capacity	\$20/gpd		\$ 2,400,000	
Sell-back of SLR System Capacity	\$10/gpd		\$ (7,800,000)	\$ (15,000,000)
TOTAL CAPITAL COSTS (rounded)			\$ 32,000,000	\$ 36,000,000

Annual Costs				
District WRP O&M Costs				
Contract O&M Service	\$ 15,000 /mn./mgd		\$ 160,000	\$ 290,000
Maint./Replace. Fund, as % WRP Constr.	1.00%		\$ 230,000	\$ 410,000
Concrete Hauling ⁴	13,500 gpd/MGD \$90/kgal.		\$ 400,000	\$ 720,000
Power	e= 75% \$0.18 /kWh			
Pumping to SLR	(Q varies) @TDH= 120 ft.		\$ 52,000	\$ 23,000
Pump-back	(Q varies) @TDH= 120 ft.			
Recycled PS (District site)	@TDH= 725 ft.		\$ 320,000	
Recycled PS (LS2 Site)	@TDH= 850 ft.			\$ 370,000
SLR Usage Charges (1.5 mgd cap.)	\$85,000 /mn.		\$ 1,100,000	\$ 490,000
SLR System Maint./Repl. Fund, District share				
WWTP, as % of Constr. Cost	\$435 MM 1.25%		\$ 510,000	\$ 230,000
Outfalls, as % of Constr. Cost	\$60 MM 1.00%		\$ 56,000	\$ 25,000
TOTAL ANNUAL O&M COSTS (rounded)			\$ 1,720,000	\$ 1,880,000

Notes:

- 1) PRELIMINARY COSTS: Preliminary cost analysis, subject to review and revision
- 2) SLR CAPACITY SELL-BACK ASSUMPTIONS: The analysis assumes the sell-back of its unneeded SLR system capacity rights is achievable, and that the District's ownership share and financial responsibility for SLR system costs would decrease proportionate with its decrease in capacity right.
- 3) CAPITALIZATION FACTOR: The capitalization factor is a percentage gradient series present worth factor, with future annual costs escalating at the rate specified.

Table 5-2 RAINBOW RECYCLED WATER SYSTEM CONCEPT STUDY -- Preliminary Cost Analysis

DRAFT 9/02/15

COST SUMMARY -- FACILITIES		Capital Cost	Power Cost	Other O&M	Total O&M
Pipelines		\$21,000,000	\$0	\$210,000	\$210,000
Pump Stations		\$9,000,000	\$230,000	\$140,000	\$370,000
Reservoirs		\$7,000,000	\$0	\$70,000	\$70,000
Customer Retrofit Assistance		\$2,000,000	\$0	\$0	\$0
System Ops (inc. T22 compliance)		\$0	\$0	\$200,000	\$200,000
Subtotal		\$39,000,000	\$230,000	\$620,000	\$850,000
Contingency @	30%	\$12,000,000		\$190,000	\$190,000
Subtotal		\$51,000,000	\$230,000	\$810,000	\$1,040,000
Design/Permitting/Admin.	20%	\$10,000,000			
Total		\$61,000,000	\$230,000	\$810,000	\$1,040,000
Per MGD (ADD)	2.74	\$22,000,000	\$80,000	\$300,000	\$380,000
Per AF/yr	3,072	\$19,600	\$70	\$270	\$340

ANNUAL COSTS AND OFFSETS (calculated on a unit-cost basis)				Unit Cost (\$/AF)
Facility O&M Unit Cost Total, from above				\$340
Net Purchase Costs (\$/AF)				
Raw Water Blend %:	10%		Blend Ratio	
Avoided Treated Water All-In Cost:		-\$1,439/AF	1.00	-\$1,440
Raw Water All-In Cost:		\$1,159/AF	0.10	\$120
Recycled Purchase Cost		\$0/AF	0.90	\$0
Sales Price Discount vs. Potable		\$300/AF	1.00	\$300
Lost Water Revenue for System o/h		\$250/AF	1.00	\$250
Subtotal:				-\$770
Total Net of Annual Cost Items				-\$430

LIFE-CYCLE COSTS (calculated on a unit-cost basis)				Unit Cost (\$/AF)
N (yrs):	30	i (%/yr):	3.50%	
j (escalation rate) (%/yr):	2.50%			
Amortization Factor (A/P, i, N):	0.0544			
Capitalization Factor ³ (P/A, i, j, N):	25.3			
Present-Worth Cost Analysis				Unit Cost (\$/AF)
Net of Annual Costs, from above				-\$430
Present-Worth of Annual Costs	Pj =	25.3		-\$10,870
Total Capital (from above)				\$19,600
Total Present Worth Costs (rounded)				\$3,730
Equivalent Annual Costs (" ")	A/P =	0.0544		\$470
Subsidy Required from WRP to Reach Break-Even				
Remaining Unfunded Unit Life-Cycle Cost (\$/AF)				\$470
Capitalized Value (\$/AF-c)				\$8,600
Capitalized Value (\$/mgd)				\$10,000,000
Amount per MGD of WRP Capacity, at Specified Blend (\$/mgd)				\$11,000,000
If funded by new Supply Offset Capacity Fee, per EDU per mgd		3,500 EDU		\$3,100

DISCUSSION -- LIFE-CYCLE COSTS AND SUBSIDY REQUIREMENTS

- **Recycled System Cost Deficit:** The revenues and avoided purchase costs that accrue to the recycled system fund part but not all of the system's life-cycle costs of construction and operation.
- **Subsidy Requirement to Reach Break-Even:** The recycled system will require subsidies to reach break-even . . . not counting the indirect benefits of local supply. One possible option is the implementation of a new **Supply Offset capacity fee**, as calculated above.

15-48



BOARD ACTION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 15-15 AUTHORIZING THE GENERAL MANAGER TO APPLY FOR THE WATER RECYCLING PLANNING GRANT

BACKGROUND

The State of California through the water recycling funding program provides assistance consisting of grants or low interest loans to agencies pursuing different types of water projects. The purpose of the planning grant is to assist agencies with completing planning studies for water recycling projects using treated municipal wastewater and or treated groundwater from sources contaminated by human activities. In addition to encouraging new recycling planning studies, these funds are intended to supplement local funds and enhance the quality of local planning efforts. Grants are provided for facilities planning studies to determine the feasibility of using recycled water to offset the use of fresh/potable water from state and/or local supplies.

DESCRIPTION

The water reclamation plant study is eligible for the recycling planning grant. If approved, the grant will cover 50 percent of eligible costs up to \$75,000. To apply for the grant, a complete application package must be submitted to the State including a resolution designating an authorized representative to apply for the grant.

POLICY

N/A

BOARD OPTIONS/FISCAL IMPACTS

This will offset the costs of the water reclamation planning study.

- 1) Approve Resolution No.15-15 to authorize General Manager to apply for the water recycling planning grant.
- 2) Provide other direction to Staff.

STAFF RECOMMENDATION

Staff recommends Option 1.


Sherry Kirkpatrick
Engineering Manager

September 16, 2015

14-1

RESOLUTION NO. 15-15

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE
RAINBOW MUNICIPAL WATER DISTRICT AUTHORIZING THE
GENERAL MANAGER TO APPLY FOR FINANCIAL
ASSISTANCE FOR A GRANT AGREEMENT FROM THE STATE
WATER RESOURCES CONTROL BOARD**

WHEREAS the Rainbow Municipal Water District desires to determine the feasibility of using recycled water to offset potable water; and

BE IT RESOLVED by the Board of Directors of the Rainbow Municipal Water District (the "Entity"), as follows:

The General Manager (the "Authorized Representative") or designee is hereby authorized and directed to sign and file, for and on behalf of the Entity, a Financial Assistance Application for a grant agreement from the State Water Resources Control Board for the planning of a water reclamation plant and recycled water distribution system (the "Project").

This Authorized Representative, or his/her designee, is designated to provide the assurances, certifications, and commitments required for the financial assistance application, including executing a financial assistance agreement from the State Water Resources Control Board and any amendments or changes thereto.

The Authorized Representative, or his/her designee, is designated to represent the Entity in carrying out the Entity's responsibilities under the grant agreement, including certifying disbursement requests on behalf of the Entity and compliance with applicable state and federal laws.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Rainbow Municipal Water District held on the 16th day of September, 2015 by the following vote, to wit:

**AYES:
NOES:
ABSENT:
ABSTAIN:**

Dennis Sanford, Board President

ATTEST:

Dawn M. Washburn, Board Secretary



BOARD ACTION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

DISCUSSION AND POSSIBLE ACTION TO APPROVE RESOLUTION NO. 15-13—A RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ESTABLISHING CLASSIFICATIONS AND MONTHLY RATES OF PAY FOR DISTRICT EMPLOYEES EFFECTIVE JULY 3, 2015 THROUGH JUNE 30, 2016.

DESCRIPTION

In compliance with state and CalPERS regulations, the District maintains a table of all job titles, salary grades and salary ranges. The table is available for public review, accessible from the RMWD web site, and is published on a web site hosted by the California State Controller.

On April 7, 2014 the Board approved the current table of salary grades and pay ranges. The table included in Resolution No. 15-13 is revised to reflect the changes in employee salaries as a result of a 2% COLA increase effective the beginning of the July 3, 2015 pay period. This increase was approved at the August 26, 2014 board meeting through the Memorandums of Understanding between the District and the Rainbow Employees Association, the Rainbow Association of Supervisors and Confidential Employees and the Exempt Employees. This increase is in effect through June 30, 2016.

Resolution No. 15-13 rescinds Resolution No. 14-26.

POLICY

This document needs to be updated as needed to comply with CalPERS requirements and California Code of Regulations 570.5 and 571.

BOARD OPTIONS/FISCAL IMPACTS

N/A

STAFF RECOMMENDATION

Staff recommends the Board approves Resolution No. 15-13 and direct the Human Resources Manager to post a copy on the RMWD website.


Tom Kennedy
General Manager

September 16, 2015

17-1

RESOLUTION NO. 15-13

RESOLUTION OF THE BOARD OF DIRECTORS OF RAINBOW MUNICIPAL WATER DISTRICT ESTABLISHING CLASSIFICATIONS AND MONTHLY RATES OF PAY FOR DISTRICT EMPLOYEES EFFECTIVE July 3, 2015 through June 30, 2016

Job Title	Salary Grade	Monthly Salary Range
General Manager	n/a	\$16,667
Engineering Manager Finance Manager Human Resources Manager Operations Manager	120	\$10,209-\$13,395
Associate Engineer	100	\$8,379-\$10,994
Constr. & Maintenance Superintendent Senior Accountant Wastewater Superintendent Water Operations Superintendent	95	\$7,975-\$10,464
Constr. & Maintenance Superintendent Wastewater Superintendent Water Operations Superintendent	90	\$7,591-\$9,960
Constr. & Maintenance Superintendent Senior Accountant Wastewater Superintendent Water Operations Superintendent	85	\$7,225-\$9,480
IT Administrator	80	\$6,877-\$9,023
Crew Leader Executive Assistant/Board Secretary	70	\$6,129-8,042
Crew Leader Project Manager	65	\$5,834-\$7,654
Administrative Analyst Assistant Engineer Crew Leader	60	\$5,553-\$7,286
Accountant Accounting Specialist II Electrical/Electronic Technician II Engineering Inspector II Engineering Specialist II Human Resources Technician II Senior Customer Service Representative II System Operator III	55	\$5,285-\$6,935
Electrical/Electronic Technician I Engineering Inspector I Mechanic II Water Quality Technician II	50	\$5,030-\$6,600

Accounting Specialist I Electrical/Electronic Technician I Engineering Inspector I Engineering Specialist 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	\$4,788-\$6,282
Administrative Assistant II Purchasing/Warehouse Technician I Safety Administrator I Water Quality Technician I	40	\$4,557-\$5980
Mechanic I Purchasing/Warehouse Technician I Safety Administrator I System Operator I Utility Worker II	35	\$4,338-\$5,691
Administrative Assistant I	30	\$4,129-\$5,417
Customer Service Representative II Utility Worker I	25	\$3,930-\$5,156
Customer Service Representative I	15	\$3,560-\$4,671

Resolution 15-13 rescinds Resolution 14-26.

PASSED, APPROVED, AND ADOPTED in Open Session at a meeting of the Board of Directors of the Rainbow Municipal Water District held on the 16th day of September, 2015 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Dennis Sanford, Board President

ATTEST:

Dawn Washburn, Board Secretary

17-3

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

DISCUSSION AND POSSIBLE ACTION REGARDING THE APPOINTMENT; EMPLOYMENT;
EVALUATION OF PERFORMANCE: **GENERAL MANAGER**

DESCRIPTION

The Board may take action regarding the appointment, employment, performance or compensation of the General Manager.

POLICY

BOARD OPTIONS/FISCAL IMPACTS

STAFF RECOMMENDATION



Tom Kennedy
General Manager

September 16, 2015

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

DISCUSSION AND POSSIBLE ACTION REGARDING MATTERS RELATED TO THE FPUD REORGANIZATION AND DISSOLUTION APPLICATION TO LAFCO

DESCRIPTION

RMWD continues to review matters related to the FPUD reorganization and dissolution application to LAFCO. This action item will provide for discussion and possible action on the items listed below and to discuss any other issues, concerns or comments regarding this matter.

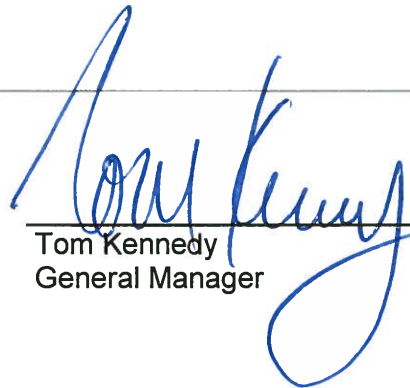
- A. Ad Hoc Committee Update

BOARD OPTIONS/FISCAL IMPACTS

N/A

STAFF RECOMMENDATION

N/A



Tom Kennedy
General Manager

9/16/2015

MEETINGS/SEMINARS/CONFERENCES/WORKSHOPS

VARIABLE					
DATE	2015	MEETING	LOCATION	ATTENDEES	POST
October	8	SDCWA Special Board Meeting	SDCWA	GM	N/A
October	*	CSDA – San Diego Chapter	(Location to be Announced) 6:00 p.m.	GM	N/A
October	*	LAFCO Special Meeting	County Admin Center, Room 358 – 9:30am	Sanford (As Advised by GM)	N/A
October	*	Santa Margarita Watershed Council	Rancho California Water District	Sanford	N/A

* To Be Announced

1971-1

MEETINGS/SEMINARS/CONFERENCES/WORKSHOPS

RECURRING						
DATE	2015	MEETING	LOCATION	ATTENDEES	POST	
October	5	Communications Committee Mtg.	RMWD Board Room 3:30 p.m.	Appointed Director, General Manager	9/22	
October	5	LAFCO	County Admin. Center Room 358 9:00 am	Sanford (As Advised by GM)	N/A	
October	7	Engineering Committee Meeting	RMWD Board Room 3:00 p.m.	Appointed Director, General Manager	9/22	
October	13	Budget & Finance Committee Mtg.	RMWD Board Room 1:00 p.m.	Appointed Director, General Manager	9/22	
October	13	SDCWA GM's Meeting	SDCWA, San Diego 9:30 a.m.	General Manager	N/A	
October	16	NC Managers	Golden Egg 7:45 a.m.	General Manager	N/A	
October	20	Council of Water Utilities	Stoneridge Country Club 7:15 a.m. Poway	All Directors, General Manager	10/15	
October	21	North County Water Group	Rincon Del Diablo, Escondido 7:30 a.m.	All Directors on a Rotating Schedule, General Manager	N/A	
October	22	SDCWA Full Board Meeting	SDCWA Board Room, 3-5 p.m.	General Manager	N/A	
October	26	San Luis Rey Watershed Council	Fallbrook Public Utility District 1:00 p.m.	Walker	N/A	
October	27	RMWD General Board	RMWD Board Room (Start Time to Be Determined)	All Directors	10/22	

19A1-2



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Construction & Maintenance Report

DESCRIPTION

Activities for Construction & Maintenance Division

Occurrences for August: **22**

Main Line	3
Air/Vac	2
Blow-Off	0
Wharfhead	0
Valve	3
Fire Hydrant	3
Meter Lateral	11
Damage Done by Individuals	0

Total for 2015-2016 fiscal YTD: **39**

Main Line	5
Air/Vac	9
Blow-Off	1
Wharfhead	1
Valve	3
Fire Hydrant	5
Meter Lateral	15
Damage Done by Individuals	0

A. The locations of failures are as follows:

Main Line Repairs

Job #	Date Reported	GPM	Status	Location	Cause
4233	7/21/15	400	Completed	Via Maria Elena	Wear out 6" CMLC
4234	8/7/15	200	Completed	West Lilac Road	Wear out 6" CMLC
4235	8/7/15	150	Leak isolated	Redondo Drive	Wear out 6" CMLC
4236	8/7/15	600	Completed	Via Gianelli	Wear out 6" CMLC

Air Vac Repairs

Job #	Date Reported	GPM	Status	Location	Cause
26366	7/30/15	1	Completed	Wilt Road	Wear out 1" Brass
26367	7/30/15	1	Completed	West Lilac Road	Wear out 1" Brass

Job #	Date Reported	GPM	Status	Location	Cause
26368	8/5/15	1.5	Completed	Villas Fore	Wear out 1" Brass
26369	8/6/15	1	Completed	Dentro De Lomas	Wear out 2" Brass

Blow Off Repairs

Job #	Date Reported	GPM	Status	Location	Cause
NONE					

Wharfhead Repairs

Job #	Date Reported	GPM	Status	Location	Cause
28131	7/30/15	N/A	Completed	Via Maria Elena	Update to standards 2" Brass

Meter Lateral Repairs

Job #	Date Reported	GPM	Status	Location	Cause
3190	8/4/15	1	In progress	Rainbow Heights	Wear out 2" Copper
3191	8/5/15	5	Completed	Pala Lake Drive	Wear out 2" Copper
3192	8/5/15	1	Completed	Pala Mesa Height	Wear out 1 Copper
3193	8/6/15	10	Completed	Villa Flora	Wear out 1 Copper
3194	8/10/15	6	Completed	Rainbow Heights	Wear out 2" Copper
3195	8/14/15	2	Completed	Rainbow Creek	Wear out 2" Copper
3196	8/19/15	2	Completed	Villa Toscana	Wear out 1 Copper
3197	8/26/15	2	Completed	Avenida Mil Flores	Wear out 1 Copper

Meter Lateral Replacements

Job #	Date Reported	GPM	Status	Location	Cause
2519	8/12/15	1	Completed	Bluebell Lane	Poly 1" Poly
2520	8/13/15	2	Completed	Canyon Heights Road	Poly 1" Poly
2521	8/25/15	1	In progress	Mountain View	Poly 1" Poly

1781-2

Valve Repairs

Job #	Date Reported	GPM	Status	Location	Cause
5074	8/12/15	N/A	Completed	Pala Mesa Oaks Drive	Maintenance 6" Plug
5075	8/24/15	N/A	Completed	Gopher Canyon Road	Maintenance 6" Plug

Valve Replacements

Job #	Date Reported	GPM	Status	Location	Cause
16121	8/4/15	N/A	Completed	Huntley Pump Station	Leaks through 12" Gate

Fire Hydrant Repairs

Job #	Date Reported	GPM	Status	Location	Cause
8591	7/23/15	N/A	In progress	Rice Canyon Road	Maintenance 6" CMLC
8592	7/30/15	1,000	Completed	Pala Mesa Oaks	Wear out 6" CMLC
8593	8/19/15	N/A	Completed	Olive Hill Road	Wear out 6" Ductile
8594	8/20/15	400	Completed	Gopher Canyon Road	Wear out 4" Steel
8595	8/25/15	1	Completed	Skycrest Drive	Wear out 6" CMLC

Control Valve Maintenance

Job #	Date Reported	GPM	Status	Location	Cause
21092	8/7/15	20	Completed	Via Vera	Maintenance 6" Cla-Valve

Damage Done by Individual

Job #	Date Reported	GPM	Status	Location	Cause
8586	5/14/15	2,070	On hold	Reche Road	Hit by car 6" CMLC

1981-3

C. After-Hours Standby Calls

Total Standby calls for August: **48**

Checked for Leaks	9
Meter Leak Repairs	3
Turned Water Off (Locked Meter)	1
Turned Water On (Unlock Meter)	2
Complaints of No Water	4
High Pressure	16
Low Pressure	0
Alarms at RMWD	0
Wastewater Calls	0
Water Quality Calls	0
Backflow Calls	0
Customer Leak Calls	4
Emergency Locates	0
Miscellaneous Calls	9

Total Standby calls for fiscal year-to-date: **87**

Checked for Leaks	16
Meter Leak Repairs	7
Turned Water Off (Locked Meter)	2
Turned Water On (Unlock Meter)	7
Complaints of No Water	10
High Pressure	18
Low Pressure	2
Alarms at RMWD	1
Wastewater Calls	0
Water Quality Calls	3
Backflow Calls	0
Customer Leak Calls	8
Emergency Locates	0
Miscellaneous Calls	13



 John Maccarrone
 Construction and Maintenance Superintendent

9/16/15



 Juan Atilano
 Operations Manager

9/16/15

1981-4



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Valve Maintenance Report

DESCRIPTION

Activities for Valve Maintenance Division

A. Total valves operated in August: **317**

Total valves operated fiscal YTD: **734**

DISTRIBUTION VALVES

Gate	10" & smaller	52
Plug	10" & smaller	9
Butterfly	10" & smaller	0
Total Small:		61
Gate	12" & larger	11
Plug	12" & larger	14
Butterfly	12" & larger	5
Total Large:		30
Total Dist. Valves:		91

Gate	10" & smaller	133
Plug	10" & smaller	34
Butterfly	10" & smaller	0
Total Small:		167
Gate	12" & larger	21
Plug	12" & larger	20
Butterfly	12" & larger	5
Total Large:		46
Total FY Dist. Valves:		213

OTHER VALVES

Air Vacs – 1", 2", 4"	95
Blow Offs – 2"	46
Fire Hydrants – 6"	66
Wharfheads – 2"	19
Total Other Valves:	226

Air Vacs – 1", 2", 4"	203
Blow Offs – 2"	105
Hydrants & Hydrant Valves –	159
Wharfheads – 2"	54
Total FY Other Valves:	521

BROKEN VALVES

B. Total broken valves in August: **31**

Total broken valves for fiscal YTD: **31**

2" and Under	Repaired	0
	Replaced	7
	Discovered	0
4" and Over	Repaired	2
	Replaced	1
	Discovered	21

2" and Under	Repaired	0
	Replaced	7
	Discovered	0
4" and Over	Repaired	2
	Replaced	1
	Discovered	21

UNABLE TO LOCATE

C. Total UTL valves in August: **0**

Checked	0
Found / Operated	0
Removed from Map Book	0

Total UTL valves for fiscal YTD: **2**

Checked	0
Found / Operated	0
Removed from Map Book	2

D. Other maintenance:

August:

Air Vacs	1"	3
Replaced	2"	1
	4"	0
Air Vacs	Serv. Stops Installed	0
	Repaired	0
	Painted	4
Hydrants	Repaired	0
	Replaced	2
	Painted	2
Wharfheads	Repaired	0
	Painted	0
Pressure Station Valves	Adjusted	1
	Rebuilt	1
	Replaced	0
	Painted	0

2015-2016 fiscal YTD:

Air Vacs	1"	4
Replaced	2"	1
	4"	0
Air Vacs	Serv. Stops Replaced	0
	Repaired	0
	Painted	6
Hydrants	Repaired	0
	Replaced	2
	Painted	5
Wharfheads	Repaired	0
	Painted	0
Pressure Station Valves	Adjusted	2
	Rebuilt	2
	Replaced	0
	Painted	0

E. Miscellaneous

August:

Shutdowns	3
New Valves	0
Abandoned Valves	0
Underground Service Alert Locates	67

2015-2016 fiscal YTD:

Shutdowns	5
New Valves	0
Abandoned Valves	0
Underground Service Alert Locates	124


John Maccarrone

Construction and Maintenance Superintendent

9/16/15


Juan Atilano

Operations Manager

9/16/15

1902-2

MAINTENANCE PLAN 2015-2016

2015								
Month	Planned Operation	Operated	Not Operable	PRV	Shut Downs	System Repair	Other Work, Yard	Map Book
Average	302.13	342.7	-----	-----	-----	-----	-----	-----
January	304	304	30	5	4	0	Yes	Yes
February	304	381	45	0	3	0	Yes	Yes
March	303	343	20	1	3	4	Yes	No
April	303	340	23	1	3	0	Yes	No
May	303	393	11	2	3	8	Yes	No
June	303	382	4	3	2	4	Yes	No
July	303	417	25	1	2	3	Yes	No
August	303	317	46	2	3	10		
September	303							
October	303							
November	303							
December	303							
Totals 2015	3,638	2,877	204	15	23	29	-----	-----

2016								
Month	Planned Operation	Operated	Not Operable	PRV	Shut Downs	System Repair	Other Work, Yard	Map Book
January	303							
February	303							
March	303							
April	303							
May	303							
June	303							
July	303							
August	303							
September	303							
October	303							
November	303							
December	303							
Totals 2016	3,636	0	0	0	0	0	-----	-----

Total Valves in System: **7,274**

Valves Operated to Date: **2,877**

Valves Inoperable: **204**

1982-3



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Garage / Shop Report

DESCRIPTION

Activities for Garage/Shop Division – August, 2015

A. Maintenance/Service: 25

2015-2016 Fiscal YTD: 58

Vehicles	17
Small Equipment	4
Large Equipment	4

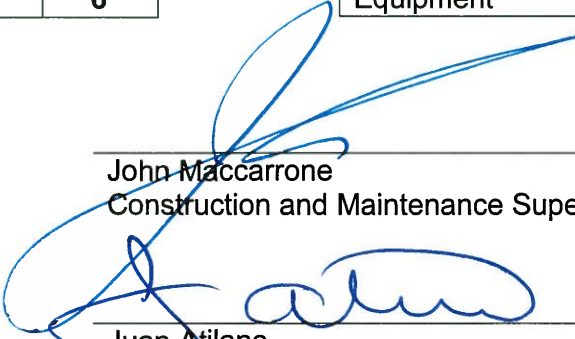
Vehicles	37
Small Equipment	7
Large Equipment	14

B. Emergencies: 9

2015-2016 Fiscal YTD: 13

Vehicles	3
Equipment	6

Vehicles	5
Equipment	8



John Maccarrone 9/16/15
Construction and Maintenance Superintendent



Juan Atilano 9/16/15
Operations Manager



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Water Operations Report

DESCRIPTION

Activities for Water Operations Division

A. August:

2015-2016 Fiscal YTD:

Tanks/Reservoirs	Maint. / Weeds	4
	Inspected	4
	Painted (Contractor)	4
	Repairs (Contractor)	0
	Repairs (RMWD)	1
	Residuals	333
Reservoir Covers	Repaired	0
	Inspected	3
	Washed/Cleaned	1
Pump Stations	Maint. / Weeds	200
	Painted	0
	Repaired	0
Chlorine Stations	Maint. / Weeds	112
	Painted	0
	Repaired	0
Back-up Generators	Tested	16
	Maintenance	0
Connection Reads		32
Morro PRVs		84
Flow Changes	SDCWA	84
Patrol Calls		20

Tanks/Reservoirs	Maint. / Weeds	6
	Inspected	17
	Painted (Contractor)	4
	Repairs (Contractor)	2
	Repairs (RMWD)	1
	Residuals	665
Reservoir Covers	Repaired	0
	Inspected	6
	Washed/Cleaned	3
Pump Stations	Maint. / Weeds	396
	Painted	0
	Repaired	2
Chlorine Stations	Maint. / Weeds	224
	Painted	0
	Repaired	2
Back-up Generators	Tested	32
	Maintenance	0
Connection Reads		64
Morro PRVs		168
Flow Changes	SDCWA	166
Patrol Calls		45

Marc Walker
Water Operations Superintendent

9/16/15

Juan Atilano
Operations Manager

9/16/15



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Electrical / Telemetry Report – August, 2015

DESCRIPTION

Activities for Electrical & Telemetry

A. Electrical:

2015-2016 Fiscal YTD:

Maintenance	Reservoirs & Tanks	1
	Pump Stations	3
	Lift Stations	3
	CL2 Stations	0
	District Offices	2
Repairs	Reservoirs & Tanks	0
	Pump Stations	2
	Lift Stations	0
	CL2 Stations	0
	District Offices	1

Maintenance	Reservoirs & Tanks	1
	Pump Stations	5
	Lift Stations	4
	CL2 Stations	0
	District Offices	4
Repairs	Reservoirs & Tanks	0
	Pump Stations	4
	Lift Stations	0
	CL2 Stations	0
	District Offices	1

B. Telemetry:

2015-2016 Fiscal YTD:

Maintenance	SDCWA Connection	0
	Tanks	0
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	0
	District Offices	4
Repairs	SDCWA Connection	0
	Tanks	1
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	0
	District Offices	0

Maintenance	SDCWA Connection	0
	Tanks	1
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	0
	District Offices	8
Repairs	SDCWA Connection	0
	Tanks	3
	Pump Stations	0
	Lift Stations	0
	CL2 Stations	0
	District Offices	0

1922-1

C. Special Projects:

DATE	LOCATION	DESCRIPTION
8/4 - 8/6 & 8/10/15	RMWD remote sites	New SCADA project
8/4, 8/13, 8/18 – 8/20 & 8/27/15	“ “ “	“ “ “
78/5, 8/6, 8/11, 8/25 & 8/26/15	Lift Station #1 & #3	Install new back-up float controls
8/7/15	Olive Hill Estates	Troubleshoot high pressure & rebuild cla-valve
8/10/15	“ “ “	Meeting on PS 1 Station vault construction
8/24/15	Lift Station #3	Pull in new wire for backup float controls



 Marc Walker 9/16/15
 Water Operations Superintendent



 Juan Atilano 9/16/15
 Operations Manager

1962-2

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Wastewater Report

DESCRIPTION

Activities for Wastewater Division

A. August, 2015:

Lift Stations	Maintenance	48
	Pump/Dry Well Repairs	9
	Wet Well Repairs	1
	Elect. Controls	6
	Generator Maint.	1
	Load Test	0
	Samples	1
Cleaning & Maintenance	Line Cleaning	6,529 ft.
	CCTV Inspection	299 ft.
	Easement Cleaning	2
	Customer Calls	1
Wet Wells	General Cleaning	15
High Frequency	Cleaning Areas	4,244 ft.
Collection	Sewer Line Repairs	0
Manholes	Raised	1
	Inspections	43
	Repairs	0
	Clean Roots	3

2015-2016 fiscal YTD:

Lift Stations	Maintenance	96
	Dry Well Repairs	19
	Wet Well Repairs	2
	Elect. Controls	13
	Generator Maint.	2
	Load Test	1
	Samples	3
Cleaning & Maintenance	Line Cleaning	11,337 ft.
	CCTV Inspection	1,055 ft.
	Easement Cleaning	4
	Customer Calls	3
Wet Wells	General Cleaning	29
High Frequency	Cleaning Areas	5,739 ft.
Collection	Sewer Line Repairs	0
Manholes	Raised	1
	Inspections	114
	Repairs	5
	Clean Roots	4

B. After-Hours Stand-by Calls:

Total Standby calls for August: **10**

Private Sewer Spills	0
RMWD Spills	0
Telemetry Alarms	1
Lift Station Alarms	0
High or Low Level Alarms	5
SmartCover Manhole Alarms	2
Customer Calls	2
Miscellaneous	0

Total Standby calls 2015-2016 fiscal YTD: **23**

Private Sewer Spills	0
RMWD Spills	0
Telemetry Alarms	1
Lift Station Alarms	0
High or Low Level Alarms	15
SmartCover Manhole Alarms	3
Customer Calls	4
Miscellaneous	0

C. Wastewater Training

- Auto Crane Safety
- PSI Switches Fundamentals Webinar


Ramon Zuniga 9/16/15
Wastewater Superintendent


Juan Atilano 9/16/15
Operations Manager

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Water Quality Report

DESCRIPTION

Activities for Water Quality Division – August, 2015

A. Samples:

2015-2016 Fiscal YTD:

Inlet/Outlet - Beck	MPN / HPC General Physicals Fluoride	Beck is offline
Open Reservoir - Beck	MPN / HPC General Physicals Fluoride Nitrification Testing	Beck is offline
Dosing	Copper Sulfate Sodium Hypochlorite	0 0
Tanks / Covered Reservoirs	Nitrification Testing Fluoride Specials	33 0 0
Morro Reservoir Zone	Ammonia / Nitrification	0
Routines		22
THM / HAA5		0
Specials		0


Inlet/Outlet - Beck	MPN / HPC General Physicals Fluoride	Beck is offline
Open Reservoir - Beck	MPN / HPC General Physicals Fluoride Nitrification Testing	Beck is offline
Dosing	Copper Sulfate Sodium Hypochlorite	0
Tanks / Covered Reservoirs	Nitrification Testing Fluoride Specials	71 0 2
Morro Reservoir Zone	Ammonia / Nitrification	0
Routines		44
THM / HAA5		0
Specials		3

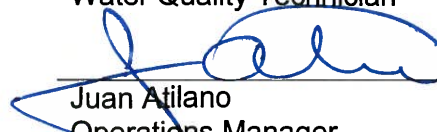
B. Water Quality:

2015-2016 Fiscal YTD:

Dead End Flushing		0
Calls	Customer RMWD	2 0

Dead End Flushing		0
Calls	Customer RMWD	6 0


 Joseph Perreira
 Water Quality Technician
 9/16/15


 Juan Atilano
 Operations Manager
 9/16/15

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Cross Connection Control Program – August, 2015

DESCRIPTION

Activities for Cross Connection Control:

A. Currently, there are **4,829** backflow devices recorded in the system.

B. In August, the following was performed:

2015-2016 fiscal YTD:

Installation 1 st Notices sent	0
Installation 2 nd Notices sent	0
Installation 3 rd Notices sent	0
Customer complaints	0
Services locked due to noncompliance	0
New devices installed, inspected	1
Annual test notices sent	1,112
Annual devices tested	439
Device failures & repairs	26
Replaced devices	0
Correction inspections	0
Property inspections	0

Installation 1 st Notices sent	0
Installation 2 nd Notices sent	0
Installation 3 rd Notices sent	0
Customer complaints	0
Services locked due to noncompliance	0
New devices installed, inspected	2
Annual test notices sent	1,112
Annual devices tested	749
Device failures & repairs	38
Replaced devices	0
Correction inspections	0
Property inspections	0

C. Construction Meters - Backflow Tests: **0**

D. Hangers for Blocked Access: **0**



Joseph Ferreira
Water Quality Technician

9/16/15



Juan Atllano
Operations Manager

9/16/15



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Engineering Report for August 2015

DESCRIPTION

CAPITAL PROJECTS:

Afton Farms Water Line Ext. (201449): Staff is preparing the bid documents.

Beck Reservoir UV (200663): Project on hold until further evaluation from the master plan.

Gird to Monserate Hill (201045): Notice to proceed issued on 8/6/15. Psomas working on preliminary design report.

Horse Creek Lift Station (200555): Developer is working on obtaining the permit from Army Corps of Engineers.

Highway 76 East Segment (201260): Ames installed approximately 2000 feet of sewerline on Ramona and Sweetgrass and the remaining sewer construction is expected to start in the Fall of 2015.

Lift Station 1 (201040): Staff is working with Caltrans regarding the site for the lift station.

Wastewater Outfall Replacement (201266): Consultant is working on the 30% submittal. Staff is coordinating with the City of Oceanside regarding the traffic control study and impacts to the road. Further evaluation from the Wastewater Master Plan to determine project requirements.

OTHER PROJECTS:

Moosa Creek Mitigation Bank (201459): Staff working with Consultant on easement widening.

SDG&E Energy Efficiency Program: Reviewing system efficiencies.

San Luis Rey Ground Water Sources (201446): Consultant determining the water quality from the samples taken out of the existing wells in the San Luis Rey Basin. Final report and ground water model being finalized.

Valley Center Regional Infrastructure Coordination: Agreement executed and analysis in progress.

Water and Wastewater Master Plans (201337W/201571WW): Consultant working on the wastewater alternative study.

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DEVELOPER PROJECTS:

Campus Park West (200542): Annexation approved by MET, SDCWA and LAFCO.

Dai Dang Meditation Center (90098): Testing of the new 8" waterline will be conducted in September 2015. The waterline tie in is scheduled for October 2015.

Golf Green Estates (90100): (near Lift Station 1): 94 SFR planned across from Bonsall Elementary School. Staff reviewing plan check number three.

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. Grading is scheduled for October 2015.

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 installing sewer and water improvements within the development. Model homes to open Fall 2015.

Pala Mesa Highlands (90056): 124 Lots on Old Highway 395. Plan check three completed.

OTHER:

ITEMS	NO#	ITEMS	NO#
Water Availability Letters	2	Water Meters Purchased	3
Sewer Availability Letters	1	Sewer EDUs Purchased	0
Water Commitment Letters	0	Scheduled/Emergency Shutdowns	3
Sewer Commitment Letters	0	Jobs Closed	0



Sherry Kirkpatrick
Engineering Manager

9/16/15

1951-2



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Field Customer Service Report – August, 2015

DESCRIPTION

Activities for Customer Services Section:

A. Customer service calls responded to: **245**

Read for Transfer	54
Locked Service	34
Unlocked Service	19
Checked for High Pressure	15
Checked for Low Pressure	4
Reports of No Water	3
Delivered 48-Hour Notices	101
Waste - Drought	15

2015-2016 fiscal YTD: **489**

Read for Transfer	135
Locked Service	55
Unlocked Service	34
Checked for High Pressure	32
Checked for Low Pressure	11
Report of No Water	6
Delivered 48-Hour Notices	196
Waste - Drought	20

Kenny Diaz
Meter Services – Crew Leader

9/16/15

Margaret Thomas
Finance Manager

9/16/15

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BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Meters Report – August, 2015

DESCRIPTION

Activities for Meter Services Section:

A. Meter Replacement:

2015-2016 fiscal YTD:


Stuck / Damage		Itron Repairs		New Itron Installations		Stuck / Damage		Itron Repairs		New Itron Installations	
5/8"	0	5/8"	0	5/8"	0	5/8"	0	5/8"	0	5/8"	0
3/4"	9	3/4"	6	3/4"	0	3/4"	18	3/4"	11	3/4"	0
1"	8	1"	12	1"	0	1"	18	1"	21	1"	0
1 1/2"	4	1 1/2"	2	1 1/2"	0	1 1/2"	4	1 1/2"	2	1 1/2"	0
2"	2	2"	0	2"	0	2"	5	2"	3	2"	0
3"	1	3"	0	3"	0	3"	1	3"	0	3"	0
4"	0	4"	0	4"	0	4"	0	4"	0	4"	0
6"	0	6"	0	6"	0	6"	0	6"	0	6"	0
TOTAL:	24	20	0	46	37	0					

B. Meter service calls responded to: 347

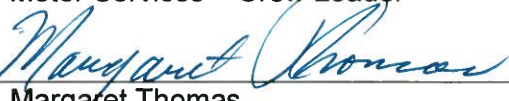
2015-2016 fiscal YTD: 720

Meter Leaks Reported	26
Checked Meter Reads	257
Replaced Meter Heads	14
Troubleshoot Meters	50

Meter Leaks Reported	48
Checked Meter Reads	530
Replaced Meter Heads	19
Troubleshoot Meters	123



 Kenny Diaz 9/16/15
 Meter Services – Crew Leader



 Margaret Thomas 9/16/15
 Finance Manager

1962

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Changes in Personnel and Reporting

DESCRIPTION

Sherry Kirkpatrick Associate Engineer promoted to Engineering Manager effective July 20, 2015.

Luz Simmons-Ojeda no longer works at the District effective July 21, 2015.

Joe Perreira Water Quality Technician I was promoted to Water Quality Technician II effective August 15, 2015.

General Services Technician I/II job description title changed to Purchasing/Warehouse Technician I/II to be more in-line with other Districts and to add more descriptive language pertaining to the job duties. Also, this position is being transferred back to the Operations Division and will report to the Operations Manager.

Safety Administrator position is now reporting back to the Operations Manager with assistance from Human Resources.

Accounting/HR Specialist I/II position has been changed to Accounting Specialist I/II.

Administrative Assistant positions are both reporting to Engineering Manager.

Human Resources/Safety Manager job title has been changed back to Human Resources Manager.

During the 2015/2016 Budget preparations, the Board of Directors approved five (5) new positions at the District; Administrative Analyst, IT Administrator, Human Resources Technician, Project Manager and Senior Accountant.

The District is currently recruiting for an Administrative Analyst, a Human Resources Technician and an IT Administrator. The District is also recruiting for a Finance Manager as our current Finance Manager has indicated she is anticipating retirement. The Project Manager recruitment will begin within in the next two months. The Senior Accountant recruitment has no definitive date set as of yet.

POLICY

N/A

FISCAL IMPACTS

N/A

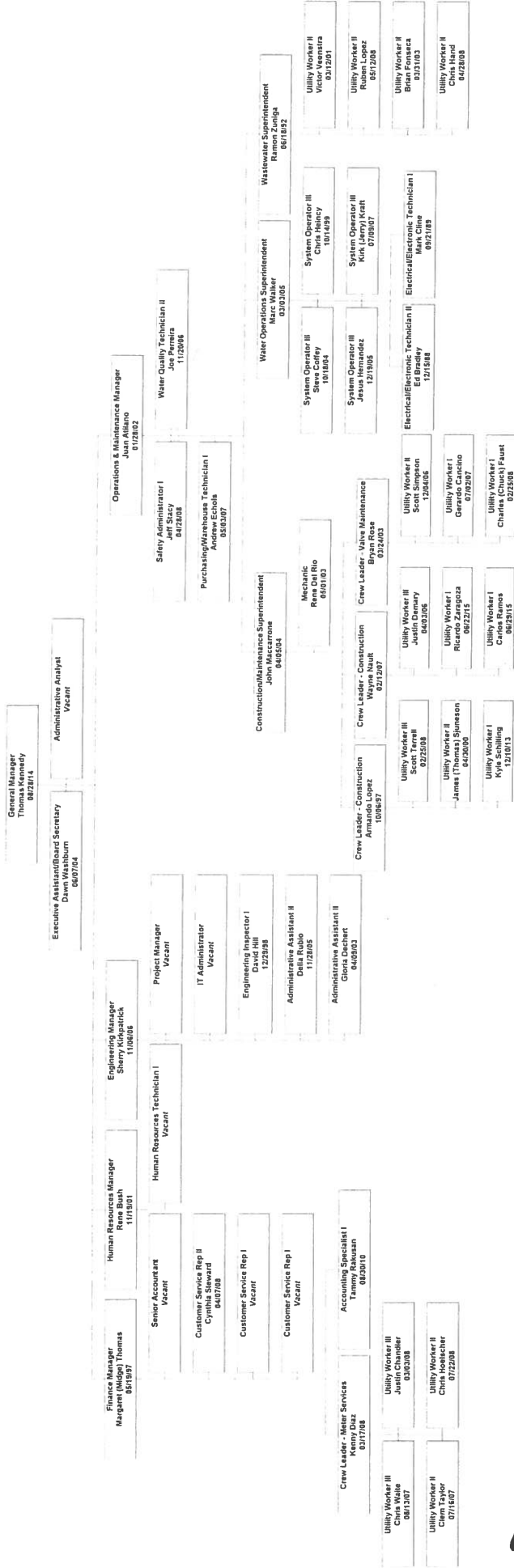


René Bush
Human Resources Manager

09/16/15

1941

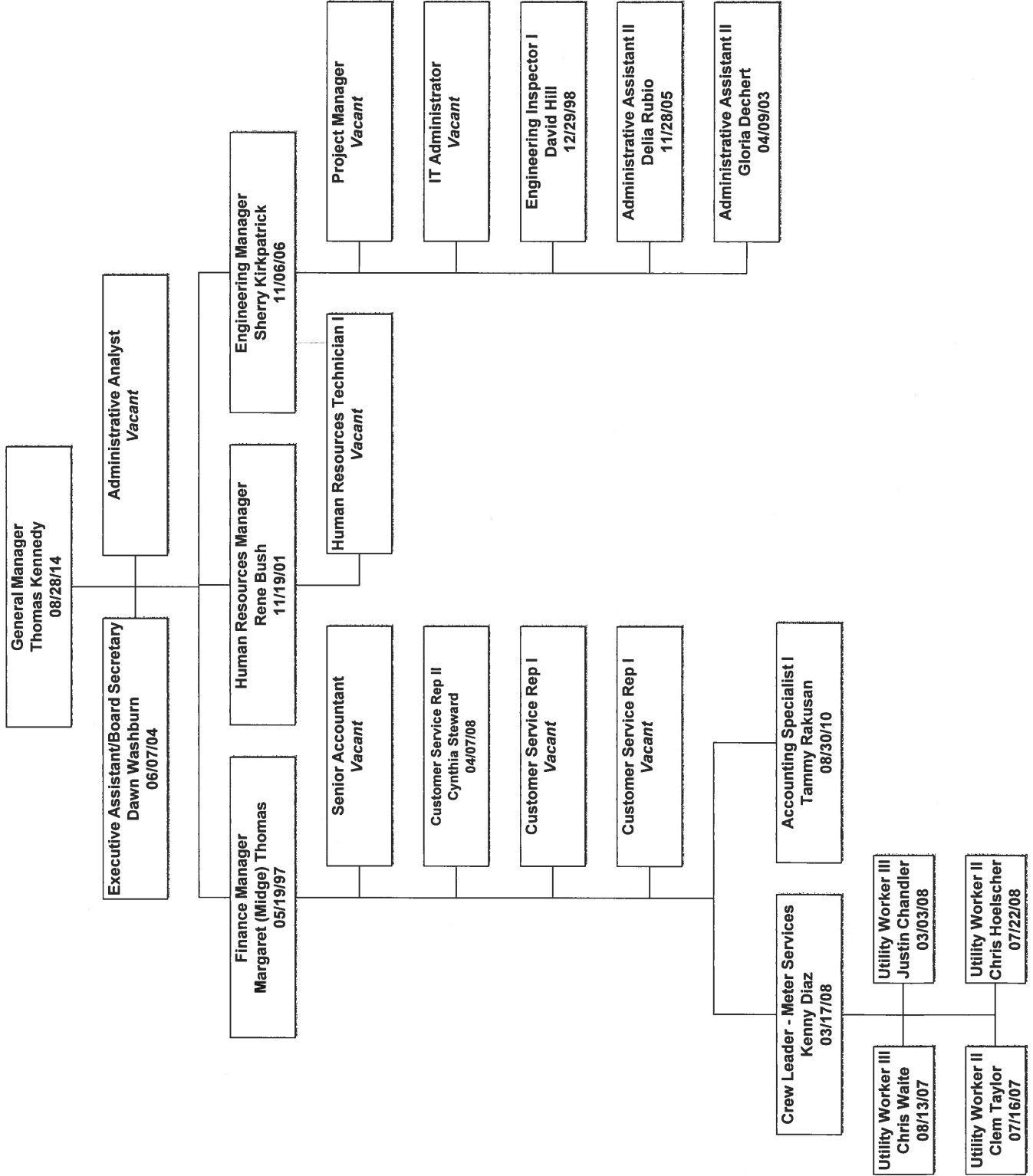
RAINBOW MUNICIPAL WATER DISTRICT
 ORGANIZATIONAL CHART
 Creation Date: August, 2015



1-2N42-1

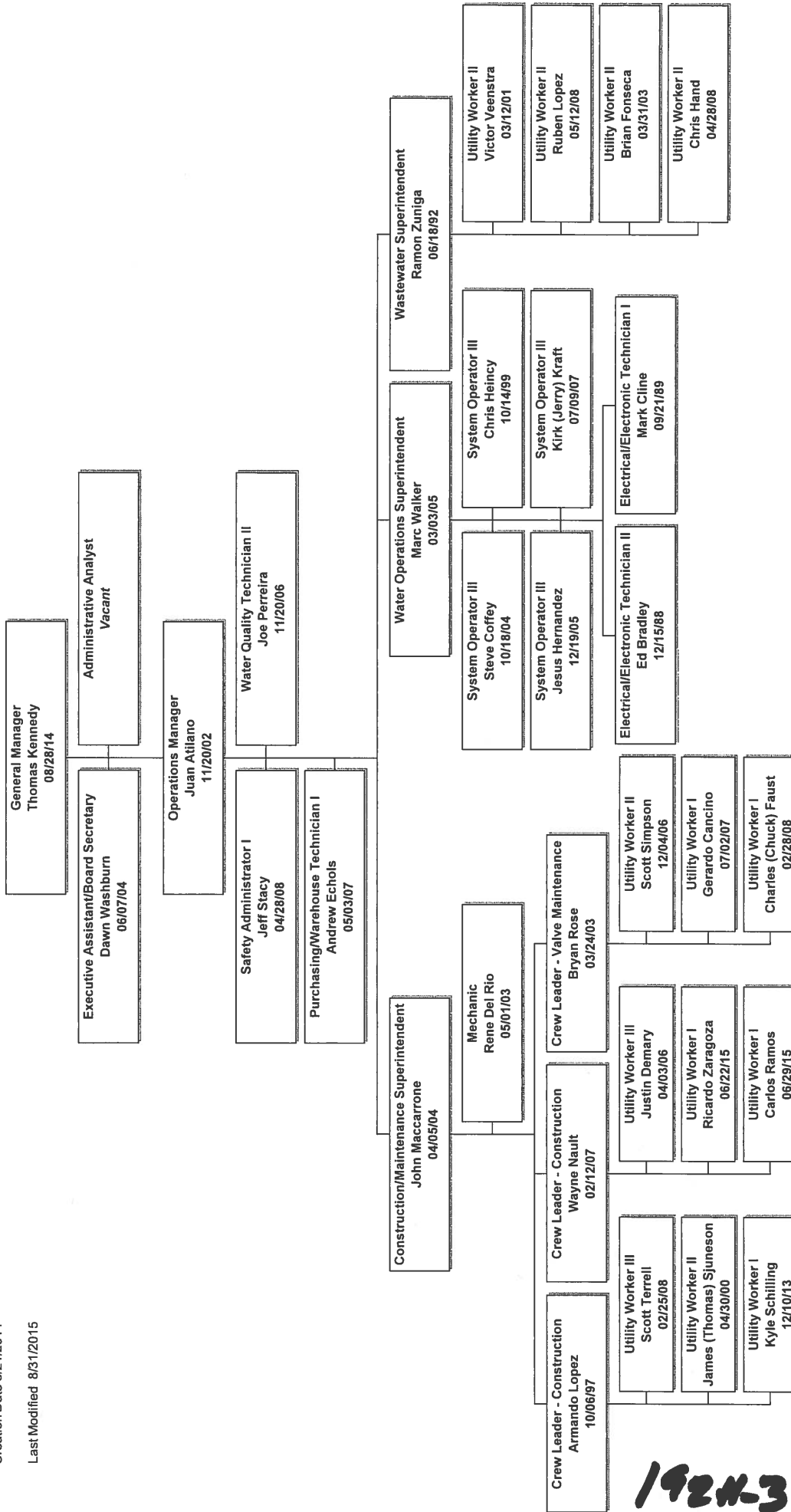
RAINBOW MUNICIPAL WATER DISTRICT
 ORGANIZATIONAL CHART
 PAGE 1 OF 2

Creation Date 8/21/2014
 Last Modified 8/31/2015



1942-2

Creation Date 8/21/2014
 Last Modified 8/31/2015



1921-3



BOARD INFORMATION

BOARD OF DIRECTORS

September 16, 2015

SUBJECT

Safety Report – August 2015

DESCRIPTION

Safety and Regulatory Update

- A. Safety Training
 - Heat Illness – 31 Employees
 - Dog Bite & Other Field Hazards – 34 Employees
 - Utility Locating – 8 Employees
 - Annual AC Pipe Refresher – 19 Employees
 - Trench Shoring Refresher – 33 Employees
- B. Tailgate Safety Meetings
 - New AutoCrane Safety & Setup
- C. Target Safety Online Training
 - Water Industry Computer Security Awareness
 - Water Industry Backflow Prevention Methods
 - Water Industry Anger, Violence, and Conflict in the Workplace
 - Water Industry Driving Safety

Jeff Stacy
Safety Administrator

9/16/15

Juan Atillano
Operations Manager

9/16/15

AMERICAN EXPRESS BREAKDOWN
AUGUST, 2015

NEW ACCOUNT

DATE OF CHARGE	AMOUNT	VENDOR & PURPOSE
7/11/2015	\$ 1,371.72	ABCANA INDUSTRIES - HYPOCHLORITE
7/11/2015	\$ 705.01	OFFICE DEPOT - PRIVACY SCREEN & VARIOUS OFFICE SUPPLIES
7/11/2015	\$ 6,732.00	PALOMAR BACKFLOW - BACKFLOW CERTIFICATIONS
7/11/2015	\$ 5,346.00	NATIONAL METER - 1 1/2" METER W/ITRON & BRT
7/11/2015	\$ 210.00	ATLAS PUMPING - MONTHLY BIN RENTAL
7/2/2015	\$ 1,649.38	BOARDER PRODUCTS - SPEEDCRETE RED LINE MORTAR, PREMIXED CONCRETE
7/2/2015	\$ 776.63	W.W. GRAINGER - SMALL TOOLS & EQUIPMENT
7/2/2015	\$ 1,132.93	WESTERN WATER WORKS - 6" FLANGE, 6" HYDRANT, 8" WATER VALVE
7/2/2015	\$ 245.75	PRUDENTIAL OVERALL - MONTHLY UNIFORMS
7/2/2015	\$ 73.93	PRUDENTIAL OVERALL - MATS & MISC
7/3/2015	\$ 111.89	W.W. GRAINGER - SAFETY YELLOW SPRAY PAINT
7/8/2015	\$ 141.00	ARS RESCUE ROOTER - REPAIR MEN'S RESTROOM
7/9/2015	\$ 831.00	ARS RESCUE ROOTER - REPLACE TOILET IN MEN'S RESTROOM
7/16/2015	\$ 65.95	MAYTAG - EXTENDED WARRANTY ON REFRIGERATOR

CHECK # 48935

AMOUNT \$ 19,393.19

20A1-1

FIRST BANKCARD VISA BREAKDOWN

AUGUST, 2015

NEW ACCOUNT

DATE OF CHARGE	AMOUNT	PURPOSE
7/17/2015	\$ 21.99	ANTHONY SQUARED - CAR WASH
7/25/2015	\$ 31.19	WAL-MART - PHONE CHARGER
8/7/2015	\$ 50.00	ACWA - DESALINATION REGISTRATION - TOM KENNEDY
8/10/2015	\$ 53.00	SOUTH TAHOE AIRPORTER - DAWN WASHBURN - SHUTTLE
8/10/2015	\$ 81.00	POCENTER, INC - HANDHELD MICROPHONE
8/10/015	\$ 525.00	VON'S - GAS FOR TOM'S VEHICLE
8/10/2015	\$ 233.01	CSDA - DAWN WASHBURN - BOARD SECRETARY CONFERENCE
8/15/2015	\$ 57.36	SOUTHWEST AIRLINES - DAWN WASHBURN - CONFERENCE

CHECK # 48973

AMOUNT \$ 1,052.55

2011-2

FIRST BANKCARD VISA BREAKDOWN
AUGUST, 2015

NEW ACCOUNT

DATE OF CHARGE	AMOUNT	PURPOSE
7/21/2015	\$ 8.50	NEWEGG - HDMI PRO 10-FOOT BLACK HIGH SPEED
7/22/2015	\$ 7.28	NEWEGG - HDMI CABLE HIGH SPEED
7/22/2015	\$ 85.99	NEWEGG - HDMI CABLE
7/24/2015	\$ 260.00	CSDA - CONFERENCE - MARC WALKER
7/24/2015	\$ 184.20	ALASKA AIRLINES - CONFERENCE - MARC WALKER
7/29/2015	\$ 260.00	CSDA - CONFERENCE - DENNIS SANFORD
7/29/2015	\$ 550.00	CSDA - CONFERENCE - TOM KENNEDY
7/29/2015	\$ 196.20	UNITED AIRLINES - CONFERENCE - DENNIS SANFORD
7/31/2015	\$ 188.34	HOME DEPOT - GARBAGE CAN - GARAGE
7/31/2015	\$ 299.00	APPLE.COM - DEPLOYMENT OF APPS TO IPADS
7/29/2015	\$ 184.20	ALASKA AIRLINES - CONFERENCE - TOM KENNEDY
8/4/2015	\$ 244.91	SOCAL WAX SHOP - FLEET SUPPLIES
8/5/2015	\$ 39.00	OVERLIMIT FEE
8/6/2015	\$ 390.15	AMAZON - RAID STORAGE - NETWORK BACK-UP
8/6/2015	\$ 56.26	AMAZON - IPAD COVER
8/6/2015	\$ 399.00	CALPERS CONFERENCE - TAMMY RAKUSAN
8/10/2015	\$ 144.31	NEWEGG - MONITOR

CHECK # 48971

AMOUNT \$ 3,497.34

2011-3

FIRST BANKCARD VISA BREAKDOWN

AUGUST, 2015

NEW ACCOUNT

DATE OF CHARGE	AMOUNT	PURPOSE
7/20/2015	\$ 537.30	RODEOS - EMPLOYEYEE STRATEGIC LUNCHEON
7/23/2015	\$ 17.90	WALMART - FOOD STORAGE CONTAINERS
7/27/2015	\$ 550.00	CALIFORNIA SPECIAL DISTRICT ANNUAL CONFERENCE
7/27/2015	\$ 184.20	ALASKA AIRLINES - TOM KENNEDY

CHECK # 48972

AMOUNT \$ 1,289.40

2011-4

FY 2015-2016

Disbursement Date	Description	Bob Lucy-21	Jack Griffiths-22	Dennis Sanford-25	Helene Brazier-27	Tory Walker-29	Paul Christensen
07/31/15	CAL PERS - HEALTH INS.						\$ 340.62
	ASSURANT - DENTAL INS.						
	CSDA, SAN DIEGO CHAPTER						
	WATER AGENCIES ASSOC OF S.D.						
	COUNCIL OF WATER UTILITIES						
	DIRECTORS' MEETINGS	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00	
	MILEAGE EXPENSE						
	REIMBURSEMENT FROM DIRECTORS						\$ (340.62)
	Monthly Totals	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00		\$ -
08/31/15	CAL PERS - HEALTH INS.						\$ 340.56
	ASSURANT - DENTAL INS.						
	CSDA, SAN DIEGO CHAPTER			\$ 456.20			
	WATER AGENCIES ASSOC OF S.D.						
	COUNCIL OF WATER UTILITIES						
	DIRECTORS' MEETINGS						
	MILEAGE EXPENSE						
	REIMBURSEMENT FROM DIRECTORS						\$ (340.56)
	Monthly Totals	\$ -	\$ -	\$ 456.20	\$ -		\$ -

20A2

FOR BOARD INFORMATION
AUGUST 31, 2015
GENERAL ACCOUNT

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
48930	08/27/15	AARON, THOMAS & ASSOCIATES INC 7,000 RMWD COMMUNITY MEETING ANNOUNCEMENT POSTCARDS #2 AND POSTAGE	4,694.73
48931	08/27/15	ABCANA INDUSTRIES HYPOCHLORITE HYPOCHLORITE HYPOCHLORITE CREDIT DUE - DRUM CONTAINERS HYPOCHLORITE	3,683.09
48932	08/27/15	CB&T/ACWA-JPIA MONTHLY HEALTH AND VISION INSURANCE CREDIT DUE	67,990.64
48933	08/27/15	AIRGAS USA, LLC MONTHLY AGREEMENT SILVER SOLDER STICK SILVER SOLDER STICK SILVER SOLDER STICK	1,186.38
48934	08/27/15	ALERT LOCKSMITH RE-KEY NEW BOARDROOM DOOR WITH NEW LOCKSET	87.00
48935	08/27/15	AMERICAN EXPRESS SEE CREDIT CARD REPORT	19,393.19
48936	08/27/15	AMERIGAS - TEMECULA PROPANE GAS	120.15
48937	08/27/15	ART'S TRENCH PLATE & TRENCH PLATE RENTAL	1,205.28
48938	08/27/15	ASSURANT EMPLOYEE BENEFITS LIFE & LONG TERM DISABILITY	3,525.93
48939	08/27/15	ASTRA INDUSTRIAL SERV. INC 1 X 3/8" FLOW CLEAN STRAINER	173.69
48940	08/27/15	AT&T MONTHLY PHONE SERVICE MONTHLY PHONE SERVICE	165.37
48941	08/27/15	AT&T LONG DISTANCE MONTHLY PHONE SERVICE	16.09
48942	08/27/15	AT&T MONTHLY PHONE SERVICE MONTHLY PHONE SERVICE MONTHLY PHONE SERVICE MONTHLY PHONE SERVICE MONTHLY PHONE SERVICE MONTHLY PHONE SERVICE	568.31
48943	08/27/15	ATKINS NORTH AMERICA, INC WATER/WASTEWATER MASTER PLAN 2015 UPDATES	13,845.24
48944	08/27/15	BABCOCK LABORATORIES, INC MONTHLY WATER ANALYSIS	465.00
48945	08/27/15	BONSALL PEST CONTROL	

2013-1

RAINBOW MUNICIPAL WATER DIST
FOR BOARD INFORMATION
AUGUST 31, 2015

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
48946	08/27/15	MONTHLY PEST CONTROL BOOT WORLD, INC	90.00
48947	08/27/15	ARMANDO LOPEZ SAFETY BOOT PURCHASE ED BRADLEY	150.00
48948	08/27/15	REIMBURSE GRADE 3 ELECTRICAL/ INSTRUMENTATION CERTIFICATE RENEWAL	91.00
48949	08/27/15	BRADY TRUCKING CO. CLASS II BASE CLASS II BASE CLASS II BASE	1,624.51
48950	08/27/15	BURLINGTON SAFETY LABORATORY SEMI-ANNUAL RE-CERTIFICATION OF PROTECTIVE ELECTRICAL RUBBER GLOVES AND REPLACEMENT FOR ONE FAILED PAIR	138.18
48951	08/27/15	JOHN M. BURROUGHS BALANCE RFND ACCT# 0702720	64.88
48952	08/27/15	CALIFORNIA COMMERCIAL SECURITY QUARTERLY SERVICE AGREEMENT	368.04
48953	08/27/15	CHRIS BROWN CONSULTING SERVICES - JULY	10,000.00
48954	08/27/15	CMS BUSINESS FORMS METER LOG BOOKS URGENT NOTICE DOOR HANGERS	1,268.01
48955	08/27/15	COLONIAL LIFE & ACCIDENT INS. HEALTH AND ACCIDENTAL INS. HEALTH AND ACCIDENTAL INS.	87.18
48956	08/27/15	COMPUTER SYSTEM MANAGERS RMWD COMPUTER SYSTEM SUPPORT RMWD COMPUTER SYSTEM SUPPORT	2,733.75
48957	08/27/15	CONTROLLED MOTION SOLUTIONS HOSE FITTING	46.25
48958	08/27/15	CORELOGIC INFORMATION REALQUEST MAP SEARCH, MORTGAGE DATA AND PROPERTY DETAIL DATA REALQUEST MAP SEARCH, MORTGAGE DATA AND PROPERTY DETAIL DATA	222.50
48959	08/27/15	COUNTY OF S.D.-DEPT. OF HEALTH LIFT STATION 1 ANNUAL HAZ MAT PERMIT LIFT STATION 5 ANNUAL HAZ MAT PERMIT BECK RESERVOIR ANNUAL HAZ MAT PERMIT	876.00
48960	08/27/15	COUNTY OF SAN DIEGO-DPW ROAD PERMITS	510.80
48961	08/27/15	COVERALL NORTH AMERICA, INC RESTROOM AND KITCHEN CLEANING SUPPLIES	464.90
		CSDA, SAN DIEGO CHAPTER	

2013-2

RAINBOW MUNICIPAL WATER DIST
 FOR BOARD INFORMATION
 AUGUST 31, 2015

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
48962	08/27/15	TOM KENNEDY ATTENDANCE AT CSDA QUARTERLY MEETING CUTTING EDGE STAFFING	30.00
48963	08/27/15	HUMAN RESOURCES TEMPORARY HELP HUMAN RESOURCES TEMPORARY HELP HUMAN RESOURCES TEMPORARY HELP DATAPROSE INC.	3,060.19
48964	08/27/15	MONTHLY MAILING OF WATER BILLS AND NEWSLETTER DION INTERNATIONAL	6,746.48
48965	08/27/15	UNIT #75 - BRAKE INSPECTION UNIT #72 - ENGINE DIAGNOSTIC DRAVES PIPELINE, INC	6,973.30
48966	08/27/15	WEST LILAC AND REDONDO WATER MAIN VIA GIANNELLI WATER MAIN EEPOD LLC	10,773.86
48967	08/27/15	UNIT #22, #33 & #36 - DPF REGENERATION TOOL FALLBROOK OIL CO	670.00
48968	08/27/15	FUEL DELIVERIES FUEL DELIVERIES FUEL DELIVERIES FUEL DELIVERIES FUEL DELIVERIES FUEL DELIVERIES FUEL DELIVERIES FUEL DELIVERIES	11,316.28
48969	08/27/15	FALLBROOK WASTE AND RECYCLING MONTHLY REFUSE AND RECYCLE MONTHLY REFUSE AND RECYCLE	335.55
48970	08/27/15	FEDEX DELIVERY SERVICE	142.55
48971	08/27/15	EQUARIUS WATERWORKS, METER HEX DIGGING BAR AND 4" FLANGE 1" PRESSURE REGULATOR 1" PRESSURE REGULATOR MEDIUM METER BOX LID MEDIUM METER BOX 1" PRESSURE REGULATOR 2" BRASS 90, 3/4" PVC SLIP 1 X 2 1/2" BRASS NIPPLE, 1" COOPER 90, 1" STEEL COUPLING	8,214.95
48972	08/27/15	FIRST BANKCARD SEE CREDIT CARD REPORT	3,497.34
48973	08/27/15	FIRST BANKCARD SEE CREDIT CARD REPORT	1,289.40
48974	08/27/15	FIRST BANKCARD SEE CREDIT CARD REPORT GIL FRANCO, TIRE HAULER USED TIRES DISPOSAL	1,052.55 112.00

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RAINBOW MUNICIPAL WATER DIST
 FOR BOARD INFORMATION
 AUGUST 31, 2015

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
48975	08/27/15	HAAKER EQUIPMENT CO. 36" TIGER TAIL, 3/4" X 25' LDR	389.32
48976	08/27/15	HACH OPERATIONS AND WATER QUALITY PPA INSTRUMENT, CHEMKEYS AND PROBES	3,402.64
48977	08/27/15	HAWTHORNE MACHINERY COMPANY UNIT #110 - REPAIRS, PARTS, LABOR AND ENVIRONMENTAL FEES TIP-TWIN SHA, PIN-GET AND RETAINER	5,461.49
48978	08/27/15	HIDDEN VALLEY PUMP SYSTEMS INC PUMP STATION 1 PUMP #6 SEAL REPAIR	500.00
48979	08/27/15	HOME DEPOT CONDUIT NIPPLE, SQUARE BOX, TEKS ROOFING, CUT-IN BOX SLAT COVERS FENCE SLATES	1,427.36
48980	08/27/15	JOE'S HARDWARE INDOOR/OUTDOOR PUSH BROOM DRYWALL CORS LUMBER, UTILITY PULL, 6" RECIPROCATING SAW BLADE	102.75
48981	08/27/15	K-FOUR SWITCHES NEW TRUCK SWITCHES	137.32
48982	08/27/15	KENNEDY/JENKS CONSULTANTS INC LIFT STATION 1 REPLACEMENT	5,480.00
48983	08/27/15	KNIGHT SECURITY & FIRE SYSTEMS ANNUAL MONITORING FEES ANNUAL MONITORING FEES ANNUAL MONITORING FEES ANNUAL MONITORING FEES	2,046.00
48984	08/27/15	THE LIGHTHOUSE NEW TRUCKS - AMBER LED STROBE LIGHT BARS AND LED WORK LIGHTS	1,079.86
48985	08/27/15	JOHN MACCARRONE REIMBURSEMENT - GRADE 3 WATER TREATMENT OPERATOR CERTIFICATE RENEWAL	60.00
48986	08/27/15	MAR-CON PRODUCTS 20-3"X24" PRE-CAST GRADE RINGS 18-6"X24" PRE-CAST GRADE RINGS	1,081.08
48987	08/27/15	MITEL LEASING LEASE AGREEMENT	441.13
48988	08/27/15	MODULAR BUILDING CONCEPTS, INC RENTAL AGREEMENT RENTAL AGREEMENT	694.44
48989	08/27/15	NORTH COUNTY FIRE BONSALL FIRE STATON #5 - REIMBURSEMENT OF UNUSED INSPECTION FEES	6,956.50

2013-4

RAINBOW MUNICIPAL WATER DIST
 FOR BOARD INFORMATION
 AUGUST 31, 2015

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
48990	08/27/15	NOSSAMAN, LLP LEGAL SERVICES - APRIL LEGAL SERVICES - JUNE LEGAL SERVICES - JULY	20,080.21
48991	08/27/15	OCCUPATIONAL HEALTH CENTERS OF AUDIOGRAM AND RESPIRATOR PHYSICALS	342.50
48992	08/27/15	ONESOURCE DISTRIBUTORS, LLC WIRING FOR NEW TRUCKS RAINBOW HEIGHTS - REPLACEMENT CURRENT/VOLTAGE ANALOG INPUT MODULE BUILDING MAINTENANCE - BALLAST AND FLUORESCENT LIGHTS	1,850.07
48993	08/27/15	PARKHOUSE TIRE, INC. UNIT #13 AND STOCK - OIL	900.79
48994	08/27/15	PETTY CASH REPLENISH FUND	277.95
48995	08/27/15	PLIC-SBD GRAND ISLAND MONTHLY DENTAL INSURANCE	5,575.92
48996	08/27/15	PRIORITY DOOR SYSTEMS REPLACEMENT OF EXTERIOR BOARD ROOM DOOR	2,465.00
48997	08/27/15	PUBLIC POLICY STRATEGIES, INC. PUBLIC RELATIONS	5,000.00
48998	08/27/15	QUALITY CHEVROLET UNIT #53 - INJECTOR AND SEAL UNIT #43 - REGULATOR UNIT #60 - RESISTO UNIT #44 AND STOCK - CAP	551.88
48999	08/27/15	RAFTELIS FINANCIAL CONSULTANTS PROFESSIONAL SERVICES FOR JULY 2015	11,180.00
49000	08/27/15	REM MECHANICAL, INC SERVICE CALL, PARTS AND LABOR SERVICE CALL	838.00
49001	08/27/15	SAGE DESIGNS, INC PROGRAMMING AND MODEM CABLES	202.50
49002	08/27/15	SAN DIEGO GAS & ELECTRIC MONTHLY GAS AND ELECTRIC SERVICE	46,454.58
49003	08/27/15	DAVID SEYMOUR REIMBURSE RETIRED EMPLOYEE HEALTH INS. - AUGUST	363.00
49004	08/27/15	SHEPHERD & STAATS, INC. ADMINISTRATIVE SERVICES	1,250.00
49005	08/27/15	SHRED-IT SERVICE AGREEMENT	571.17
49006	08/27/15	SCOTT SIMPSON REIMBURSE CROSS-CONNECTION CONTROL SPECIALIST RENEWAL	80.00
49007	08/27/15	SKILLPATH SEMINARS	

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RAINBOW MUNICIPAL WATER DIST
FOR BOARD INFORMATION
AUGUST 31, 2015

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
49008	08/27/15	GLORIA DECHERT - ADVANCED MICROSOFT EXCEL 2-DAY SEMINAR	319.00
49009	08/27/15	CHARLES C. SNEED REIMBURSE RETIRED EMPLOYEE HEALTH INS. - AUGUST	363.00
49010	08/27/15	STONE-MILLER CONSULTANTS, INC SAN LUIS REY GROUNDWATER SUSTAINABILITY PROJECT	630.00
49011	08/27/15	SUTTON LAW FIRM LEGAL SERVICES - MARCH 2015	2,606.66
49012	08/27/15	T.R.Y. ENTERPRISES, INC. MONTHLY PATROL SERVICES - AUG	510.00
49013	08/27/15	TAMAYO GROUP, INC PROFESSIONAL SERVICES FOR STRATEGIC PLANNING PROCESS	17,600.00
49014	08/27/15	SCOTT TERRELL REIMBURSE GRADE 2 WATER TREAT- MENT OPERATOR CERTIFICATION RENEWAL FEE	60.00
49015	08/27/15	TETRA TECH, INC. AS-NEEDED CONSTRUCTION SUPPORT SERVICES	2,584.00
49016	08/27/15	UNDERGROUND SERVICE ALERT LOCATE UTILITIES	115.50
49017	08/27/15	UNION BANK NORTH COUNTY JPA - SERVICE FEES	222.85
49018	08/27/15	UNUM LIFE INSURANCE MONTHLY SHORT TERM DISABILITY	552.00
49019	08/27/15	UTILITY SERVICE CO. QUARTERLY TANK SERVICE	157,305.21
49020	08/27/15	MARC WALKER REIMBURSEMENT GRADE 5 WATER DISTRIBUTION OPERATOR CERT. RENEWAL	105.00
49021	08/27/15	WESTERN LANDSCAPE MAINT PLUS, NORTH AND NORTHSIDE RESERVOIRS CLEAN VEGETATION AND TREES LANDSCAPE MAINTENANCE SERVICE	7,048.00
49022	08/27/15	WINZER FLEET SUPPLIES	258.65
49023	08/27/15	WIPER CENTRAL, USA WIPING RAGS	248.81
49024	08/27/15	XEROX CORP. MONTHLY LEASE MONTHLY LEASE	1,329.41
49025	08/27/15	XEROX FINANICAL SERVICES MONTHLY LEASE	567.14
49026	08/31/15	RAMON ZUNIGA EMPLOYEE COMPUTER ASSISTANCE PROGRAM	1,945.92
		VEBEGAS, GILVERTO	

2013-6

RAINBOW MUNICIPAL WATER DIST
FOR BOARD INFORMATION
AUGUST 31, 2015

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
		PAYMENT ON CLAIM	1,191.03
		TOTAL	512,876.18

23A3-7

Rainbow Municipal Water District
 MONTHLY WATER USAGE
 BY MONTHLY UTILITY CODES
 Fiscal Year 2015-2016

DATE AGI/AG-D SAWR SAWR/DOMESTIC TOTAL AG USAGE YR TO DATE USAGE 2014-2015

JULY 223.2 373.6 533.3 1130.1 1130.1
 AUGUST 199.4 332.6 462.6 994.6 2124.6
 SEPTEMBER
 OCTOBER
 NOVEMBER
 DECEMBER
 JANUARY
 FEBRUARY
 MARCH 0.62 1603.7
 APRIL 0.38
 MAY 17% less sales than last year
 JUNE

DATE DOMESTIC MF SAWR/DOMESTIC TOTAL DOM USAGE YR TO DATE USAGE

JULY 391.2 36.0 34.0 461.2 461.2
 AUGUST 370.3 32.2 29.5 432.0 893.3
 SEPTEMBER
 OCTOBER
 NOVEMBER
 DECEMBER
 JANUARY
 FEBRUARY
 MARCH 0.73 635.0
 APRIL 0.27
 MAY 1.5% less sales than last year
 JUNE

DATE COMMERCIAL CN SW YR TO DATE USAGE REPORT TOTAL

JULY 214.4 15.3 0.0 229.7 1821.1
 AUGUST 205.0 16.2 0.0 450.9 1647.8
 SEPTEMBER
 OCTOBER
 NOVEMBER
 DECEMBER
 JANUARY
 FEBRUARY
 MARCH
 APRIL
 MAY
 JUNE

3468.9 4701.9
 36% 74%
 LESS SALES THAN LAST YEAR 26%
 21332.0

2014

Rainbow MWD								
Projected CIP			2015-2016 Budget			8/31/2015		
A	B	C	D	E	F	H	I	J
CIP EXPENDITURES:								
Job #	Water Job Name	Funds Budgeted	Funds Expended in Prior Years	Funds Expended FY 15/16	Remaining Budget FY 15/16	Budget FY 16/17	Budget FY 17/18	Budget FY 18/19
	2015 Urban Water Management Plan	\$150,000	\$0	\$0	\$150,000	\$150,000	\$0	\$0
200748	Highway 76 Realignment-Water Lines	\$1,020,000	\$550,777	\$0	\$469,223	\$469,223	\$0	\$0
200663	Beck Reservoir Rehab	\$12,000,000	\$1,350,741	\$0	\$0	\$0	\$5,000,000	\$5,649,259
	Gird to Monserate Hill Water Line	\$950,000	\$0	\$0	\$200,000	\$750,000	\$0	\$0
	Wrightwood to Cottontail Water Line	\$200,000	\$0	\$0	\$200,000	\$0	\$0	\$0
201573	Tarek Terrace Water Line	\$150,000	\$7,081	\$0	\$142,919	\$0	\$0	\$0
	Regional Recycled Water Study	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$0
201446	San Luis Rey Groundwater Study	\$500,000	\$366,413	\$867	\$132,720	\$0	\$0	\$0
201360	Morro Tank Structural Analysis	\$100,000	\$89,984	\$52	\$9,964	\$0	\$0	\$0
201359	Ranchos Amigos Pressure Stations	\$25,000	\$2,135	\$0	\$22,865	\$0	\$0	\$0
201357	Water Master Plan	\$300,000	\$103,995	\$0	\$196,005	\$0	\$0	\$0
201449	Afton Farms Water Line	\$300,000	\$13,726	\$118	\$286,156	\$0	\$0	\$0
200950	Lake Vista Estates Loop	\$150,000	\$6,171	\$0	\$143,829	\$0	\$0	\$0
	Pressure Reducing Stations	\$400,000	\$0	\$0	\$130,000	\$130,000	\$140,000	\$0
201570	Corrosion Control Implementation	\$240,000	\$4,973	\$0	\$13,000	\$120,000	\$106,364	\$0
	SDCWA Shutdown Pump Stations	\$400,000	\$0	\$0	\$130,000	\$130,000	\$140,000	\$0
	Other Infrastructure Replacements	\$6,483,636	\$0	\$0	\$0	\$6,483,636	\$2,870,000	\$3,613,636
201661	Parking Lot Paving	\$25,000	\$0	\$0	\$25,000	\$0		
	Total Expenditure (Water):	\$23,543,636	\$2,495,996	\$1,037	\$2,401,682	\$8,232,859	\$8,256,364	\$9,262,895
Wastewater Job Name								
	Abandon Lift Station 3B	\$300,000	\$0	\$0	\$0	\$300,000	\$0	\$0
201266	Sewer Outfall Line RMWD Replacement	\$13,000,000	\$200,815	\$93	\$1,000,000	\$10,000,000	\$1,799,185	
201040	Lift Station #1 Replacement	\$2,400,000	\$248,237	\$5,480	\$1,494,520	\$725,040	\$0	\$0
200768	Highway 76 Realignment-Sewer lines	\$365,000	\$11,985	\$0	\$353,015	\$0	\$0	\$0
201260	Hwy 76 Realignment - CalTrans UPSIZE	\$3,200,000	\$1,009,330	\$12,372	\$1,050,000	\$100,000	\$1,040,670	\$0
201571	2015 Wastewater Master Plan	\$300,000	\$40,058	\$7,840	\$259,942	\$0	\$0	\$0
	Manhole Rehabilitation	\$180,000	\$0	\$0	\$60,000	\$60,000	\$60,000	\$0
	Total Expenditure (Wastewater):	\$19,745,000	\$1,510,425	\$25,785	\$4,217,477	\$11,185,040	\$2,899,855	\$0
CASH FLOW SUMMARY:								
Water Capital Funding								
	Beginning Cash Balance			\$9,260,509	\$9,720,447	\$10,501,025	5,645,766	5,353,802
	Capacity Fees			\$458,405	\$830,000	\$1,100,000	\$3,200,000	\$3,700,000
	Interest Income			\$2,570	\$60,360	\$50,000	\$75,000	\$75,000
	Transfers from Water Operations			\$0	\$2,291,900	\$2,227,600	\$4,689,400	\$5,557,300
	Total Water Expenditures			-\$1,037	-\$2,401,682	-\$8,232,859	-\$8,256,364	-\$9,262,895
	Interfund Transfer from Wastewater			\$0	\$0	\$0	\$0	\$0
	Interfund Transfer to Wastewater			\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0
	Ending Cash Balance Water			\$ 9,720,447	\$ 10,501,025	\$ 5,645,766	\$ 5,353,802	\$ 5,423,207
Wastewater Capital Funding								
	Beginning Cash Balance			\$ 13,259,496	\$13,237,290	\$9,019,813	-\$1,910,227	-\$1,030,082
	Capacity Fees			\$ -	\$0	\$0	\$3,600,000	\$6,500,000
	Impact Fees (Proposed)				\$0	\$0	\$0	\$0
	Interest Income			\$3,579	\$0	\$120,000	\$45,000	\$33,000
	Transfers from Sewer Operations				\$0	\$135,000	\$135,000	\$422,000
	Interfund Transfer to Water							
	Interfund Transfer from Water							
	Transfer Repayments from Water			\$0	\$0	\$0	\$0	\$0
	Total Sewer Expenditures			-\$25,784.51	-\$4,217,477	-\$11,185,040	-\$2,899,855	\$0
	Ending Cash Balance Wastewater			\$13,237,290	\$9,019,813	-\$1,910,227	-\$1,030,082	\$5,924,918

2015