PROFESSIONAL CONSULTANT SERVICES AGREEMENT

EADIE AND PAYNE, LLP

Audit of Riverside Public Utilities Electric and Water Fund (RFP No. 1880)

THIS PROFESSIONAL CONSULTANT SERVICES AGREEMENT ("Agreement") is made and entered into this _____ day of _____, 2019 ("Effective Date"), by and between the CITY OF RIVERSIDE ("City"), a California charter city and municipal corporation and EADIE AND PAYNE, LLP, a California limited liability partnership ("Consultant").

1. **Scope of Services**. City agrees to retain and does hereby retain Consultant and Consultant agrees to provide the services more particularly described in Exhibit "A," "Scope of Services" ("Services"), attached hereto and incorporated herein by reference, in conjunction with the Audit of Riverside Public Utilities Electric and Water Fund (RFP No. 1880) ("Project").

2. **Term**. This Agreement shall be effective on the date first written above and shall remain in effect until March 26, 2020, unless otherwise terminated pursuant to the provisions herein.

3. **Compensation/Payment**. Consultant shall perform the Services under this Agreement for the total sum not to exceed Sixty Thousand Dollars ($60,000.00), payable in accordance with the terms set forth in Exhibit "B." Said payment shall be made in accordance with City's usual accounting procedures upon receipt and approval of an itemized invoice setting forth the services performed. The invoices shall be delivered to City at the address set forth in Section 4 hereof.

4. **Notices**. Any notices required to be given, hereunder shall be in writing and shall be personally served or given by mail. Any notice given by mail shall be deemed given when deposited in the United States Mail, certified and postage prepaid, addressed to the party to be served as follows:

To City	To Consultant
City Manager's Office/Finance Dept. City of Riverside Attn: Carlie Myers/Jennifer McCoy 3900 Main Street Riverside, CA 92522	Eadie and Payne, LLP Attn: Donald Ecker 3880 Lemon Street Suite 300 Riverside, CA 92501

5. **Prevailing Wage**. If applicable, Consultant and all subcontractors are required to pay the general prevailing wage rates of per diem wages and overtime and holiday wages determined by the Director of the Department of Industrial Relations under Section 1720 et seq. of the California Labor Code and implemented by Resolution No. 13346 of the City Council of the City of Riverside. The Director's determination is available on-line at www.dir.ca.gov/dlsr/DPreWageDetermination.htm and is referred to and made a part hereof; the wage rates therein ascertained, determined, and specified are referred to and made a part hereof as though fully set forth herein.

6. **Contract Administration**. A designee of the City will be appointed in writing by the City Manager or Department Director to administer this Agreement on behalf of City and shall be referred to herein as Contract Administrator.

7. **Standard of Performance**. While performing the Services, Consultant shall exercise the reasonable professional care and skill customarily exercised by reputable members of Consultant's profession practicing in the Metropolitan Southern California Area, and shall use reasonable diligence and best judgment while exercising its professional skill and expertise.

8. **Personnel**. Consultant shall furnish all personnel necessary to perform the Services and shall be responsible for their performance and compensation. Consultant recognizes that the qualifications and experience of the personnel to be used are vital to professional and timely completion of the Services. The key personnel listed in Exhibit "C" attached hereto and incorporated herein by this reference and assigned to perform portions of the Services shall remain assigned through completion of the Services, unless otherwise mutually agreed by the parties in writing, or caused by hardship or resignation in which case substitutes shall be subject to City approval.

9. **Assignment and Subcontracting**. Neither party shall assign any right, interest, or obligation in or under this Agreement to any other entity without prior written consent of the other party. In any event, no assignment shall be made unless the assignee expressly assumes the obligations of assignor under this Agreement, in a writing satisfactory to the parties. Consultant acknowledges that any assignment may, at the City's sole discretion, require City Manager and/or City Council approval. Consultant shall not subcontract any portion of the work required by this Agreement without prior written approval by the responsible City Contract Administrator. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement, including without limitation, the insurance obligations set forth in Section 12. The Consultant acknowledges and agrees that the City is an intended beneficiary of any work performed by any subcontractor for purposes of establishing a duty of care between any subcontractor and the City.

10. **Independent Contractor**. In the performance of this Agreement, Consultant, and Consultant's employees, subcontractors and agents, shall act in an independent capacity as independent contractors, and not as officers or employees of the City of Riverside. Consultant acknowledges and agrees that the City has no obligation to pay or withhold state or federal taxes or to provide workers' compensation or unemployment insurance to Consultant, or to Consultant's employees, subcontractors and agents. Consultant, as an independent contractor, shall be responsible for any and all taxes that apply to Consultant as an employer.

11. **Indemnification.**

11.1 **Design Professional Defined.** For purposes of this Agreement, "Design Professional" includes the following:

A. An individual licensed as an architect pursuant to Chapter 3 (commencing with Section 5500) of Division 3 of the Business and Professions Code, and a business entity offering architectural services in accordance with that chapter.

B. An individual licensed as a landscape architect pursuant to Chapter 3.5 (commencing with Section 5615) of Division 3 of the Business and Professions Code, and a business entity offering landscape architectural services in accordance with that chapter.

C. An individual registered as a professional engineer pursuant to Chapter 7 (commencing with Section 6700) of Division 3 of the Business and Professions Code, and a business entity offering professional engineering services in accordance with that chapter.

D. An individual licensed as a professional land surveyor pursuant to Chapter 15 (commencing with Section 8700) of Division 3 of the Business and Professions Code, and a business entity offering professional land surveying services in accordance with that chapter.

11.2 **Defense Obligation For Design Professional Liability.** Consultant agrees, at its cost and expense, to promptly defend the City, and the City's employees, officers, managers, agents and council members (collectively the "Parties to be Defended") from and against any and all claims, allegations, lawsuits, arbitration proceedings, administrative proceedings, regulatory proceedings, or other legal proceedings to the extent the same arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of Consultant, or anyone employed by or working under the Consultant or for services rendered to the Consultant in the performance of the Agreement, notwithstanding that the City may have benefited from its work or services and whether or not caused in part by the negligence of an Indemnified Party. Consultant agrees to provide this defense immediately upon written notice from the City, and with well qualified, adequately insured and experienced legal counsel acceptable to City. Consultant will reimburse City for reasonable defense costs for claims arising out of Consultant's professional negligence based on the percentage of Consultant's liability. This obligation to defend as set forth herein is binding on the successors, assigns and heirs of Consultant and shall survive the termination of Consultant's Services under this Agreement.

11.3 **Indemnity For Design Professional Liability.** When the law establishes a professional standard of care for Consultant's services, to the fullest extent permitted by law, Consultant shall indemnify, protect and hold harmless the City and the City's employees, officers, managers, agents, and Council Members ("Indemnified Parties") from and against any and all claim for damage, charge, lawsuit, action, judicial, administrative, regulatory or arbitration proceeding,

damage, cost, expense (including counsel and expert fees), judgment, civil fines and penalties, liabilities or losses of any kind or nature whatsoever to the extent the same arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of Consultant, or anyone employed by or working under the Consultant or for services rendered to the Consultant in the performance of the Agreement, notwithstanding that the City may have benefited from its work or services and whether or not caused in part by the negligence of an Indemnified Party.

11.4 **Indemnification.** Consultant shall indemnify, defend (with counsel reasonably approved by City) and hold harmless the City, its authorized officers, employees, agents and volunteers from and against, all claims, damages, losses and expenses, including reasonable attorneys' fees and court costs caused by the negligence or willful misconduct of the Consultant and/or any of its partners, subcontractors, employees or officers.

12. **Insurance.**

12.1 **General Provisions**. Prior to the City's execution of this Agreement, Consultant shall provide satisfactory evidence of, and shall thereafter maintain during the term of this Agreement, such insurance policies and coverages in the types, limits, forms and ratings required herein. The rating and required insurance policies and coverages may be modified in writing by the City's Risk Manager or City Attorney, or a designee, unless such modification is prohibited by law.

12.1.1 **Limitations**. These minimum amounts of coverage shall not constitute any limitation or cap on Consultant's indemnification obligations under Section 11 hereof.

12.1.2 **Ratings**. Any insurance policy or coverage provided by Consultant or subcontractors as required by this Agreement shall be deemed inadequate and a material breach of this Agreement, unless such policy or coverage is issued by insurance companies authorized to transact insurance business in the State of California with a policy holder's rating of A or higher and a Financial Class of VII or higher.

12.1.3 **Cancellation**. The policies shall not be canceled unless thirty (30) days' prior written notification of intended cancellation has been given to City by certified or registered mail, postage prepaid.

12.1.4 **Adequacy**. The City, its officers, employees and agents make no representation that the types or limits of insurance specified to be carried by Consultant pursuant to this Agreement are adequate to protect Consultant. If Consultant believes that any required insurance coverage is inadequate, Consultant will obtain such additional insurance coverage as Consultant deems adequate, at Consultant's sole expense.

12.2 **Workers' Compensation Insurance**. By executing this Agreement, Consultant certifies that Consultant is aware of and will comply with Section 3700 of the Labor Code of the State of California requiring every employer to be insured against liability for workers' compensation, or to undertake self-insurance before commencing any of the work. Consultant shall carry the insurance or provide for self-insurance required by California law to protect said Consultant from claims under the Workers' Compensation Act. Prior to City's execution of this Agreement,

Consultant shall file with City either 1) a certificate of insurance showing that such insurance is in effect, or that Consultant is self-insured for such coverage, or 2) a certified statement that Consultant has no employees, and acknowledging that if Consultant does employ any person, the necessary certificate of insurance will immediately be filed with City. Any certificate filed with City shall provide that City will be given ten (10) days' prior written notice before modification or cancellation thereof.

12.3 **Commercial General Liability and Automobile Insurance**. Prior to City's execution of this Agreement, Consultant shall obtain, and shall thereafter maintain during the term of this Agreement, commercial general liability insurance and automobile liability insurance as required to insure Consultant against damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from or which may concern operations by anyone directly or indirectly employed by, connected with, or acting for or on behalf of Consultant. The City, and its officers, employees and agents, shall be named as additional insureds under the Consultant's insurance policies.

12.3.1 Consultant's commercial general liability insurance policy shall cover both bodily injury (including death) and property damage (including, but not limited to, premises operations liability, products-completed operations liability, independent contractor's liability, personal injury liability, and contractual liability) in an amount not less than $1,000,000 per occurrence and a general aggregate limit in the amount of not less than $2,000,000.

12.3.2 Consultant's automobile liability policy shall cover both bodily injury and property damage in an amount not less than $1,000,000 per occurrence and an aggregate limit of not less than $1,000,000. All of Consultant's automobile and/or commercial general liability insurance policies shall cover all vehicles used in connection with Consultant's performance of this Agreement, which vehicles shall include, but are not limited to, Consultant owned vehicles, Consultant leased vehicles, Consultant's employee vehicles, non-Consultant owned vehicles and hired vehicles.

12.3.3 Prior to City's execution of this Agreement, copies of insurance policies or original certificates along with additional insured endorsements acceptable to the City evidencing the coverage required by this Agreement, for both commercial general and automobile liability insurance, shall be filed with City and shall include the City and its officers, employees and agents, as additional insureds. Said policies shall be in the usual form of commercial general and automobile liability insurance policies, but shall include the following provisions:

> It is agreed that the City of Riverside, and its officers, employees and agents, are added as additional insureds under this policy, solely for work done by and on behalf of the named insured for the City of Riverside.

12.3.4 The insurance policy or policies shall also comply with the following provisions:

a. The policy shall be endorsed to waive any right of subrogation against the City and its sub-consultants, employees, officers and agents for services performed under this Agreement.

b. If the policy is written on a claims made basis, the certificate should so specify and the policy must continue in force for one year after completion of the services. The retroactive date of coverage must also be listed.

c. The policy shall specify that the insurance provided by Consultant will be considered primary and not contributory to any other insurance available to the City and Endorsement No. CG 20010413 shall be provided to the City.

12.4 **Errors and Omissions Insurance**. Prior to City's execution of this Agreement, Consultant shall obtain, and shall thereafter maintain during the term of this Agreement, errors and omissions professional liability insurance in the minimum amount of $1,000,000 to protect the City from claims resulting from the Consultant's activities.

12.5 **Subcontractors' Insurance**. Consultant shall require all of its subcontractors to carry insurance, in an amount sufficient to cover the risk of injury, damage or loss that may be caused by the subcontractors' scope of work and activities provided in furtherance of this Agreement, including, but without limitation, the following coverages: Workers Compensation, Commercial General Liability, Errors and Omissions, and Automobile liability. Upon City's request, Consultant shall provide City with satisfactory evidence that Subcontractors have obtained insurance policies and coverages required by this section.

13. **Business Tax**. Consultant understands that the Services performed under this Agreement constitutes doing business in the City of Riverside, and Consultant agrees that Consultant will register for and pay a business tax pursuant to Chapter 5.04 of the Riverside Municipal Code and keep such tax certificate current during the term of this Agreement.

14. **Time of Essence**. Time is of the essence for each and every provision of this Agreement.

15. **City's Right to Employ Other Consultants**. City reserves the right to employ other Consultants in connection with the Project. If the City is required to employ another consultant to complete Consultant's work, due to the failure of the Consultant to perform, or due to the breach of any of the provisions of this Agreement, the City reserves the right to seek reimbursement from Consultant.

16. **Accounting Records**. Consultant shall maintain complete and accurate records with respect to costs incurred under this Agreement. All such records shall be clearly identifiable. Consultant shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall allow inspection of all work, data, documents, proceedings, and

activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

17. **Confidentiality**. All ideas, memoranda, specifications, plans, procedures, drawings, descriptions, computer program data, input record data, written information, and other materials either created by or provided to Consultant in connection with the performance of this Agreement shall be held confidential by Consultant, except as otherwise directed by City's Contract Administrator. Nothing furnished to Consultant which is otherwise known to the Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use City's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production, website, or other similar medium without the prior written consent of the City. This provision shall survive the expiration or termination of this Agreement.

18. **Ownership of Documents**. All reports, maps, drawings and other contract deliverables prepared under this Agreement by Consultant shall be and remain the property of City. Consultant shall not release to others information furnished by City without prior express written approval of City. This provision shall survive the expiration or termination of this Agreement.

19. **Copyrights.** Consultant agrees that any work prepared for City which is eligible for copyright protection in the United States or elsewhere shall be a work made for hire. If any such work is deemed for any reason not to be a work made for hire, Consultant assigns all right, title and interest in the copyright in such work, and all extensions and renewals thereof, to City, and agrees to provide all assistance reasonably requested by City in the establishment, preservation and enforcement of its copyright in such work, such assistance to be provided at City's expense but without any additional compensation to Consultant. Consultant agrees to waive all moral rights relating to the work developed or produced, including without limitation any and all rights of identification of authorship and any and all rights of approval, restriction or limitation on use or subsequent modifications. This provision shall survive the expiration or termination of this Agreement.

20. **Conflict of Interest**. Consultant, for itself and on behalf of the individuals listed in Exhibit "C," represents and warrants that by the execution of this Agreement, they have no interest, present or contemplated, in the Project affected by the above-described Services. Consultant further warrants that neither Consultant, nor the individuals listed in Exhibit "C" have any real property, business interests or income interests that will be affected by this project or, alternatively, that Consultant will file with the City an affidavit disclosing any such interest.

21. **Solicitation**. Consultant warrants that Consultant has not employed or retained any person or agency to solicit or secure this Agreement, nor has it entered into any agreement or understanding for a commission, percentage, brokerage, or contingent fee to be paid to secure this Agreement. For breach of this warranty, City shall have the right to terminate this Agreement without liability and pay Consultant only for the value of work Consultant has actually performed, or, in its sole discretion, to deduct from the Agreement price or otherwise recover from Consultant the full amount of such commission, percentage, brokerage or commission fee. The remedies

specified in this section shall be in addition to and not in lieu of those remedies otherwise specified in this Agreement.

22. **General Compliance With Laws**. Consultant shall keep fully informed of federal, state and local laws and ordinances and regulations which in any manner affect those employed by Consultant, or in any way affect the performance of services by Consultant pursuant to this Agreement. Consultant shall at all times observe and comply with all such laws, ordinances and regulations, and shall be solely responsible for any failure to comply with all applicable laws, ordinances and regulations. Consultant represents and warrants that Consultant has obtained all necessary licenses to perform the Scope of Services and that such licenses are in good standing. Consultant further represents and warrants that the services provided herein shall conform to all ordinances, policies and practices of the City of Riverside.

23. **Waiver**. No action or failure to act by the City shall constitute a waiver of any right or duty afforded City under this Agreement, nor shall any such action or failure to act constitute approval of or acquiescence in any breach thereunder, except as may be specifically, provided in this Agreement or as may be otherwise agreed in writing.

24. **Amendments**. This Agreement may be modified or amended only by a written agreement and/or change order executed by the Consultant and City.

25. **Termination**. City, by notifying Consultant in writing, shall have the right to terminate any or all of Consultant's services and work covered by this Agreement at any time. In the event of such termination, Consultant may submit Consultant's final written statement of the amount of Consultant's services as of the date of such termination based upon the ratio that the work completed bears to the total work required to make the report complete, subject to the City's rights under Sections 15 and 26 hereof. In ascertaining the work actually rendered through the termination date, City shall consider completed work, work in progress and complete and incomplete reports and other documents only after delivered to City.

25.1 Other than as stated below, City shall give Consultant thirty (30) days' prior written notice prior to termination.

25.2 City may terminate this Agreement upon fifteen (15) days' written notice to Consultant, in the event:

25.2.1 Consultant substantially fails to perform or materially breaches the Agreement; or

25.2.2 City decides to abandon or postpone the Project.

26. **Offsets**. Consultant acknowledges and agrees that with respect to any business tax or penalties thereon, utility charges, invoiced fee or other debt which Consultant owes or may owe to the City, City reserves the right to withhold and offset said amounts from payments or refunds or reimbursements owed by City to Consultant. Notice of such withholding and offset, shall promptly be given to Consultant by City in writing. In the event of a dispute as to the amount owed or whether

such amount is owed to the City, City will hold such disputed amount until either the appropriate appeal process has been completed or until the dispute has been resolved.

27. **Successors and Assigns**. This Agreement shall be binding upon City and its successors and assigns, and upon Consultant and its permitted successors and assigns, and shall not be assigned by Consultant, either in whole or in part, except as otherwise provided in paragraph 9 of this Agreement.

28. **Venue.** Any action at law or in equity brought by either of the parties hereto for the purpose of enforcing a right or rights provided for by this Agreement shall be tried in the Superior Court, County of Riverside, State of California, and the parties hereby waive all provisions of law providing for a change of venue in such proceedings to any other county. In the event either party hereto shall bring suit to enforce any term of this Agreement or to recover any damages for and on account of the breach of any term or condition of this Agreement, it is mutually agreed that each party will bear their own attorney's fees and costs.

29. **Nondiscrimination**. During Consultant's performance of this Agreement, Consultant shall not discriminate on the grounds of race, religious creed, color, national origin, ancestry, age, physical disability, mental disability, medical condition, including the medical condition of Acquired Immune Deficiency Syndrome (AIDS) or any condition related thereto, marital status, sex, genetic information, gender, gender identity, gender expression, or sexual orientation, military and veteran status, in the selection and retention of employees and subcontractors and the procurement of materials and equipment, except as provided in Section 12940 of the California Government Code. Further, Consultant agrees to conform to the requirements of the Americans with Disabilities Act in the performance of this Agreement.

30. **Severability**. Each provision, term, condition, covenant and/or restriction, in whole and in part, of this Agreement shall be considered severable. In the event any provision, term, condition, covenant and/or restriction, in whole and/or in part, of this Agreement is declared invalid, unconstitutional, or void for any reason, such provision or part thereof shall be severed from this Agreement and shall not affect any other provision, term, condition, covenant and/or restriction of this Agreement, and the remainder of the Agreement shall continue in full force and effect.

31. **Authority**. The individuals executing this Agreement and the instruments referenced herein on behalf of Consultant each represent and warrant that they have the legal power, right and actual authority to bind Consultant to the terms and conditions hereof and thereof.

32. **Entire Agreement**. This Agreement constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to the subject matter of this Agreement, and supersedes all prior and contemporaneous understandings or agreements of the parties. Neither party has been induced to enter into this Agreement by and neither party is relying on, any representation or warranty outside those expressly set forth in this Agreement.

33. **Interpretation**. City and Consultant acknowledge and agree that this Agreement is the product of mutual arms-length negotiations and accordingly, the rule of construction, which

provides that the ambiguities in a document shall be construed against the drafter of that document, shall have no application to the interpretation and enforcement of this Agreement.

33.1 Titles and captions are for convenience of reference only and do not define, describe or limit the scope or the intent of the Agreement or any of its terms. Reference to section numbers, are to sections in the Agreement unless expressly stated otherwise.

33.2 This Agreement shall be governed by and construed in accordance with the laws of the State of California in effect at the time of the execution of this Agreement.

33.3 In the event of a conflict between the body of this Agreement and Exhibit "A" - Scope of Services hereto, the terms contained in Exhibit "A" shall be controlling.

34. **Exhibits**. The following exhibits attached hereto are incorporated herein to this Agreement by this reference:

Exhibit "A" - Scope of Services
Exhibit "B" - Compensation
Exhibit "C" - Key Personnel
Exhibit "D" – Water Rate Design Study

IN WITNESS WHEREOF, City and Consultant have caused this Agreement to be duly executed the day and year first above written.

CITY OF RIVERSIDE, a California charter city and municipal corporation
a California corporation

By: _____
City Manager

Attest: _____
City Clerk

Certified as to Availability of Funds:

By: _____
Asst. Chief Financial Officer

Approved as to Form:

By: _____
Senior Deputy City Attorney

EADIE AND PAYNE, LLP
a California limited liability partnership

By: _____

DONALD N. ECKER
[Printed Name]
CHAIRMAN
[Title]

By: _____

EDEN C CASARENO
[Printed Name]
PARTNER
[Title]

EXHIBIT "A"
SCOPE OF SERVICES
AUDIT OF RIVERSIDE PUBLIC UTILITIES ELECTRIC AND WATER FUND

City of Riverside, Finance Department

Task A Interview City Council members to discuss any concerns regarding RPU financial data.

Task B For the Electric and Water Utility, audit total revenues for the five and a half (5½) fiscal years starting on July 1, 2013 through June 30, 2018, plus the partial fiscal year starting July 1, 2018 – December 31, 2018. The deliverables shall:

1. Show summary level of major components of revenues with supporting schedules providing detail breakdown by general ledger category.
    a. Provide comparison to industry standards or benchmarks
    b. Validate accuracy of revenue received and proper accounting treatment including reporting categorization.
2. Provide an audited schedule of the 10 largest electric/water customers for same period showing Pre and Post emergency drought activity for water utility customers. A drought period is defined by the State of California or California State Water Resources Control Board.

Task C Organic Reuse of Water - The deliverables shall:

1. Provide a comparative analysis of recycled versus potable water uses for the six (6) fiscal years and the partial fiscal year as noted in Task B above. The analysis should indicate water usage for each Pre and Post emergency drought periods. The usage should be bifurcated between commercial and retail consumers.

Task D Water - The deliverables shall:

1. Provide a schedule that shows audited Water utility revenue comparison Pre and Post emergency drought (January 2014 through April 2017).

2. Provide an audited schedule of revenue Wholesale water sales by customer for the periods requested.

3. Calculate the cost to produce water per acre foot.
    a. Re-compute RPUs computation for accuracy.

b. Validate accuracy of variables used for computation. Are they in compliance with industry standards or benchmarks?
c. Audit variables used in calculation.

4. Audit the assumptions and calculations embedded in the Water Utilities projected O&M Expenditures for FY2018 through FY2022. See Exhibit D for Water Rate Design Study.

5. Each summer the Water Utility implements summer rates
    a. As a result of the implementation of summer rates, provide audited revenue results showing the comparison of consumption changes year over year. What impact did the summer rates have on usage and revenue? See Task B.

6. Audit the Electric and Water utilities cash reserves as required by policy and reported by RPU for Water and Electric. Cash reserve policy first adopted on July 26, 2016 and updated on July 24, 2018.
    a. Disclose variances and assumptions used. Provide comparison to industry standards.

7. Audit the utilities travel and meetings account; provide an analysis and breakdown of expenses by type. Provide categories for business purpose of and categories of types of expenditures.

Responsibilities of Selected Firm

A. During audits, the selected firm shall promptly and directly report to the Finance Committee regarding any conditions, transactions, situations, or circumstances encountered which would impede or impair the proper conduct of the audit, or which would seem to warrant a special investigation or report in more detail than that which is necessary to perform the standard audit.

B. The selected firm shall take all steps necessary to safeguard any data, files, reports or information from loss, destruction, or erasure.

C. Any costs or expenses of replacing, or damages resulting from the loss of such data, shall be borne by the auditor.

D. The selected firm shall maintain adequate staff to perform as required by the agreement resulting from this solicitation.

E. The selected firm shall also include in its proposal a statement ensuring the integrity of the audit findings.

EXHIBIT "B"
COMPENSATION

PRICING

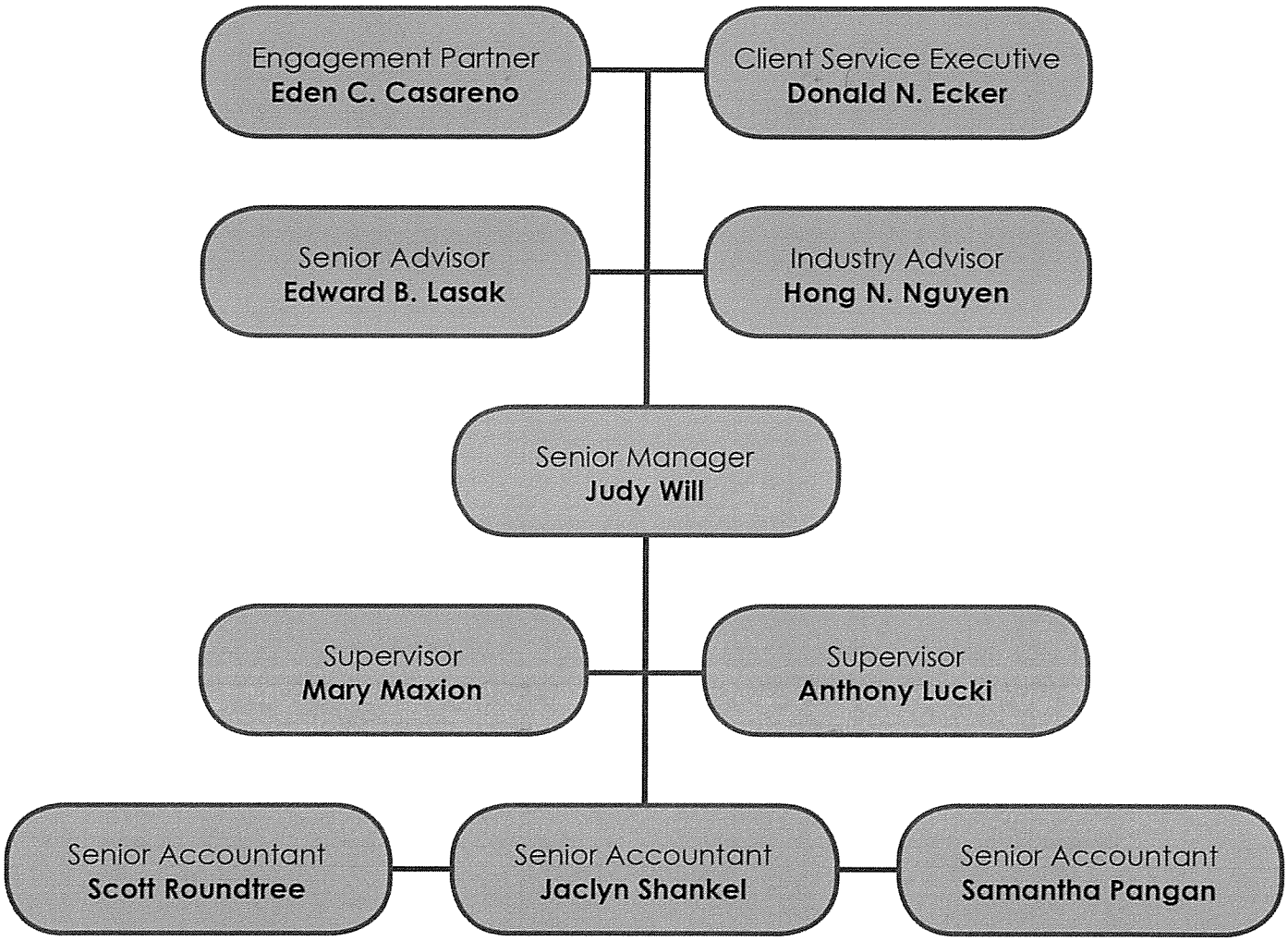
Item #	Item Description	UOM	Est Hours	Hourly Rate	Total
1	Task A: City Council Interview	Per Task	10	$ 246	$ 2,450
2	Task B: Audit of 5 1/2 Fiscal Years	Per Task	50	$ 160	$ 8,000
3	Task C: Organic Reuse of Water	Per Task	30	$ 167	$ 5,000
4	Task D: Water	Per Task	275	$ 162	$ 44,550
5	Additional Expenses	Total	-		$ -

TOTAL PROPOSAL AMOUNT IN FIGURES $60,000

TOTAL PROPOSAL AMOUNT IN WORDS Sixty Thousand Dollars

EXHIBIT "C"
KEY PERSONNEL

COMPANY PERSONNEL



DONALD N. ECKER

Client Service Executive

decker@ceos2.com | 951.241.7803

Mr. Ecker has been a community leader in Southern California for 40 years and understands the local economy.

Chairman

EDUCATION

BS Degree in Business Administration, emphasis in Business, from California Polytechnic University, Pomona

Executive MBA from Northwestern University, Kellogg School of Management

Young Presidents University Programs: Stanford, Buckhead-Georgia, Chicago, Monterey, Newport, Greece, Sweden, Taiwan, New Zealand, Colorado Springs, and Australia

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

COMMUNITY ORGANIZATIONS

Greater Riverside Chamber of Commerce Past Chairman
Citizen of the Year
Business of the Year
Volunteer of the Year
UC Riverside Board of Trustees-28 Years
Monday Morning Group-Past Chairman, 30 years
Founding member of Security Bank of California
Co-Chair Measure A
Has participated in raising $100M for Charities throughout the Inland Empire
United Way of the Inland Valleys, Past Chairman

Licensed by the State of California
Years of Experience: 50

SUMMARY

Mr. Ecker joined Eadie + Payne in 2015 as Director of Risk Management. He serves as Risk Advisor and Leader in Communication with boards and top management in assuring clients that commitments are delivered consistent with engagement letters and commitments.

Mr. Ecker is a true entrepreneur having founded various businesses in three distinctly different sectors.

Mr. Ecker is a Retired Senior and Managing Partner/Practice Leader of EY, a global professional services firm, including Managing Partner of the Riverside Office. During his 20 plus year career he co-founded the Capital Markets Group for the firm and headed Entrepreneurial Services, Southern California, that had approximately 350 people. While Managing Partner of EY Riverside, he was the coordinating/Relationship Partner on RCTC. He played a key role in transportation dating back to Measure A in 1988 as well as Measure AA in 1992. He also led the bond analysis of RCTC Toll Road original 1st placement. He participated in P3 discussions between the California Private Transportation Company, Orange County Measure M, and Riverside County from 1988-1993. He was part of the team that successfully negotiated the partnership between OCTA and RCTC.

Mr. Ecker is one of E+P's client service executives currently serving the County of San Bernardino on two engagements – the Risk Assessment and Audits of Special Districts. In 1999, Mr. Ecker also assisted in the passage of Measure I in San Bernardino County.

He founded CEO Strategic Solutions, LLC. He works with CEOs in clarifying the mission and giving objective solutions for business success. He served on two public boards; having qualified as a "financial expert" for SEC reporting, and chaired both audit committees.

Mr. Ecker has earned a trusted relationship with the State Controller's Office dating back to 2016.

Mr. Ecker's career in the public sector includes:

- Riverside County
- Riverside County Transportation Commission
- City of Compton
- City of Oxnard
- City of Stockton
- Mission Inn, City of Riverside Transaction
- Orange County- post bankruptcy
- San Bernardino County- Various Projects

Private Sector Includes:
- Baker's Burgers
- Guthy Renker
- Press Enterprise
- Stater Bros.
- Yeager Construction

RECENT RELEVANT CPE:

CSMFO Annual Conference: 2018
CSMFO Panel, Case in Point: Restoring Fiscal Credibility to your City: 2018
League of California Cities Annual Conference: 2016

EDEN CASARENO, CPA

Engagement Partner

ecasareno@eadiepaynellp.com | 951.241.7805

Our team has the ideal mix of industry experience and an innovative approach to ensure our solutions are in line with Riverside's mission.

Partner
Head of Attest and Government Services

EDUCATION

BS Degree in Business Administration, emphasis in Accounting, University of California, Riverside

Leadership Excellence Summit, Brainard Strategy Leadership Academy

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

California Society of Municipal Finance Officers

California Special Districts Association

Licensed by the State of California
Years of Experience: 18

SUMMARY

Ms. Casareno joined Eadie + Payne in 2002 and became a partner in 2009. Ms. Casareno ensures continual communication and high-quality execution, leveraging her over 18 years of experience performing financial statement audits, assisting clients with complex governmental accounting and reporting requirements, evaluating internal control design and implementation, and developing solutions for government clients in Southern California.

Ms. Casareno serves as the engagement partner for the following entities:

- City of Oxnard
- City of Stockton
- Hesperia Recreation and Park District
- Inland Empire Resource Conservation District
- Inland Valley Development Authority
- Law Library for San Bernardino County
- Riverside County Law Library
- San Bernardino County Auditor-Controller's Office
- San Bernardino County Special Districts
- San Gorgonio Pass Water Agency
- Twentynine Palms Water District

She also served as lead partner in providing agreed-upon procedures and consulting services to former redevelopment agencies in eight cities in Los Angeles County, Riverside County, and San Bernardino County, and assisted these agencies with the unique and complex compliance and financial reporting requirements related to the dissolution of redevelopment agencies in California. She also provided consulting services to the City of Moreno Valley (process reviews for CAL-Card and ASES program), City of Eastvale (property tax study), and County of San Bernardino (CAL-Card audit and County-wide Risk Assessment study).

As engagement partner, Ms. Casareno will be responsible for meeting all deadlines requested by the City. Having managed large, complex projects, she will lead the engagement team and maintain communication with management.

RECENT RELEVANT CPE:

AICPA Advanced Topics in a Single Audit: 2018
CSMFO Conference: 2018, 2017, 2016
CSMFO Panel, Case in Point: Restoring Fiscal Credibility to your City: 2018
AICPA Government Audit Quality Center Update: 2018, 2017, 2016
E+P Audit and Accounting Update: 2018, 2017, 2016
AICPA Fundamentals of Single Audit: 2017
CalCPA Governmental Accounting and Auditing Conference: 2017, 2016
Financial Statement, Tax, and Government Fraud: 2016
League of California Cities Annual Conference: 2016

EDWARD B. LASAK, CPA

Senior Advisor, AICPA COSO Certified

elasak@eadiepaynellp.com | 951.241.7833

Director of Consulting

EDUCATION

BS Degree in Accounting and MS Degree in Accounting, Illinois State University, Normal, Illinois

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

American Society of Appraisers

The ESOP Association

National Center For Employee Ownership

COSO INTERNAL CONTROL CERTIFICATE

AICPA
06/05/2018

Licensed by the States of California and Florida
Years of Experience: 35

SUMMARY

Mr. Lasak joined Eadie + Payne in 2018 as a senior industry advisor and Director of Consulting. He has more than 35 years of senior leadership experience as a Chief Financial Officer and Chief Operating Officer, most recently with the Press Enterprise Company and Stephens Media, LLC. In these roles, he directed operations, information technology, risk management, treasury, consumer sales, new product development, and strategic and capital plans.

Prior to his CFO roles, Mr. Lasak was responsible for starting and managing an internal audit department focusing on auditing through the computer and coordinating with outside auditors.

In 2015, Mr. Lasak founded Strategic Business Solutions. As a consultant, he works with CEOs, business owners, and Boards of Directors to optimize shareholder value, strengthen balance sheets, improve internal controls, analyze M&A opportunities, and minimize business risk.

In 2017, Mr. Lasak further expanded his consulting practice to provide professional CFO services to government agencies. In 2018, he earned his COSO certification and performs risk assessments and internal control evaluations. His experience in the public sector includes:

- City of Compton
- City of Moreno Valley
- City of Oxnard
- County of San Bernardino
- San Bernardino County Special Districts
- West Valley Water District

In concert with his CFO and COO roles, Mr. Lasak has led several significant business and production system conversions to the latest technology both as a project leader and the chief executive.

Mr. Lasak is, and has been, an active and influential member of the Inland Southern California community. For 18 years, he has served as a member and past Chairman of Inland Action, Inc. of San Bernardino County. He is serving on the board of the Unforgettables, and has served on community boards with Inland Empire Risk Management Association, California State University San Bernardino Business Advisors, the Riverside Philharmonic, and the Inland Empire Industry Advisor for California Society of CPAs.

Mr. Lasak served as an outside board member of BABCOCK Laboratories, Inc.

RECENT RELEVANT CPE:

AICPA –GAQC Update 2017, 2018
AICPA – Single Audit Fundamentals, Parts 1-4, 2017
CSMFO – The Coleman Report, 2018
CSMFO – Avoiding the Pitfalls: Common Financial Reporting Deficiencies and Latest GASB Implementation Guidance, 2018
CSMFO – The Future of IT and Smart Cities, 2018
CSMFO – District 9! Risk and Compliance in Special Districts, 2018
CSMFO – GASB Revisits the Financial Reporting Model, 2018
CSMFO – Debt Disclosure Policies, 2018

HONG N. NGUYEN, CPA

Industry Advisor

hnguyen@eadiepaynellp.com | 951.241.7804

Ms. Nguyen strives for continual improvement and embraces being a positive resource to her clients.

Industry Advisor

EDUCATION

BS Degree in Business Administration, emphasis in Accounting, University of California, Riverside

Brainard Strategy Leadership Academy graduate September 2018

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

California Society of Municipal Finance Officers

Licensed by the State of California
Years of Experience: 10

SUMMARY

Ms. Nguyen joined Eadie + Payne in 2008 and was promoted to partner in 2018. Ms. Nguyen possesses a comprehensive understanding of governmental auditing standards and an ability to apply technical accounting and auditing knowledge to real-life situations of the clients she serves. She demonstrates professional judgment, makes sound decisions, and possesses strong project management and interpersonal skills.

She has been the Executive on numerous initial audit engagements and excels in gaining a thorough understanding of the entity's operations and procedures. She values integrity and continued improvement.

Ms. Nguyen's governmental clients served include:

- Big Bear Municipal Water District
- City of Compton
- City of Industry
- City of Montebello
- City of Pomona Redevelopment Agency
- City of Oxnard
- City of Stockton
- City of San Fernando Redevelopment Agency
- County of San Bernardino
- Hesperia Recreation and Park District
- Inland Valley Development Agency
- Law Library for San Bernardino County
- San Bernardino County Special Districts
- San Bernardino Valley Water Conservation District

She served as the in-charge executive in providing agreed-upon procedures to multiple former redevelopment agencies in Los Angeles County, Riverside County, and San Bernardino County. She gained a thorough understanding of the unique and complex compliance and financial reporting requirements related to the dissolution and consequent presentation of redevelopment agencies in California and continues to remain updated with current developments and regulations.

RECENT RELEVANT CPE:

CSMFO Conference: 2018, 2017, 2016
CSMFO Panel, Case in Point: Restoring Fiscal Credibility to Your City: 2018
E+P Audit and Accounting Update: 2018, 2017, 2016
Quarterly Yellow Book Update - Q3: 2017
AICPA Single Audit Fundamentals: 2017
E+P Risk Assessment and Internal Control: 2017
AICPA Government Audit Quality Center Update: 2018, 2016
CalCPA Governmental Accounting & Auditing Conference: 2016, 2015
E+P Single Audit Update: 2016

JUDITH WILL, CPA

Senior Manager

jwill@eadiepaynellp.com | 951.241.7824

Senior Manager

EDUCATION

BS in Accounting, Cal Poly Pomona (Magna Cum Laude)

Post Graduate, Cal State University, Fullerton

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

Licensed by the State of California
Years of Experience: 25

SUMMARY

Ms. Will is a Senior Manager in the attest department with over 20 years of industry experience including government, not for profit, and privately and publicly held companies. Ms. Will has a thorough understanding of audit and accounting processes and procedures. During her career she has taken on the roles of auditor, auditee, as well as financial statement user. During her eight years at KPMG her experience as an audit manager included leading audits of IPO's and SEC S-1 Filings. She also has had a variety of private industry experience as a Vice President of Commercial Lending, and a Controller of a construction company. These experiences allowed her to gain unique insights into both bond financing requirements and highway and street construction. In the most recent years her focus has been on setting up auditing departments for local CPA firms including training staff to become CPA qualified, writing department audit processes and procedures, and overseeing Quality Control including peer review compliance.

Ms. Will's governmental clients served include:

- City of Compton
- City of Oxnard
- City of Lake Elsinore
- Hesperia Recreation and Parks District
- Inland Counties Regional Center
- San Bernardino County Special Districts
- Inland Valley Development Agency

As the senior manager, Ms. Will will manage the engagement paying particular attention to areas of risk. She will analyze the results and provide written recommendations for improvements to internal controls and other accounting processes to help eliminate inefficiencies, and mitigate risk.

RECENT RELEVANT CPE:

CalCPA Audit and Accounting Update: 2017, 2016, 2015
Financial Statement Disclosures, 2017
Fraud in Financial Statements, 2017
New COSO Framework: 2016

MARY MAXION, CPA

Supervisor

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Audit Supervisor

EDUCATION

BA Degree in Business Administration emphasis in Accounting, DeVry University, Long Beach, California

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

Licensed by the State of California
Years of Experience: 2

SUMMARY

Ms. Maxion joined Eadie + Payne as a staff accountant in April 2017 and has been promoted to supervisor in July 2018. Ms. Maxion demonstrates a strong understanding of generally accepted accounting principles, as well as governmental auditing standards. She has proven herself to be a valuable key team player by undertaking challenging assignments and overcoming them through efficient planning, sound decision making, and effective communicating, both internally and externally.

Ms. Maxion's clients served include:

- City of Compton
- City of Oxnard
- San Bernardino Special Districts
- Inland Counties Regional Center, Inc.
- Southern California Professional Golfers' Association Foundation, Inc.
- TuffStuff Fitness International Inc.
- Ultimate Internet Access, Inc.
- Partners Advantage Insurance LLC
- Central Valley Almond Association
- Calcot, Ltd.
- Cal Bean & Grain Coop Inc.
- Ventura Pacific Coop
- Fisher Family Properties, LLC

Ms. Maxion has been a key person in the firm's largest government audit client for which she serves as the first point of contact to the client. She is in charge of working with the City Controller's office to resolve the major discrepancies from prior fiscal years to bring them current. She holds regular status update presentations for City Management and she was the key player in assessing weaknesses in internal control by conducting interviews with department heads, documenting procedures, observations, and control testing. Ms. Maxion has led the team in processing and documenting over 200 findings, including interpreting State Controller's internal control findings. Ms. Maxion also assigns and supervises staff to complete work on multi-year engagements concurrently. She works with various City departments to manage the project work flow and communications of requested items in relation to the engagement.

RECENT RELEVANT CPE:

AICPA –GAQC Update 2017, 2018
AICPA – Single Audit Fundamentals, Parts 1-4, 2017
CSMFO – The Coleman Report, 2018
CSMFO – Avoiding the Pitfalls: Common Financial Reporting Deficiencies and Latest GASB Implementation Guidance, 2018
CSMFO – The Future of IT and Smart Cities, 2018
CSMFO – District 9! Risk and Compliance in Special Districts, 2018
CSMFO – GASB Revisits the Financial Reporting Model, 2018
CSMFO – Debt Disclosure Policies, 2018

ANTHONY J. LUCKI, CPA

Supervisor

alucki@eadiepaynellp.com | 951.241.7801

Supervisor

EDUCATION

BA Degree in Business Administration with a concentration in Accounting, California State University, Fullerton

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

License Pending
Years of Experience: 3

SUMMARY

Mr. Lucki is a supervisor with Eadie + Payne. Throughout his three years in the accounting industry, Mr. Lucki has focused on US GAAP, SEC, and financial statement reporting issues. He has acquired an extensive array of technical accounting knowledge and experiences, particularly in financial statement reporting and filings, debt restructurings, revenue recognition, multiple element arrangements, lease accounting, going concern evaluations, SOX 404 implementation, audits of ICFR, and SEC reporting matters.

Mr. Lucki has worked on major engagements including:

- San Bernardino County Special Districts
- Inland Valley Development Agency
- sTec, Inc.
- Buy.com
- Specific Media Group (owner of Myspace)
- The Lone Cypress Company
- Western Dental
- Tuff Stuff International

As supervisor of the audit of San Bernardino County Special Districts, Mr. Lucki is in charge of auditing 90 entities over a period of six months. He demonstrates sound professional judgment, and possesses project management and interpersonal skills.

RECENT RELEVANT CPE:

AICPA Government Audit Quality Center Update – 2017
Level 1 CFA certification (in progress)

SCOTT ROUNDTREE

Senior Accountant

sroundtree@eadiepaynellp.com | 951.241.7828

Senior Accountant

EDUCATION

BS in Business Marketing Management, Cal Poly Pomona

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

CERTIFICATIONS

Series 7 2007 - 2015

Series 66 2007 - 2015

CA - Life Insurance 2007 - 2015

Licensed by the State of California
Years of Experience: 2

SUMMARY

Scott Roundtree joined Eadie + Payne in 2017 as a Senior Staff Accountant. His responsibilities include preparing tax returns, tax planning & tax research. He also assists with audits & reviews as needed.

During Mr. Roundtree's eight years in the financial service industry, he became experienced in both trust and estate planning and developed an understanding of how individuals can avoid or reduce their estate tax liability with proper planning.

He excelled in investment planning as it pertains to estates and learned how individuals can maximize their wealth through proper planning.
Mr. Roundtree received his Bachelor of Science in Business Marketing Management at Cal Poly Pomona and later completed continuing education courses in accounting.

Mr. Roundtree was a key team member on the following audits:

- City of Oxnard
- Calcot, Ltd.
- Cal Bean & Grain
- San Bernardino Special Districts
- Inland Counties Regional Center
- Hesperia Recreation and Parks District

Relevant Recent CPE:

AICPA –Non GAAP Measures-What do they say About Fraud Risk
Preparing Government Financial Statements
Checkpoint Learning-C Corporations-Income Tax

JACLYN SHANKEL, CPA Candidate

Senior Accountant

jshankel@eadiepaynellp.com | 951.241.7819

Senior Accountant

EDUCATION

BA in Business and History, Walla Walla University (Summa Cum Laude)

MA in Early Modern History, King's College, London (Merit)

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

License Pending
Years of Experience: 1

SUMMARY

Ms. Shankel joined Eadie + Payne as a senior staff accountant in 2018 with a diverse training in accounting and research. During her time at E+P and through prior nonprofit accounting experience, Ms. Shankel has demonstrated a strong understanding of generally accepted accounting principles and procedures. She has further developed her research and critical thinking skills through substantial volunteering experience, donating time to institutions such as the British Museum, the Museum of Tolerance, local nonprofits, and more. Through the application of these key analytical and critical thinking skills to auditing standards, Ms. Shankel has proved herself to be a valuable team player.

Ms Shankel passed all parts of the CPA exam and is working on completing the required attest hours.

Ms. Shankel's clients served include:

- City of Oxnard
- San Bernardino County Special Districts
- Riverside County Law Library
- Ventura Pacific Company
- Girl Scouts of San Gorgonio Council
- San Bernardino Regional Emergency Training Center

RELEVANT RECENT CPE:

Analytical Procedures

SAMANTHA PANGAN, CPA

Senior Accountant

spangan@eadiepaynellp.com | 951.241.7829

Senior Accountant

EDUCATION

Bachelor of Technology in Accounting, British Columbia Institute of Technology

Associates Degree in Financial Management, British Columbia Institute of Technology

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Public Accountants

California Society of Certified Public Accountants

Licensed by the State of California
Years of Experience: 2

SUMMARY

Ms. Pangan is a senior accountant with Eadie + Payne. Ms. Pangan demonstrates a strong understanding of generally accepted accounting principles and governmental auditing standards through performing tests of internal controls and compliance of numerous local governments, including single audits. Ms. Pangan is confident in her work drive and ethic.

Ms. Pangan's clients served include:

- City of Compton
- City of Oxnard
- City of La Mesa
- City of El Cajon
- City of Thousand Oaks
- City of Aliso Viejo
- City of Sierra Madre
- City of West Covina
- City of Claremont
- City of La Verne
- City of Menifee
- City of Moorpark
- National Orange Show
- United Water Conservation District
- Ventura Regional Sanitation District
- Vallecitos Water District
- Pine Cove County Water District

RELEVANT RECENT CPE:

AICPA – 2017 Auditing Update
GASB 34: Basic Financial Statements for State and Local Governments
Audits of State and Local Governments
California Rules and Regulations

EXHIBIT "D"
WATER RATE DESIGN STUDY

PROJECT MEMORANDUM

WATER COST OF SERVICE AND RATE DESIGN

Date: 03/30/2018
Project No.: 9938B.00

City of Riverside Public Utilities

Subject: **Development of Scaled Rates Calculation**

Purpose

This project memorandum describes the methodology and results of the rate scaling analysis. Carollo assisted Riverside Public Utilities (RPU) with the analysis in order to adjust the rates proposed in the 2017 Cost of Service Analysis (COSA) Report based on RPU's updated 10-Year Financial Pro Forma (Pro Forma).

Background

Beginning in 2015, Carollo worked with RPU to complete a comprehensive water cost of service and rate design analysis, the analysis and report were finalized in August 2017. After the finalization of the COSA, RPU began a public outreach campaign with presentations to several stakeholder groups, the RPU Board of Directors, and the Riverside City Council. RPU subsequently received direction from the Board and Council to modify the plan and adjust the rates to lessen overall rate increases. Carollo assisted RPU in adjusting the rates proposed in the 2017 COSA to reflect the updated Pro Forma's projected rate revenue requirements and water sales.

Methodology and Results

Rate Implementation Timing

When the COSA study was completed, RPU anticipated implementing rate adjustments starting on April 1, 2018 followed by adjustments on January 1 of each of the following 4 years. Due to the delay driven by the Council's request to reevaluate the rates, the implementation dates were pushed back. As planned, the first adjustment will now take place on July 1, 2018, followed by adjustments on July 1 of the following 4 years.

To account for the delay, the rate scaling calculations compare the FY 2017/18 results from the COSA to the FY 2018/19 results from the updated Pro Forma and so forth for subsequent years. Table 1 below shows the COSA and Pro Forma fiscal years that correspond to each of the rate plan years (1 through 5).

Table 1. Scaling Analysis Years

	Year 1	Year 2	Year 3	Year 4	Year 5
COSA	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Updated Pro Forma	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23

Water Sales

RPU's Pro Forma includes price elasticity adjustments to account for changes in water sales driven by rate increases. The lowered rate increases of the updated Pro Forma lessen the impact of price elasticity on

RPU's sales projections, leading to higher overall sales. The rate scaling calculation is based on the higher level of sales in the updated Pro Forma. Table 2 shows the projected sales from the COSA analysis compared to those in the Updated Pro Forma. By year 5, RPU expects to have annual sales of nearly 1 million ccf higher than those projected in the COSA.

Table 2. Projected Sales Comparison

	Year 1	Year 2	Year 3	Year 4	Year 5
COSA Retail Sales (ccf)	26,572,000	26,035,000	25,604,000	25,176,000	24,744,000
Updated Pro Forma Retail Sales (ccf)	26,629,000	26,422,000	26,216,000	26,007,000	25,738,000
Increase from COSA (ccf)	57,000	387,000	612,000	831,000	994,000
Note: Sales shown in this table do not include sales to Totals may be imprecise due to rounding.					

In order to complete the rate scaling calculation, the sales projection from the updated Pro Forma was used to develop matching sales projections by rate class. Increases in sales for each of the major customer types (Residential, Commercial and Industrial, and Other) were applied to the detailed projections from the COSA to project the sales by rate class with the lowered rate increases of the updated Pro Forma. Table 3 shows the projected sales by rate class used in the rate scaling calculations.

Table 3. Projected Sales by Class

	Year 1	Year 2	Year 3	Year 4	Year 5
WA-2 Temporary Service	54,000	54,200	54,400	54,500	54,600
WA-4 Riverside Water Company Irrigators	29,100	28,700	28,400	28,000	27,600
Commercial and Industrial	7,874,000	7,898,300	7,923,500	7,947,900	7,960,800
WA-7 Interruptible	962,900	965,900	968,900	971,900	973,500
SFR	15,712,000	15,479,900	15,248,300	15,014,700	14,736,800
MFR	469,200	462,200	455,300	448,300	440,000
Landscape	1,527,500	1,532,200	1,537,100	1,541,900	1,544,300
Total Sales	**26,629,000**	**26,422,000**	**26,216,000**	**26,007,000**	**25,738,000**
Note: Totals may be imprecise due to rounding.					

Revenue Requirements

The updated revenue requirements set the basis for adjusting the proposed rates from the COSA. Table 4 shows a summary of the updated revenue requirements. This table can be compared to Table 4-9 in the COSA report.

Table 4. Updated Revenue Requirements

Revenues	Year 1 FY 2018/19	Year 2 FY 2019/20	Year 3 FY 2020/21	Year 4 FY 2021/22	Year 5 FY 2022/23
Revenue before rate and demand increase[1]	$57.74	$60.25	$63.29	$66.48	$69.83
Offsetting Revenues					
Interest income	1.45	1.69	1.30	1.54	1.79
Miscellaneous income	10.06	10.18	10.30	10.43	10.55
Outside City Surcharge	1.55	1.59	1.64	1.69	1.73
Other Charges for Service	0.63	0.64	0.66	0.67	0.68
Total Revenues Before Increase	**$71.43**	**$74.35**	**$77.19**	**$80.80**	**$84.60**
Expenditures					
Production costs	$4.85	$4.92	$5.00	$5.07	$5.13
Personnel costs	18.21	19.51	20.59	21.69	22.73
Other O&M costs	20.17	20.57	20.98	21.40	21.82
Additional O&M for CIP and Tech	0.99	1.47	1.95	2.34	2.98
Debt service requirements	15.42	17.54	17.21	18.56	21.47
General fund transfer	6.71	7.00	7.36	7.73	8.12
Capital outlay financed by rates	10.79	5.62	6.70	4.46	4.83
Total Expenditures	**$77.13**	**$76.62**	**$79.78**	**$81.25**	**$87.08**
Allocation to (Use of) Reserves Prior to Increases	**($5.70)**	**($2.27)**	**($2.59)**	**($0.45)**	**($2.49)**
Revenue Increase due to Demand and Growth Increases[2]	0.99%	0.80%	0.81%	0.83%	0.84%
Rate Revenue Increase	4.50%	5.75%	5.75%	5.75%	6.50%
Month of Rate Increase	July	July	July	July	July
Revenues from Demand and Rate Increases	$2.57	$3.10	$3.25	$3.41	$3.95
Total Revenues	**$73.99**	**$77.45**	**$80.44**	**$84.21**	**$88.55**
Allocation to (Use of) Reserves After to Increases	**($3.13)**	**$0.83**	**$0.66**	**$2.96**	**$1.46**
Unrestricted Undesignated Reserves	*$33.60*	*$33.41*	*$33.47*	*$33.67*	*$33.97*
Debt Service Coverage Ratio[3]	2.05x	1.86x	1.96x	1.91x	1.75x

Notes:
(1) Projected revenues prior to each fiscal year's demand and rate increases, includes the impact of increases from previous years.
(2) Prior to inclusion price elasticity adjustment.
(3) Net of BABs treasury credit.
(4) Totals may be off due to rounding.

Agricultural and Cemetery Rates

Based on direction from the City Council, agricultural customers in the Special Irrigation (WA-3) and Grove Preservation (WA-9) rate classes will not transition to otherwise applicable tariffs as proposed in the COSA. Rather, an Agricultural Rate Task Force is being assembled to assess options for the agricultural customers. For this analysis, it was assumed that the agricultural customers would receive the system average rate increases with a one-year delay to allow the Task Force to complete its study.

Similarly, cemeteries currently assessed the WA-7 rates will not be transitioned to the Landscape or Commercial classes. For this analysis, it was assumed that the cemetery customers would receive the system average rate increases beginning on July 1, 2018.

The proposed rates in the COSA report were calculated with the assumption that agricultural and cemetery customers would be transitioned into the other rate classes. The revenue impacts associated with the transition were incorporated into the rate revenue requirements and offset using non-rate revenues from interest earnings to avoid revenue shortfalls. The Council's new direction to create the Task Force and the change to the cemetery transition, as well as the scaled rates change the revenue impacts from those shown in the COSA.

Resulting Rate Revenue Requirements

Table 5 on the following page shows the rate revenue requirements used to calculate the scaled rates. The rate revenue requirements are determined by subtracting any offsetting revenues from the total annual requirements (expenditures) and adding adjustments for the rate increase delays (mid-year increases) and the agricultural and cemetery rates revenue impacts. Because the rates will be implemented on July first of each year, no adjustment for rate increase delays is needed in the updated rate revenue requirements. Table 5 can be compared to Table 4-10 in the COSA report.

Table 5. Updated Rate Revenue Requirements

	Year 1 FY 2018/19	Year 2 FY 2019/20	Year 3 FY 2020/21	Year 4 FY 2021/22	Year 5 FY 2022/23
Total Expenditures	$77.13	$76.62	$79.78	$81.25	$87.08
Allocation to (Use of) Reserves After Increases	(3.13)	0.83	0.66	2.96	1.46
Less Offsetting Revenues:					
Interest Income	($1.45)	($1.69)	($1.30)	($1.54)	($1.79)
Miscellaneous income	(10.06)	(10.18)	(10.30)	(10.43)	(10.55)
Outside City Surcharge	(1.55)	(1.59)	(1.64)	(1.69)	(1.73)
Other Charges for Service	(0.63)	(0.64)	(0.66)	(0.67)	(0.68)
Required Rate Revenue	**$60.30**	**$63.35**	**$66.54**	**$69.89**	**$73.78**
Plus: Anticipated Adjustment for Agricultural and Cemetery Rates[1]	$0.75	$0.75	$0.74	$0.72	$0.71
Revenue Requirements For Scaled Rates	**$61.05**	**$64.10**	**$67.28**	**$70.61**	**$74.49**
Notes:					
(1) The revenue shortfalls associated with Agricultural and Cemetery rates will be offset using Interest Income.					

Rate Scaling

The rate scaling calculation applies a scaling factor to the COSA rates to adjust them such that they generate the rate revenue requirements shown in Table 5.

Revenues with COSA Rates

Because the updated Pro Forma includes a higher sales projection than that of the COSA report due to decreased price elasticity, the rate revenue requirements from the COSA cannot be directly compared to those in the updated Pro Forma. Rather, the rate scaling calculation considers the amount of revenue that would be generated by applying the COSA's proposed rates to the updated sales projections. Table 6 shows the amount of rate revenues that would be expected with the COSA rates and the updated sales projection.

Table 6. Revenues with COSA Rates and Updated Sales Projection

	Year 1 FY 2018/19	Year 2 FY 2019/20	Year 3 FY 2020/21	Year 4 FY 2021/22	Year 5 FY 2022/23
Variable Revenue	$45,707,700	$47,229,200	$48,558,000	$49,959,400	$50,967,500
Fixed Revenue	17,680,000	20,909,400	24,504,600	28,472,500	32,802,800
Total Revenues with COSA Rates	**$63,388,000**	**$68,139,000**	**$73,063,000**	**$78,432,000**	**$83,770,000**
Note: Totals may be imprecise due to rounding.					

Scaling and Proposed Rates

The rate scaling factor for each year is equal to the Total Revenues with COSA Rates from Table 6 divided by the Revenue Requirements for Scaled Rates from Table 5. Table 7 shows the scaling factors for each year in the analysis.

Table 7. Rate Scaling Factor

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Revenues with COSA Rates	$63,388,000	$68,139,000	$73,063,000	$78,432,000	$83,770,000
Updated Revenue Requirements	61,052,000	64,099,000	67,281,000	70,615,000	74,493,000
Rate Scaling Factor	**0.963**	**0.941**	**0.921**	**0.900**	**0.889**

The proposed rates from the COSA report are multiplied by the rate scaling factor for the corresponding year to calculate the scaled rates. Due to the phase-in of increased fixed charges, the calculated volumetric rates for certain rate classes decrease slightly year-to-year. In these cases, the rates were overridden to hold rates constant for the 5-year period. The overrides will result in a slight under collection of revenue in years 1 through 3 and a corresponding slight over collection in years 4 and 5. Table 8 and Table 9 show the scaled volumetric rates and fixed service charges.

Table 8. Scaled Volumetric Rates

Single Family Residential (SFR) WA-1A							
Winter Rates	Existing	CCF Allotment	Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	$1.13	First 9	$1.16	$1.19	$1.22	$1.26	$1.30
Tier 2	1.64	10-35	1.45	1.50	1.54	1.58	1.64
Tier 3	2.26	>35	2.67	2.76	2.84	2.91	3.01
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	$1.14	First 9	$1.16	$1.19	$1.22	$1.26	$1.30
Tier 2	1.83	10-35	1.45	1.50	1.54	1.58	1.64
Tier 3	2.85	>35	3.26	3.37	3.46	3.55	3.66
Tier 4	4.10						
Multi-Family Residential (MFR) WA-1B							
Winter Rates	Existing	CCF Allotment	Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	$1.13	First 7 per DU[1]	$1.16	$1.19	$1.22	$1.25	$1.30
Tier 2	1.64	>7 per DU[1]	1.66	1.71	1.76	1.81	1.87
Tier 3	2.26						
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	$1.14	First 7 per DU[1]	$1.16	$1.19	$1.22	$1.25	$1.30
Tier 2	1.83	>7 per DU[1]	1.88	1.95	2.00	2.05	2.12
Tier 3	2.85						
Tier 4	4.10						
Commercial and Industrial WA-6							
Winter Rates	Existing		Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	Varies	All Usage	$1.58	$1.58	$1.58	$1.58	$1.58
Summer Rates	Existing		Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	Varies	All Usage	$1.84	$1.84	$1.84	$1.84	$1.84
Landscape Volumetric Rates (New Rate Schedule)							
Winter Rates	Existing		Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	Varies	All Usage	$1.67	$1.67	$1.67	$1.67	$1.67
Summer Rates	Existing		Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	Varies	All Usage	$2.14	$2.14	$2.14	$2.14	$2.14
Temporary Service WA-2							
	Existing		Year 1	Year 2	Year 3	Year 4	Year 5
All Usage	$2.71	All Usage	$2.39	$2.39	$2.39	$2.39	$2.39

Riverside Water Company Irrigators WA-4							
Winter Rates	Existing	CCF Allotment	Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	$1.14	First 15	$1.21	$1.22	$1.26	$1.29	$1.32
Tier 2	1.75	16-70	1.45	1.48	1.52	1.55	1.58
Tier 3	1.77	>70	2.26	2.29	2.36	2.40	2.46
Summer Rates	Existing	CCF Allotment	Year 1	Year 2	Year 3	Year 4	Year 5
Tier 1	$1.14	First 15	$1.21	$1.22	$1.26	$1.29	$1.32
Tier 2	1.76	16-70	1.45	1.48	1.52	1.55	1.58
Tier 3	1.87	>70	2.91	2.94	3.04	3.10	3.17
Interruptible and Recycled Water (New Rate Schedule- Previously WA-7 and WA-10)							
	Existing		Year 1	Year 2	Year 3	Year 4	Year 5
All Usage	$0.80 to $1.14		$1.57	$1.57	$1.57	$1.57	$1.57
Notes:							
(1) Dwelling Unit							

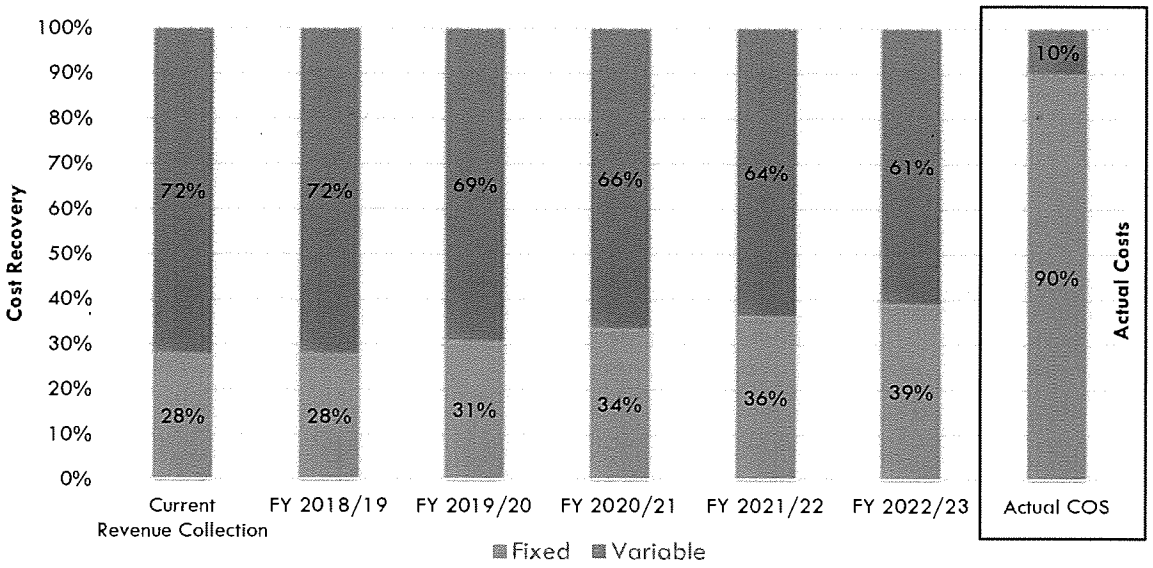
Table 9. Scaled Monthly Fixed Charges

Meter Size	Existing Residential	Existing Commercial/ Industrial	Year 1	Year 2	Year 3	Year 4	Year 5
3/4" & 5/8"	$13.99	$11.57	$15.80	$18.07	$20.53	$23.08	$26.00
1"	23.29	19.22	25.08	28.69	32.58	36.63	41.26
1.5"	46.60	38.46	48.08	55.00	62.45	70.22	79.08
2"	74.49	61.51	75.80	86.70	98.45	110.68	124.64
3"		142.52	140.51	160.72	182.49	205.16	231.03
4"		237.57	232.95	266.44	302.52	340.10	382.97
6"		475.19	510.10	583.43	662.43	744.72	838.59
8"		760.29	833.40	953.19	1,082.28	1,216.71	1,370.06
10"		1092.85	1,295.28	1,481.47	1,682.08	1,891.02	2,129.34
12"		1330.40	1,849.59	2,115.45	2,401.91	2,700.26	3,040.57

Fixed and Variable Revenues

Figure 1 on the next page shows the percentage of rate revenue in each year that is expected from the fixed and variable components of the rates. By the last year in the rate plan, 39 percent of total rate revenues will be generated by the fixed service charges. In the COSA, fixed service charge revenues in the last year of the rate plan were expected to comprise 40 percent of total rate revenues. However, the increased level of sales as compared to the projections in the COSA study leads to an increased portion of overall rate revenues being generated by the volumetric rates.

Figure 1. Fixed and Variable Revenues



Outside City Surcharge

The outside city surcharge calculation has been updated to reflect the scaling. Because (1) the scaled rates are lower than those proposed in the COSA, but (2) the amount of surcharge revenue to be collected is based on infrastructure needs that are not subject to scaling, the updated surcharge is slightly higher than that presented in the COSA report. Table 10 shows a summary of the outside city surcharge calculation, the updated surcharge amount will be 47 percent.

Table 10. Outside City Surcharge Calculation

	Year 1	Year 2	Year 3	Year 4	Year 5	Five Year Sum
Variable Revenue Without Surcharge	$2,240,000	$2,269,000	$2,290,000	$2,313,000	$2,340,000	$11,452,000
Annual Fixed Revenue Without Surcharge	874,000	1,008,000	1,154,000	1,308,000	1,485,000	$5,829,000
Total Revenue Without Surcharge	**$3,114,000**	**$3,277,000**	**$3,444,000**	**$3,621,000**	**$3,825,000**	**$17,281,000**
Surcharge Costs to Collect	**$1,550,000**	**$1,595,000**	**$1,640,000**	**$1,687,000**	**$1,735,000**	**$8,207,000**
					Calculated Surcharge	**47%**
Notes:						
(1) Totals may be off due to rounding.						

Memorandum Source Material

The information discussed and presented in this document is based on the "*Water 10 Yr Pro Forma 1-23-2018 - With Rate Scaling 3-30-2018.xlsm*" spreadsheet.

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WATER COST OF SERVICE AND RATE DESIGN STUDY

AUGUST 2017

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FIGURES

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GLOSSARY

TERM	DESCRIPTION
AF	Acre foot / Acre feet, 1 AF = 435.6 CCF, 326,000 gallons
AWWA	American Water Works Association
Carollo	Carollo Engineers, Inc.
CCF	One hundred cubic feet, 1 CCF = 748 gallons
CIP	Capital Improvement Plan
CY	Calendar Year
Domestic	Potable Water
Fixed Costs	Expenses that are not dependent on the level water production or water sold
FY	Fiscal Year
GPCD	Gallons per capita per day
GPD	Gallons per day
M1 Manual	"Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1" published by AWWA
MEU	Meter Equivalent Units – relate the capacity required to serve each connection to the system based on the expected maximum flow from meters of each size
MGD	Million gallons per day
O&M	Operations and Maintenance
PAYGO	Pay-As-You-Go
Potable Water	Water suitable to be consumed for drinking and other uses.
Raw Water	Water in its natural state, prior to any treatment for drinking.
Recycled Water or Reclaimed Water	Sewage that is treated to remove solids and impurities, and used for non-potable irrigation and commercial and industrial water needs
R-GPCD	Residential gallons per capita per day
RPU	Riverside Public Utilities
SWRCB	State Water Resources Control Board
Variable Cost	Costs that change in proportion to volume of water sold or produced

1 EXECUTIVE SUMMARY

1.1 STUDY PURPOSE

The City of Riverside, California's (City) Strategic Plan seeks to advance the mission of providing high-quality municipal services to ensure a safe, inclusive, and livable community. As the *City of Arts & Innovation*, the City's leaders aim towards a prosperous future in which the City builds on its assets to implement intelligent growth, and to be a location of choice that drives innovation, provides a high quality of life, and is united in pursuing the common good. In the Riverside 2.0 Strategic Plan, a wide-reaching set of objectives address challenges ranging from uncertain economic conditions, to climate change, to aging infrastructure. Guided by the Riverside 2.0 Strategic Plan, Riverside Public Utilities (RPU) developed the Utility 2.0 Strategic Plan (Utility 2.0 Plan). The Utility 2.0 Plan focuses on providing safe, reliable, affordable, and financially responsible water and electric services for the benefit of the residences and businesses it serves. Specific challenges that RPU is facing include:

- Ensuring water supply remains resilient and sustainable.
- Replacing aging water and electric infrastructure while balancing cost impacts.
- Developing its workforce and addressing the need for changing skill sets.
- Employing advanced technology in all areas of its business to provide more efficient and better customer service, both behind, and in front of, the meter.
- Thriving financially by ensuring costs are recovered and developing a new business model to adapt for the future.

To thrive financially, RPU must balance operating costs, capital expenditures, operating income, and reserves. Spending too much on operations and capital investments requires more revenue from customers, while spending too little degrades safety, reliability, and customer service. If operating income falls short of budgets, reserves can deplete causing borrowing costs to increase. RPU has effective tools to strike the right balance between these competing objectives including its 10-year Financial Pro Forma Model (pro forma) and new fiscal policies, which includes an updated reserves policy. However, RPU needs to develop a business model that is sustainable into the future.

RPU provides safe and reliable water to over 65,000 service connections in an environmentally and financially responsible manner. RPU's water service area is approximately 75 square miles, which includes approximately five square miles of land outside of the City limits. RPU's potable water system consists of groundwater basins, groundwater wells, a supply transmission system, water treatment plants, and a water distribution system. This report and the specific information that is presented relates specifically to RPU's Water Utility.

RPU funds its operations using water rate revenue, wholesale water revenue, water conveyance revenue (wheeling fees), and other miscellaneous revenue. The primary source of funding are the water rates

charged to residential, commercial, industrial, and other users, which account for over 86 percent of annual operating revenues.

Within the State of California, water agencies must establish rates in conformance with the substantive requirements defined by California Constitution article XIII D, section 6 (commonly referred to as Proposition 218), while taking into consideration the constitutional mandate to conserve the water resources of the State set forth in California Constitution article X, section 2.

Prudent financial planning and responsible use of reserves has allowed RPU to avoid increasing rates since 2010. To maintain a high level of service, RPU has undertaken the development of a cost-of-service and rate design study (study). This study incorporates and builds upon the projections in RPU's pro forma and consumption forecasts, and draws on several other sources including, but not limited to, historical billing data, cost of water analyses, and engineering data related to RPU's water systems. The goals of this study are to determine revenue requirements to operate the water utility, update the cost of providing water service to various customer classes, and develop water rates that are adequate to fund RPU's water operations in compliance with the requirements of proposition 218.

Though the wet winter in Fiscal Year (FY) 2016/17 has alleviated drought conditions for much of the state, it has resulted in ongoing challenges for water agencies. At the peak of the drought in FY 2015/16, RPU's customers were using over 20 percent less water than historic levels. Since the lifting of the State mandated usage curtailments RPU has realized a rebound in demands. However, it is expected that demand hardening due to conservation will result in continuing demand reductions, though not as severe as those in FY 2015/16.

RPU's current rates recover costs primarily through volumetric charges. However, approximately 90% of RPU's costs are fixed. As water demand decreases, RPU loses income needed to pay for its fixed costs related to providing water service. With ideally designed rates, the fixed charges are designed to recover fixed costs and variable charges are designed to recover variable costs, and eliminating the risk of under-collection of fixed costs. RPU's current residential and commercial rate structures also include inclining tiered pricing which increases revenue risk when customers in the higher tiers conserve or reduce their demand. These factors have significantly increased the level of uncertainty with regards to RPU's operational and financial planning. Reducing the number of tiers will allow RPU to mitigate the revenue risk associated with reduced revenue resulting from reduced demand.

These uncertainties underscore the need for integrated financial planning and flexible rate design. At the outset of the study, Carollo Engineers (Carollo) and RPU discussed and summarized key study goals. Several key issues and challenges that were considered during the cost-of-service analysis and rate design project included:

- Review implications of ongoing water conservation.
- Implement cost-of-service-based demand reduction rates that comply with Proposition 218, and are adaptable to changing water demands.
- Maintain financial stability while incentivizing efficient water usage.

- Better align fixed and variable revenue collection with costs.
- Evaluate and consider reducing the number of tiers in the residential and commercial classes
- Achieve customer equity under continued changes to consumption. Review customer demand impacts from implementing a new rate structure.
- Identify future fiscal, operational, and capital impacts and considerations.

1.2 COST OF SERVICE STUDY

RPU retained Carollo Engineers to conduct a five-year cost of service study starting with its FY 2017/18 water rate structure. Like many California water agencies, the drought and its now lifted mandatory water use reduction requirements has had lasting implications for RPU. Continued conservation has resulted in some revenue instability due to decreased revenues resulting from lower water sales and uncertainty of future water demands. The cost of service study addresses the need for RPU to adapt to this "new normal" level of demand as it continues to fund its operations and system investment.

The cost of service rate analysis presented within this report consists of the following three interconnected processes:

The processes presented above are advocated by the American Water Works Association (AWWA) for cost of service rate setting. While the process is described in a linear step by step approach, it is better understood as an iterative process where the ultimate objective is to balance revenues with costs in an equitable manner for customers. These three processes will form the basis for the rate analyses presented within this report.

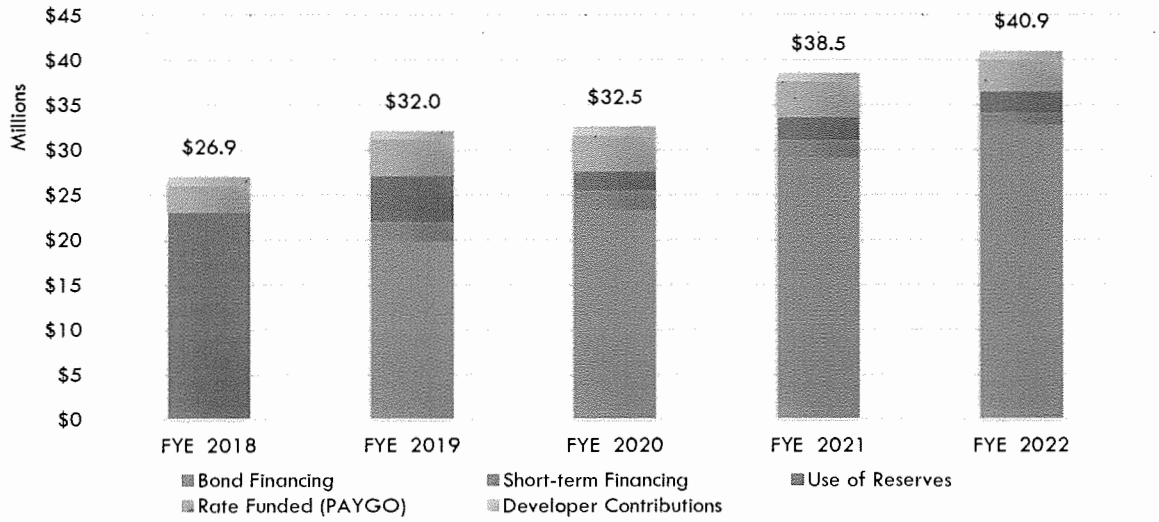
1.2.1 Revenue Requirements

The revenue requirements analysis compares the forecasted revenues of the utility to its forecasted operating and capital costs less offsetting revenues including interest income, lease revenues, water conveyance revenue, wholesale water sales revenues, capacity charge revenues, settlement revenues, interest earnings, and other operating and non-operating revenues, to determine the adequacy of the existing rates to recover the utility's costs of providing service. If any shortfalls exist, rates might need to be increased. Through its annual budgeting process, RPU performs a detailed review of its costs, including operations expenditures, capital needs, and funding requirements. RPU developed and maintains a financial pro forma that defines its annual rate revenue requirements based on projected expenditures and as prescribed by its fiscal, cash reserve, and debt management policies. The pro forma serves as the basis for this rate analysis.

Capital Improvement Plan

In October 2015, RPU's governing Board and City Council conceptually approved a new plan called Utility 2.0. Utility 2.0 includes a ten year Capital Improvement Plan with several options that relate to rehabilitation and replacement of existing infrastructure, enhancements to existing water supply, development of new sources of supply, expansion of the recycled water system, and employing advanced technologies to provide more efficient and better customer service. The results discussed within the body of this report are based on Option 3 in the Utility 2.0 Plan which was conceptually approved by City Council on October 6, 2015. The Utility 2.0 CIP will be funded through a combination of reserve funds, rate revenues, debt financing, and other sources as shown in Figure 1-1 below.

FIGURE 1-1 CIP FUNDING SOURCES



Reserve Policy

To accompany the Utility 2.0 CIP, RPU has developed a robust reserve policy, which is designed to promote fiscal sustainability, minimize borrowing costs, and provide a source of emergency funds for unforeseen events. The reserve policy defines the restricted reserves, unrestricted designated reserves, and unrestricted undesignated reserves, while also setting the overall minimum and maximum unrestricted undesignated reserve levels. Detailed information on each specific risk category is provided in Section 4.4 of this report. Table 1-1 below shows the projected unrestricted undesignated reserve minimum and maximum levels for each year of the study period.

As part of the Five Year Rate Plan, RPU will propose updating the reserve policy to securing a line of credit (LOC) from a third party as available reserves to meet unrestricted undesignated reserve targets. A LOC is a low cost mechanism that allows RPU to draw upon cash when needed, thus reducing required cash reserve levels, minimizing rate increases to maintain reserve levels, and increasing liquidity. Unrestricted undesignated reserve projections were developed to include the LOC and remain above the target minimum levels.

TABLE 1-1 UNRESTRICTED, UNDESIGNATED RESERVE LEVELS

Target Reserve Level	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Minimum	$43,647,000	$47,915,000	$52,101,000	$55,734,000	$62,907,000
Maximum	$67,226,000	$72,686,000	$79,257,000	$84,457,000	$93,807,000
Proposed Line of Credit	$34,222,000	$34,222,000	$34,222,000	$34,222,000	$34,222,000

Financial Projection

Overall, RPU must raise rate revenues in order to account for reduced water demands, increases in operating costs, and to fund future capital reinvestments. While the water utility will recover some additional revenue from the projected increases in water demands as the restrictions are lifted, these increased sales alone are not sufficient to fund RPU's needs. Table 1-2 presents a summarized financial projection including revenues, expenditures, and overall rate revenue increases for the forecast period beginning in FY 2017/18 through FY 2021/22. A system wide rate revenue increase of 8.75 percent will be required starting on April 1, 2018, with 8.50 percent increases occurring on January 1 of each subsequent year through FY 2021/22. Actual rate increases may vary by customer class and consumptions levels as reflected in Appendices G and H.

TABLE 1-2 REVENUE REQUIREMENTS FORECAST (MILLIONS)

Revenues	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Rate Revenue before annual rate and demand increase[1]	$55.61	$59.60	$65.26	$69.85	$74.64
Offsetting Revenues	11.32	12.56	13.03	12.67	13.38
Total Revenues Before Increase	**$66.93**	**$72.16**	**$78.29**	**$82.52**	**$88.01**
Expenditures					
O&M Expenditures	40.77	44.25	46.58	48.67	50.65
Debt service requirements	13.82	15.40	18.78	18.79	21.10
General fund transfer	6.64	7.11	7.76	8.30	8.86
Capital outlay financed by rates	5.07	9.79	6.70	7.10	6.52
Total Expenditures	**$66.30**	**$76.54**	**$79.82**	**$82.86**	**$87.12**
Allocation to (Use of) Reserves Prior to Increases	**$0.63**	**($4.37)**	**($1.53)**	**($0.34)**	**$0.89**
Demand and Growth Increase[2]	6.56%	0.99%	0.80%	0.81%	0.83%
Rate Revenue Increase	8.75%	8.50%	8.50%	8.50%	8.50%
Month of Rate Increase	April	January	January	January	January
Revenue from Demand and Rate Increases	$4.01	$5.67	$4.60	$4.81	$5.10
Total Revenues	**$70.94**	**$77.84**	**$82.89**	**$87.32**	**$93.12**
Allocation to (Use of) Reserves After Increases	**$4.64**	**$1.30**	**$3.06**	**$4.46**	**$6.00**
Unrestricted Undesignated Reserves	*$40.22*	*$38.41*	*$40.19*	*$43.85*	*$45.64*
Debt Service Coverage Ratio[3]	2.29x	2.27x	2.00x	2.13x	2.07x

Notes:

(1) Projected revenues prior to each fiscal year's demand and rate increases with Outside City Surcharge, includes the impact of increases from previous years.
(2) Prior to inclusion of price elasticity adjustments.
(3) Net of BABs treasury credit.
(4) Totals may be off due to rounding

1.2.2 Cost of Service Analysis

After determining the utility's revenue requirements, the next step in the analysis is to outline the cost to deliver each unit of water to serve each customer. This process takes each item in RPU's budget and reviews how and why those costs are incurred to serve water customers. For example, some cost items support the ability to deliver basic water service, while other costs are incurred in order to provide water during the summer when outside irrigation demands are the highest. These high summer demands drive the need for oversizing of infrastructure and system capacity to serve the peak demand. Organizing the budget in terms of end function allows direct correlation between each budget item and the rate, coupling the cost incurred by RPU and the benefit delivered to the customer or the demand and burden that the customer places on RPU's system and/or water resources.

1.2.3 Rate Design Analysis

The final component of the analysis is the rate design analysis. The rate design involves developing a rate structure that proportionally recovers costs between customer classes (i.e., single-family residential and commercial), as well as from customers within their designated customer class. For example water supply costs are recovered based on the units of water sold (demand), while capital costs are recovered based on the size of a customer's meter, which accounts for the capacity needs of that customer or potential demand that customer can place on the system. This step allows RPU to develop unit costs that can then be layered based on customer characteristics. This is a critical process for establishing tiered rates, as increasing usage incurs additional costs that make each unit of water more expensive to provide. This process creates a fair and equitable foundation for establishing each charge and rate that RPU levies in order to proportionally recover system costs from its customers.

Forecasting water sales and purchases is also a critical component in the rate setting process. RPU's forecast process includes a multi-year evaluation of system demands on a customer class and system-wide basis. RPU currently has enough local supplies to meet all of its demands, as well as has the ability to purchase imported water from Western Municipal Water District, a member agency of the Metropolitan Water District of Southern California. RPU's water demand forecast is used as the basis for setting commodity rates for this rate plan.

With this approach, Carollo has taken into consideration not only industry accepted standards issued by the AWWA and RPU's specific water system and customer characteristics, but also California's unique legal framework as discussed later within this study.

Current Rate Structure

Table 1-3 below shows a list of RPU's current water customer classes and a brief description of the rate structure and consumption characteristics of each. The rate design analysis reviewed the characteristics and consumption patterns of each rate to verify the appropriateness of the current structure, and to identify potential enhancements and simplifications that could be made.

TABLE 1-3 CURRENT CUSTOMER CLASSES AND RATES

Customer Class		Rate Structure and Consumption Characteristics
Residential	WA-1	Meters serve both single and multiple unit residences; consumption peaks in summer months due to increased outdoor usage. Seasonal rates with a 4-tier inclining block structure.
Flat Rate Temporary Service	WA-2	Flat rate for temporary usage for construction, fire hydrant use, and bulk permit delivery. Consumption peaks heavily in summer.
Irrigation Metered Service w/ Residence	WA-3.1	Two tiered inclining block structure with very large tier 1 block (100 CCF). Consumption peaks marginally in summer. Closed to new customers as of May 31, 2003.
Irrigation Metered Service w/o Residence	WA-3.2	Flat rate for all usage. Consumption peaks during the summer months. Closed to new customers as of May 31, 2003.
Riverside Water Company Irrigators	WA-4	Three tiered inclining block structure for residential and commercial customers. Consumption peaks marginally in summer. RPU is contractually bound to serve these customers under a unique rate structure, resulting from the acquisition of the Riverside Water Company.
General Metered Service - Commercial	WA-6.1	Two tiered inclining block structure for meters from 5/8" to 2" serving commercial customers. Consumption peaks marginally in summer.
General Metered Service - Industrial	WA-6.2	Three tiered inclining block structure for meters from 3" to 12" serving industrial and institutional customers. Consumption peaks marginally in summer.
Special Metered Service	WA-7	Flat rate for all usage by City of Riverside for irrigation of public facilities. Consumption peaks heavily in summer.
Greenbelt Irrigation Service	WA-8	Pass-through rate for customers who are able to take Gage Canal water and have installed a pressurized system. Used only for outdoor irrigation; consumption peaks heavily in summer.
Grove Preservation Service with Residence and Nominal Ornamental Landscaping	WA-9.1	Three tiered structure with declining tier 3 rate. Meters serve both indoor (residential) and outdoor usage; consumption peaks in summer due to increased outdoor usage.
Grove Preservation Service without residence or with separately metered Residence and more than Nominal Ornamental Landscaping	WA-9.2	Flat rate for all usage. Meters may serve outdoor usage; consumption peaks in summer due to increased outdoor usage.
Recycled Water Service	WA-10	Flat Rate for all usage. Meters serve outdoor usage; consumption peaks heavily in summer due to increased irrigation demands.

1.3 RESULTS AND RECOMMENDATIONS

While the existing rate structure was found to be appropriate, Carollo recommends that RPU update its water rates based on its forecasted budget, water demands and on the analysis as presented within this Cost of Service Study (Study). The rate structure updates and enhancements center on providing increased revenue stability from both fixed and variable charges, simplifying specific rate structures, and creating new customer classes for distinct user groups.

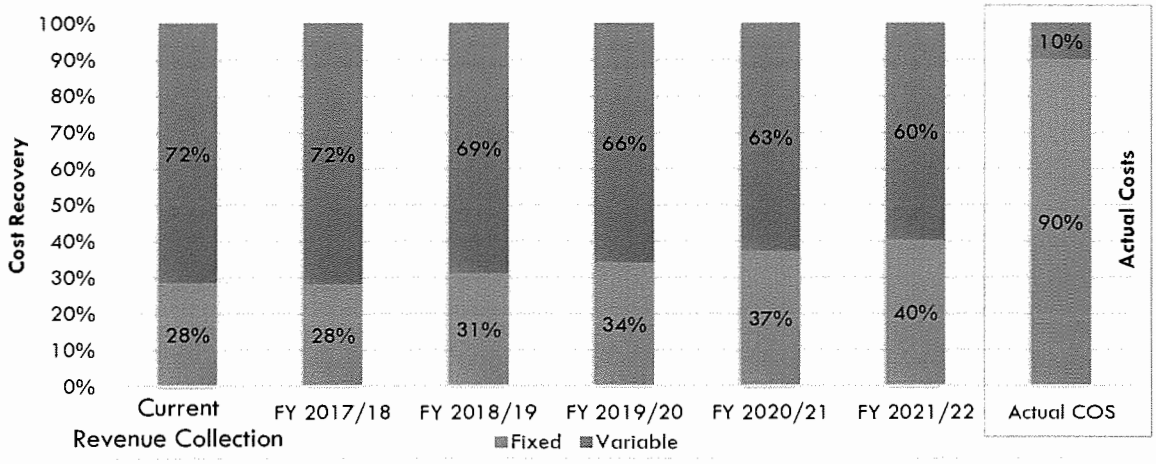
Based on discussion with RPU staff and careful review of the cost of service analysis, Carollo recommends that RPU implement the following rate design modifications:

- Increase the percentage of costs recovered by the fixed charge to better reflect how actual costs are incurred. The adjustments helps RPU meet its objective of increased revenue stability and predictability.
- Implement a uniform fixed monthly service charge for each meter size.
- Separate Single Family Residential (SFR) and Multi-Family Residential (MFR) customers into different rates.
- Implement a three-tier rate structure for SFR customers with seasonally adjusted rates.
- Revise SFR tier 1 allotment from 15 CCF to 9 CCF per month, which assumes 55 gallons per day at four persons per SFR dwelling.
- Implement a two-tier rate structure for MFR customers with two, three, or four dwelling units with tier allocations based on the number of dwelling units served by each account. MFR accounts with more than 4 dwelling units will be assessed the Commercial and Industrial Rate.
- The MFR tier 1 allotment will be set at 7 CCF based on 3 persons per household and 55 gallons per person per day.
- Combine Commercial (WA-6.1) and Industrial (WA-6.2) accounts into one rate class with a uniform, seasonally adjusted rate.
- Implement a uniform landscape rate which is seasonally adjusted and separate from the Commercial and Industrial Rates.
- Combine Special Metered Service (WA-7) accounts, which are used by the City for irrigation of public facilities, with Recycled Water (WA-10).
- Transition Irrigation Metered Service (WA-3) and Grove Preservation Service (WA-9) customers to the otherwise applicable rate classes. Services with residences (WA-3.1 and WA-9.1) will be transitioned to the SFR rate class as they serve residences, while services without residences (WA-3.2 and WA-9.2) will be transitioned to the commercial and industrial rate class as they serve primarily commercial nursery operations.
- Transition cemeteries that have historically been charged under the Special Metered Service (WA-7) rate to the otherwise applicable rate classes. Meters that serve offices or other structures will transition to the Commercial and Industrial rate, while those that serve exclusively irrigation will transition to the Landscape rate.

Revenue Stability

RPU's current rates are structured to recover costs primarily through volumetric charges while most of its costs are fixed. As water demand decreases, RPU loses income needed to pay for its fixed costs related to providing water service. As fixed charges are increased to better collect fixed costs, RPU increases revenue stability and predictability. The proposed rates will increase fixed revenue to about 40% of retail revenues by FY 2021/22 and reduce the number of tiers in the residential and commercial classes. The proposed rate structures reduce revenue volatility and maintain financial stability. Figure 1-2 shows the percentage of overall rate revenue to be collected through the fixed charges and the volumetric rates for each year of the study period.

FIGURE 1-2 FIXED COST RECOVERY



Revenue stability enhancements will also be achieved through the modifications to the volumetric rates for SFR and Commercial and Industrial customers. The move to a three tiered structure rather than a four tiered structure for SFR customers decreases volatility in revenues from the highest users. Additionally, the differential in the rate for usage within each tier have been reduced based on RPU's supply characteristics to further reduce volatility. Migration to a seasonally adjusted uniform rate for commercial and industrial users will reduce volatility driven by the changes among the highest users in those classes.

Rate Structure Simplifications

Simplifications will be made to the fixed charges paid by all classes, and to the volumetric rates for specific classes. The shift to monthly fixed service charges that are consistent for all customer classes will simplify the overall rate structure and promote better customer understanding while accurately reflecting the capacity burden placed on the system by each customer. Implementation of a seasonally adjusted uniform rate structure will allow commercial and industrial customers to be combined into a single class.

New Customer Classes

New customer classes will be created to separate distinct user groups that are currently charged under more general rate classes. The Residential customer class will be separated into SFR and MFR classes, and landscape irrigation rates will be separated from the commercial and industrial classes.

MFR customers with two, three, or four dwelling units will be placed into a distinct rate class with a two tiered structure and allotments that are set based on the number of dwelling units served by each account. This structure better reflects the indoor usage needs and overall usage pattern of MFR accounts. All MFR accounts with more than four dwelling units will be charged under the commercial and industrial rate, since those complexes typically exhibit consumption patterns similar to those of commercial customers.

Landscape irrigation customers are currently served under the commercial and industrial rates depending on the size of the water meter. However, analysis of billing data has shown that the consumption patterns of landscape irrigation customers are distinct from those of other non-landscape commercial and industrial users, in that they exhibit a much larger seasonal peak. The proposed rates address this discrepancy by providing a separate seasonally adjusted uniform rate for landscape irrigation customers.

Variable Rates

The variable rates are developed for each customer class and are designed to recover the costs proportionate to water demands. The variable rates recover the costs of producing water from RPU's groundwater basins, treating water to potable standards, and transporting it to each customer. They also recover the costs to operate and maintain the system, a portion of engineering costs, and the portion of capital costs (debt service and rate funded capital) that is associated with projects that develop, maintain, or enhance RPU's water supplies. Supply related capital projects include groundwater recharge, recycled water, storm water capture, and treatment plant projects.

Costs that are associated with providing a basic level of service, base costs, are equal for each unit of water provided. Differences in rates between each customer class and between each tier are based on the water supplies required to provide water to each customer class, and to cover demand in each tier (in classes with tiered rates.) Supply related costs are recovered from each customer class based on each class's consumption patterns, users who place a greater burden on the system during the summer months are responsible for a greater share of the higher cost sources of supply.

For classes with tiered rates, supply costs are allocated to each tier starting with the lowest cost sources for usage in Tier 1 and applying the higher cost supplies to usage in the upper tiers. For example, the Proposed Tier I rate for single family includes base costs, plus the single family class's share of supply costs for water produced from the Gage supply, RPU's lowest cost water source, and a portion of existing debt service. Tier 2 rate includes the class's share of costs to produce water from the Riverside North/South supply, a portion of those from Waterman supply (the next highest cost sources of supply), and a portion of supply related capital costs. The Tier 3 rate includes the class's remaining portion of Waterman costs, the class's share of costs for the Flume system costs (the highest cost source of supply)

as well as portion of supply related capital costs. The proposed volumetric rates are presented in Table 1-4.

TABLE 1-4 VOLUMETRIC RATES

Single Family Residential (SFR) WA-1							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 9	$1.20	$1.27	$1.33	$1.40	$1.46
Tier 2	1.64	10-35	1.51	1.59	1.67	1.76	1.84
Tier 3	2.26	>35	2.77	2.93	3.08	3.23	3.38
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 9	$1.20	$1.27	$1.33	$1.40	$1.46
Tier 2	1.83	10-35	1.51	1.59	1.67	1.76	1.84
Tier 3	2.85	>35	3.38	3.58	3.76	3.94	4.12
Tier 4	4.10						
Multi-Family Residential (MFR) WA-1							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 7 per DU[1]	$1.20	$1.27	$1.33	$1.39	$1.46
Tier 2	1.64	>7 per DU[1]	1.72	1.82	1.91	2.01	2.10
Tier 3	2.26						
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 7 per DU[1]	$1.20	$1.27	$1.33	$1.39	$1.46
Tier 2	1.83	>7 per DU[1]	1.95	2.07	2.17	2.28	2.38
Tier 3	2.85						
Tier 4	4.10						
Commercial and Industrial WA-6							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.66	$1.69	$1.72	$1.75	$1.77
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.93	$1.97	$2.00	$2.03	$2.05
Landscape Volumetric Rates (New Rate Schedule)							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.75	$1.78	$1.81	$1.84	$1.86
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.24	$2.28	$2.32	$2.36	$2.38
Temporary Service WA-2							
	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.50	$2.56	$2.60	$2.64	$2.67
Riverside Water Company Irrigators WA-4							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.26	$1.30	$1.37	$1.43	$1.48
Tier 2	1.75	16-70	1.51	1.57	1.65	1.72	1.78
Tier 3	1.77	>70	2.35	2.43	2.56	2.67	2.77
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.26	$1.30	$1.37	$1.43	$1.48
Tier 2	1.76	16-70	1.51	1.57	1.65	1.72	1.78
Tier 3	1.87	>70	3.02	3.13	3.30	3.44	3.56
Interruptible and Recycled Water (New Rate Schedule- Previously WA-7 and WA-10)							
	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$0.80 to $1.14	All Usage	$1.63	$1.67	$1.70	$1.72	$1.74

Notes:
(1) Dwelling Unit

Fixed Charges

The fixed charge is intended to provide a stable revenue source that that recovers the costs allocated based on customer accounts and the amount of capacity reserved by each customer. The customer account component recovers costs that apply to all accounts in the system, regardless of usage or the size of the connection to the system. Specifically, these costs include billing and administrative costs that are independent of each customer's capacity share and therefore equal for each account.

The amount of capacity reserved by each customer is based on the size of their connection to the system, thus, the capacity component of the fixed charge is different for each meter size. In the proposed fixed charge, the capacity component is designed to collect costs associated with capital expenditures that are not related to water supply enhancements. These costs include a portion of existing and projected debt service, a portion of rate funded capital, and a portion of engineering costs.

Table 1-5 presents the proposed fixed charges for each year of the rate plan.

TABLE 1-5 FIXED MONTHLY SERVICE CHARGES

Meter Size	Existing Residential	Existing Commercial/ Industrial	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
3/4" & 5/8"	$13.99	$11.57	$16.40	$19.21	$22.29	$25.64	$29.24
1"	23.29	19.22	26.04	30.50	35.38	40.69	46.40
1.5"	46.60	38.46	49.92	58.47	67.82	77.99	88.93
2"	74.49	61.51	78.70	92.16	106.91	122.93	140.16
3"		142.52	145.89	170.85	198.17	227.87	259.80
4"		237.57	241.86	283.23	328.52	377.75	430.67
6"		475.19	529.61	620.20	719.36	827.16	943.03
8"		760.29	865.28	1,013.27	1,175.29	1,351.40	1,540.69
10"		1,092.85	1,344.83	1,574.84	1,826.63	2,100.35	2,394.54
12"		1,330.40	1,920.34	2,248.78	2,608.32	2,999.17	3,419.25

1.4 TRANSITIONAL RATES

As a component of the cost of service analysis, RPU's rate classes were reviewed and customer data was analyzed to test the nexus between rate class and account and usage characteristics. As a result of this analysis, it was determined that several rate classes that have historically been treated as distinct classes, would be more appropriately placed within RPU's general SFR, Commercial and Industrial, or Landscape rate classes. The effected customers include all customers in Irrigation Metered Service (WA-3.1, WA-3.2), Grove Preservation Rate (WA-9.1, WA-9.2), and cemetery customers in Special Metered Service (WA-7).

Under direction from RPU, and in order to mitigate the rate impacts to effected customers, this study migrates the customers to the appropriate rate classes over the rate projection period. As a result, transitional rates for each of the classes were developed to smooth the increases over five years. All of the effected rate classes are or will be closed to new users going forward.

The proposed monthly transitional rates are set forth in the tables of this report as well as in in Appendix H.

1.5 RATE ADJUSTMENTS

In light of the current water demand uncertainty and need for financial resiliency, RPU has explored multiple approaches to increase revenue stability. Two rate adjustment mechanisms were explored as part of this study, if used collectively, can help to create revenue stability for RPU.

1.5.1 Demand Reduction Rates

Demand Reduction Rates are charges that may be imposed by RPU following levels of extreme water demand reductions. The objective of these rates is to maintain sufficient revenue levels if customers' potable water usage declines as a result of expanded or future water shortage conditions. The rates are important in that many of RPU's costs are fixed and do not fluctuate with changes in water demands.

RPU is forecasted to have water sales of roughly 26.7 million CCF in FY 2017/18. Based on an extreme water curtailment period, RPU estimated three potential demand reduction scenarios as follows:

- Demand Reduction Stage 1 would equate to a slight reduction in demands (15 percent).
- Demand Reduction Stage 2 would equate to a larger reduction in demands (20 percent).
- Demand Reduction Stage 3 would equate to the maximum expected reduction in demands (30 percent).

The demand reduction rates would be implemented through a council action and would be lifted once there are no longer reduced water sales.

1.5.2 Pass-Through Cost Adjustments

In 2008, the California legislature adopted California Assembly Bill 3030 (AB 3030), which allows agencies to adopt rates that include automatic adjustments that either pass through increases in wholesale charges for water or include increases for inflation. As part of its Proposition 218 rate noticing process, RPU may notice its cost escalation assumptions and subsequently make specific pass-through cost adjustments if costs escalation, such as for the price of energy, exceed the noticed cost assumptions. These adjustments require a written notice to RPU's customers before the automatic increase is implemented, and gives RPU flexibility to adapt to changes in costs that could occur within the Five Year Rate Plan.

1.6 RPU WITHOUT RATE ADJUSTMENTS

RPU is going through a challenging period of change over the next five years as it takes action to achieve the strategic visions of the City. The Utility 2.0 Plan includes updating and modernizing operations through technology; replacing aging infrastructure; enhancements to existing water supply; development of new sources of supply; expansion of the recycled water system; and setting new

standards for excellence in operations, safety, efficiency, and reliability; all while maintaining long-term financial strength.

RPU's operations and needed investments cannot be sustained without rate adjustments. Rates must be adjusted to more accurately reflect the high fixed costs relative to variable cost structure. If rates are not adjusted, RPU will not be able to fund its Utility 2.0 investments, its increased operating costs, and will fail to maintain its strong financial metrics. RPU's existing reserves are not sufficient to pay for the planned investments. Additionally, drawing down on its reserves will also lead to higher borrowing costs for the City, as a result of anticipated negative impacts to its credit rating. RPU has deferred its investments for as long as practical; without rate adjustments, these delays will impact utility operations and customer service.

2 INTRODUCTION

2.1 STUDY PURPOSE

The City of Riverside (City) Public Utilities Department (RPU) provides safe and reliable water to over 65,000 service connections in an environmentally and financially responsible manner. To maintain this level of service in light of water conservation requirements and needed implementation of Utility 2.0, RPU has undertaken the development of a cost-of-service and rate design study. This study incorporates and builds upon the projections in the pro forma and consumption forecasts, and draws on several other sources including, but not limited to, historical billing data, cost of water analyses, and engineering data related to RPU's water systems.

Though the wet winter in FY 2016/17 has alleviated drought conditions for much of the state, it has resulted in ongoing challenges for water agencies. At the peak of the drought in FY 2015/16, RPU's customers were using over 20 percent less water than historic levels. Since the lifting of the State mandated usage curtailments RPU has realized a rebound in demands. However, it is expected that demand hardening due to conservation will result in continuing demand reductions, though not as severe as the reductions in FY 2015/16. Continued conservation has resulted in some revenue instability due to decreased revenues resulting from lower water sales and uncertainty of future water demands. These factors have significantly increased the level of uncertainty with regards to RPU's operational and financial planning.

This uncertainty underscores the need for integrated financial planning and flexible rate design. At the outset of the study, Carollo Engineers (Carollo) and RPU discussed and summarized key study goals. Several key issues and challenges that were considered during the cost-of-service analysis and rate design project included:

- Review implications of ongoing water conservation.
- Implement cost-of-service-based demand reduction rates that comply with Proposition 218 and are adaptable to changing water demands.
- Maintain financial stability while incentivizing efficient water usage.
- Achieve customer equity under continued changes to consumption. Review customer demand impacts from implementing a new rate structure.
- Identify future fiscal, operational, and capital impacts and considerations.

The purpose of this report is to address each of these key issues as part of the systematic evaluation and development of the cost-of-service analysis and RPU rate design.

The study was divided into three main phases in order to address these issues and prepare the rate design:

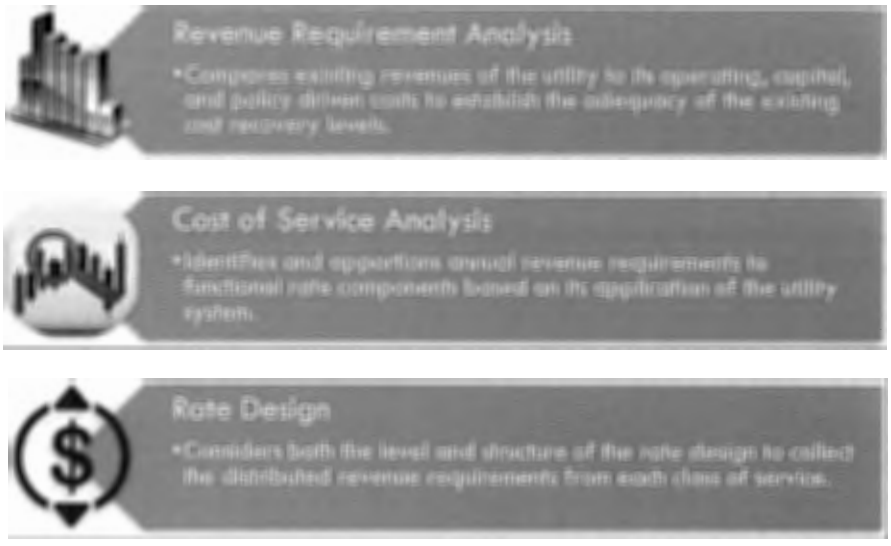
1. Water Utility Rate Trends Analysis
2. Cost of Service Analysis at Current Rates
3. Rate Design Recommendations

This Cost of Service Analysis Report (COSA) addresses the cost of service analysis and the rate design recommendations. Earlier in the study process, water utility rate trends were reviewed to explore industry rate trends present alternatives that might be appropriate for RPU to consider.

2.2 OVERVIEW OF THE RATE SETTING PROCESS

Rate analyses should be performed periodically so that revenues from rates adequately fund utility operations, maintenance, and capital investments. Additionally, in California, water rates must adhere to the cost of service requirements imposed by Proposition 218 and the State Constitution. Proposition 218 requires that property related fees and charges, including water rates, do not exceed the reasonable cost of providing the service. In additional to Proposition 218 requirements, Article X (2) of the State Constitution establishes the need to preserve the State's water supplies and discourage the wasteful or unreasonable use of water by encouraging conservation. The proposed rate plan accounts for both the proportionality requirement of Proposition 218, as well as encourages efficient use of water.

The cost of service rate analysis presented within this report consists of the following three interconnected processes:



The processes presented above are advocated by the American Water Works Association (AWWA) for cost of service rate setting. While the process is described in a linear step by step approach, it is better understood as an iterative process where the ultimate objective is to balance revenues with costs in an equitable manner for customers. These three processes will form the basis for the rate analyses presented within this report.

2.3 FORWARD-LOOKING STATEMENT

The rate calculations presented within this report are based on the reasonable projections of existing service costs, water demands, system operations with information available, and on existing legal requirements. Moreover, RPU developed the pro forma and water demand forecast that serve as the basis for all rate calculations. Significant changes in RPU's operations or costs or the Utility 2.0 Capital Improvement Plan discussed in Section 4, changes occurring in California law, deviation from the projected water demands, or further regulatory actions by the Governor or the SWRCB in regard to water use may result in the projected rate revenues deviating from Carollo's projections, and will require RPU to revisit the cost of service analysis.

2.4 RPU BACKGROUND

The current RPU service area is approximately 75 square miles and includes about 65,000 water service connections. The service area is primarily within the City limits and includes approximately five square miles of land served by RPU outside of the City limits as shown on Figure 2-1 (Figure 2.1 from master plan). RPU's potable water system consists of groundwater basins, groundwater wells, a supply transmission system, water treatment plants, and a water distribution system. As discussed later within this report, these water supplies are used to meet both ongoing, year-round and peak summer demands, as well as provide a level of resiliency for drought conditions.

RPU has facilities to extract groundwater from five groundwater basins: Bunker Hill, Rialto-Colton, Riverside North, Riverside South, and Arlington Basins. RPU's groundwater supply production is based on the 1969 Western-San Bernardino Judgment that regulates basin extraction amounts. The location of these groundwater basins, the City boundaries, and RPU's groundwater wells are depicted on Figure 2-2 (Figure 2.3 from master plan).

Groundwater pumped from RPU's wells is conveyed to the Linden-Evans Reservoir for blending and temporary storage through a network of water supply transmission lines. This supply system consists of four transmission mains: Gage Pipeline, Waterman Pipeline, North Orange Pipeline, and the Flume Pipeline. Prior to reaching the Linden-Evans Reservoir, groundwater from several wells is treated at one of RPU's six water treatment facilities. See Figure 2-3 (Figure 2.4 from master plan) for a diagram of the supply system.

From Linden-Evans Reservoir, water is distributed to RPU's customers. The distribution system includes approximately 65,000 connections and consists of 46 pressure zones, 921 miles of pipelines, 16

storage reservoirs, 41 booster pump stations, and 29 pressure regulating stations. Figure 2-4 (Figure 2.5 from master plan) for a diagram of the distribution system.

RPU also distributes a small amount of recycled water (about 200 acre-feet-per-year (AFY)) from the City's Regional Water Quality Control Plant (RWQCP). Current deliveries are to nine meters located near the RWQCP. Based on current effluent flows, the RWQCP has the potential to deliver approximately 5,400 AFY, after subtracting a 25,000 AFY environmental commitment. As part of the proposed capital improvement plan, RPU will begin expanding its recycled water distribution system.

FIGURE 2-1 RPU SERVICE AREA

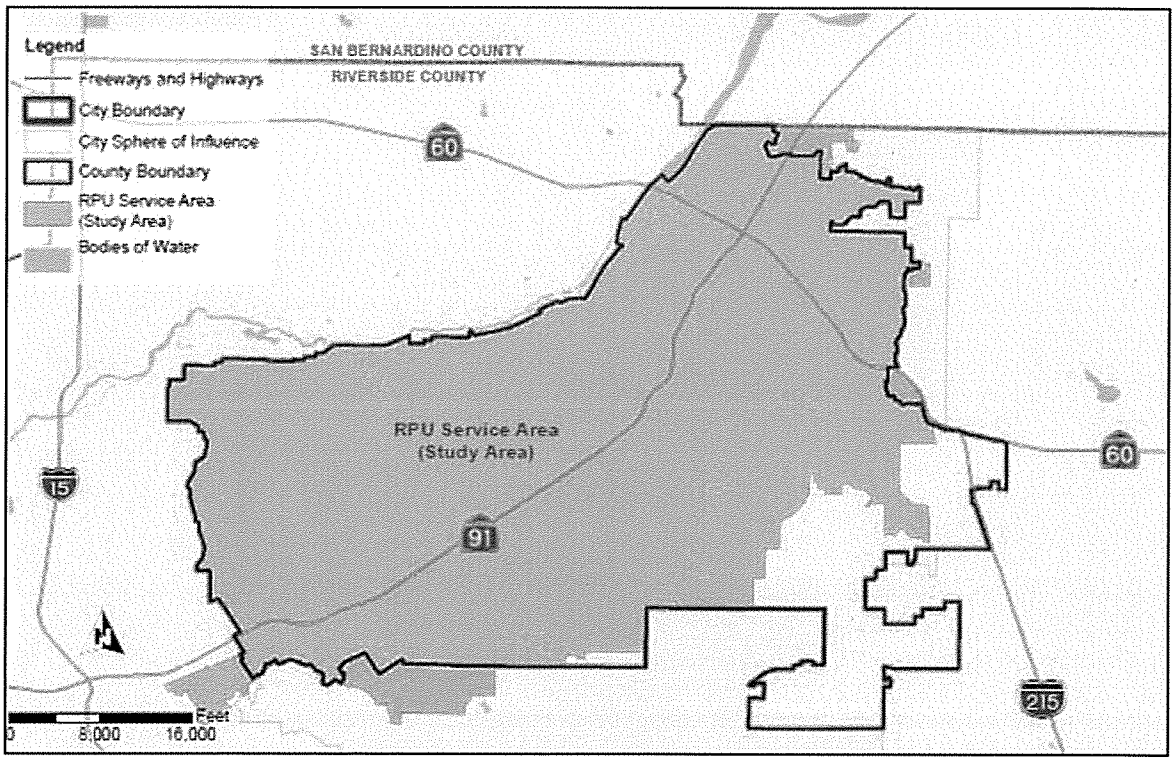


FIGURE 2-2 GROUNDWATER BASINS

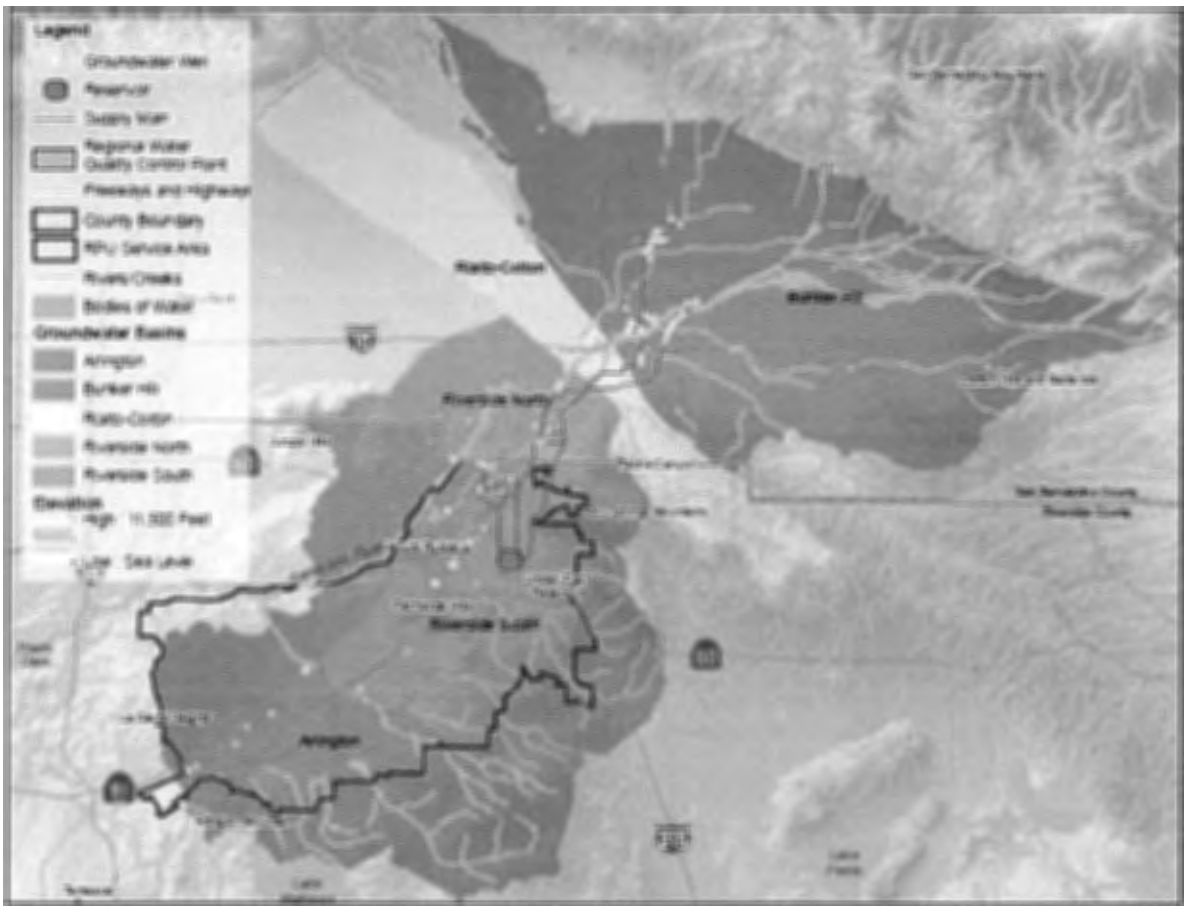


FIGURE 2-3 TREATMENT AND TRANSMISSION FACILITIES

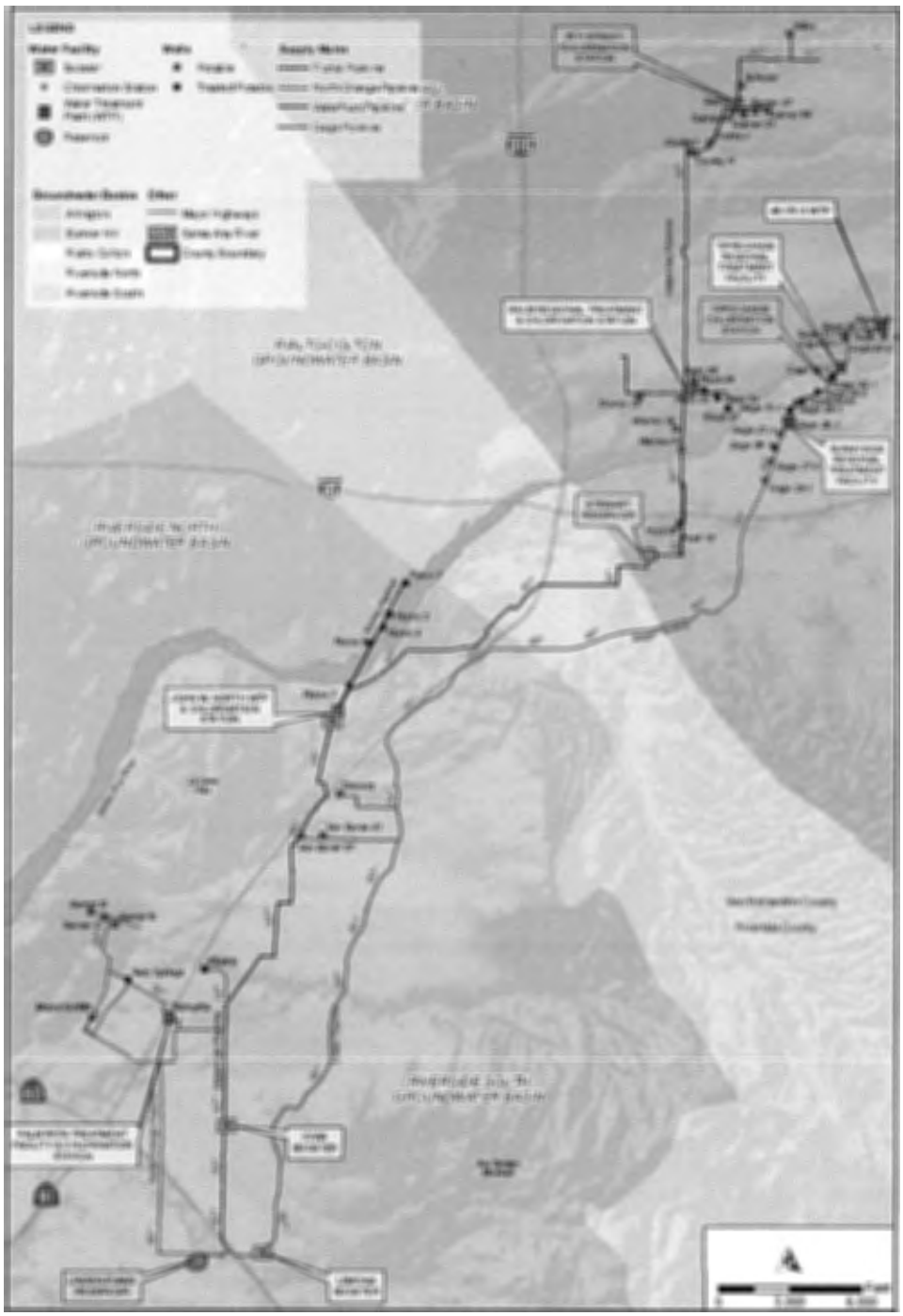
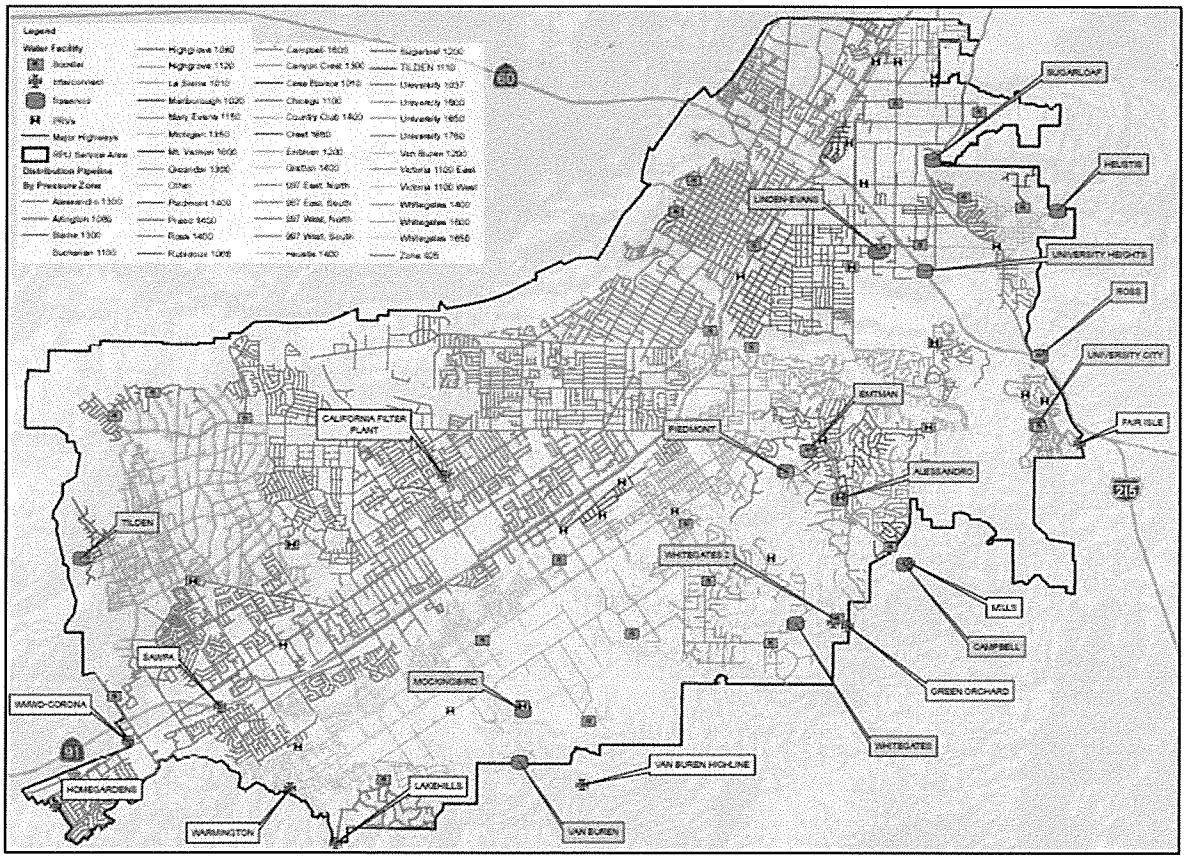


FIGURE 2-4 DISTRIBUTION SYSTEM



2.4.1 Impact of Recent Drought

The recent drought in the Western US has had profound impacts on municipalities and water agencies across the State of California. In order to cope with the effects of the drought, the State instituted mandatory restrictions to achieve a total conservation target of 25 percent compared to 2013 levels of consumption for municipal water agencies. Under the requirements of the State Water Boards Emergency Regulations (SWRCB), RPU was required to curtail water demands by 28 percent as compared to the base year of 2013. In February of 2016, the SWRCB voted to extend the conservation mandate through October 2016; however, they applied new rules to account for growth and alternatives supplies. Based on those changes, RPU's target for March through October 2016 was set at 25 percent.

In May of 2016, the State modified the emergency regulations to allow agencies to self-certify that sufficient supply is available, and thus to modify their mandatory curtailments. Based on RPU's water supplies exceeding projected water demands for the next three years, the City Council self-certified to a zero conservation standard in June 2016. However, the adopted zero conservation standard only applies

to the extraordinary conservation requirements of the State and does not reduce Riverside's need to conserve water to comply with State Senate bill SBX7-7 (2009). In addition, conservation is the centerpiece of Riverside's water supply plan. With an ongoing drought, the City Council deemed it appropriate to remain within a drought stage at this time, and Water Conservation Stage 1 was declared. While Water Conservation Stage 1 does not include mandatory outdoor water restriction, it does encourage customers to use water efficiently and reflects changes to state regulations.

The water demand analyses completed for the cost of service study center on comparing usage on a fiscal year basis, since this method is in line with RPU's accounting practices. Significant voluntary conservation began in May 2015 (part of FY 2014/15) with the announcement of the mandatory curtailments that began in July 2015. FY 2015/16 included the height of the drought, and the highest levels of conservation, resulting in the lowest fiscal year water consumption of the analyzed fiscal years. The wet winter in FY 2016/17 has led to the lifting of the State's mandatory usage curtailments. Water usage has rebounded during FY 2016/17, though it remains below historical levels due to demand hardening from conservation, as well as decreased irrigation demands due to the wet winter. The demand analyses within the cost of service study use past data from FY 2013/14 and FY 2015/16 along with RPU's water sales forecasts to project usage for each customer class and tier (where applicable).

2.5 UTILITY 2.0 PLAN

The Utility 2.0 Plan has been designed to facilitate and advance the strategic goals adopted by the City Council in the Riverside 2.0 Strategic Plan, as well as the strategic goals adopted by the Board. In developing the Utility 2.0 Plan, a number of "roadmaps" have been presented to the City Council and Board, including Utility Infrastructure and Supply, Workforce Development, and Thriving Financially. The Utility 2.0 Plan provides 10-year financial projections for revenue requirements needed to fund various paces of implementation for the Utility 2.0 Plan. In conceptually selecting the Option 3 strategy of proactive implementation, the Board and City Council recognize that business as usual will fall far short of both the RPU's vision and the City's vision for the future. A summary of each of the utility Infrastructure and Supply roadmaps, as applicable to RPU's water utility, follows.

2.5.1 Water Supply

RPU's future water supply will be met through a combination of conservation and efficiency, recycled water, and storm water capture. Water conservation activities will continue as RPU enhances its programs. The proposed Jackson Street alignment of the future first phase of recycled water infrastructure will be introduced. Storm water capture projects including Riverside's continued participation in the Seven Oaks Dam infrastructure improvements, the proposed Santa Ana River rubber dam project, and smaller scale urban storm water capture projects are expected to yield 16,000 acre feet of new water supply annually. Recommended water supply projects have been arranged in three tiers to allow execution of new projects as future demand materializes.

2.5.2 Water Infrastructure

RPU's investment in the Safe WATER Plan beginning in 2006 yielded significant improvements to the water utility infrastructure, including replacement of 68 miles of water pipelines, replacement of three storage reservoirs, and construction of the John W. North Water Treatment Plant. With these investments, Riverside has moved ahead of many agencies in infrastructure management. However, as acknowledged at the time of its adoption, the Safe WATER Plan did not address all of the infrastructure needs.

2.5.3 Technology

On July 10, 2015 and August 7, 2015, the Board received updates on the Strategic Technology Plan which outlines 19 recommended projects to be completed over the next 10 years. Many of those projects are embedded within the recommendations outlined in the infrastructure roadmaps. All of the costs associated with the technology projects are outlined in the pro forma and financial plan. The Strategic Technology Plan includes 19 projects categorized as customer focused, information based, and real-time operational technologies. Three additional technology projects were added after the Strategic Technology Plan was issued. All of the costs associated with the projects are outlined in the ten-year pro forma.

2.6 EXISTING RATE STRUCTURE

The existing water rates are based on industry accepted, cost of service structures. The rate program incorporates a number of different features, such as tiers and seasonal rates in order to account for the increase cost of water delivery during peak periods. The current rate program includes ten rate categories (and thirteen total rate codes) as shown in Table 2-1.

TABLE 2-1 EXISTING RATE CLASS DESCRIPTIONS

Rate Class Number and Name		Rate Structure Description
WA-1	Residential Metered Service Inside City	1. For single and multi-family units. 2. Different seasonal rates June through October and November through May 3. Four inclining rate tiers (CCF) Tier 1: 0 to 15, Tier 2: 16 to 35, Tier 3: 36 to 60, Tier 4: Over 60
WA-2	Flat Rate - Temporary Service	Flat rate for construction water, fire hydrant use, and bulk permit delivery.
WA-3	Irrigation Metered Service	1. Closed to new customers as of May 31, 2003. 2. With Residence two inclining tiers (CCF) Tier 1: 0 to 100, Tier 2: Over 100 3. Without Residence per CCF
WA-4	Riverside Water Company Irrigators	1. Three inclining tiers (CCF) Tier 1: 0 to 15, Tier 2: 16 to 70, Tier 3: Over 70 2. Different seasonal rates June through October and November through May 3. Open only to former shareholders in Riverside Water Company.
WA-6	General Metered Service	1. Commercial two inclining tiers (CCF) Tier 1: 0 to 550, Tier 2: Over 550 2. Industrial three inclining tiers (CCF) Tier 1: 0 to 550, Tier 2: 551 to 5500, Tier 3: Over 5500 3. Seasonal rates using WA-1 seasons.
WA-7	Special Metered Service	Flat rate structure for two cemeteries and City irrigation.
WA-8	Greenbelt Irrigation Service	1. Properties in greenbelt able to take service from Gage Canal facilities. 2. Flat rate plus Gage Canal pass-through charge. 3. Pass-through has three inclining tiers (CCF). Tier 1: 0 to 156, Tier 2: 157 to 312, Tier 3: Over 312
WA-9	Grove Preservation Service	1. With residence and nominal landscaping - three inclining tiers (CCF). Tier 1: 0 to 15, Tier 2: 16 to 60, Tier 3: Over 60 2. With residence and more than nominal landscaping requires 2 meters. a. Residence and landscape area - WA-1. b. All other water flat rate. 3. Without residence - flat rate structure.
WA-10	Recycled Water Service	Flat rate structure.

Table 2-2 presents the current rates for the majority of the customers in the City: residential (WA-1), commercial (WA-6.1), and industrial (WA-6.2).

TABLE 2-2 RPU RATES BY CUSTOMER CATEGORY

Category	Summer Rates Jun to Oct -	Winter Rates - Nov to May -	Fixed Charges: Per meter/month		
WA-1: Residential Metered Service			**Meter Size**	**Residential**	**Commercial/ Industrial**
First 15 CCF	$1.14	$1.13	5/8 & 3/4"	$13.99	$11.57
16-35 CCF	1.83	1.64	1"	23.29	19.22
36-60 CCF	2.85	2.26	1.5"	46.60	38.46
>60 CCF	4.10	2.75	2"	74.49	61.51
WA-6.1: General Metered Service - Commercial			3"		142.52
First 550 CCF	$1.77	$1.42	4"		237.57
>550 CCF	2.32	1.99	6"		475.19
WA-6.2: General Metered Service - Industrial			8"		760.29
First 550 CCF	$1.77	$1.42	10"		1,092.85
551- 5500 CCF	1.89	1.54	12"		1,330.40
>5500 CCF	2.32	1.99			
(1) One CCF is equivalent to 748 gallons					

3 WATER USAGE AND SUPPLY

As noted in the report above, RPU maintains a diversified portfolio of water sources and has invested in redundant supplies to create a highly localized and resilient system. To this end, RPU will also be expanding the recycled water distribution system and deliveries, and looking to conservation as a "new" source of supply. In addition to these localized supplies, RPU also has the ability to purchase water from Western Municipal Water District. These supplemental, imported supplies are significantly more expensive than RPU's local supplies and supply is not guaranteed.

3.1 GROWTH AND WATER DEMAND

3.1.1 Customer Account Growth

A moderate level of customer account growth is expected over the projection period from FY 2017/18 through FY 2021/22. Annual growth in the total number of accounts is expected at about 0.8 percent per year through the projection period. Growth for specific customer classes is expected to vary from 0 percent to about 2.1 percent per year, with the highest level of growth in commercial accounts. Table 3-1 below presents the projected accounts for each customer class.

TABLE 3-1 ACCOUNT GROWTH

Growth ID	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Residential	0.5%	0.6%	0.6%	0.6%	0.6%
Commercial & Industrial	1.9%	2.1%	2.1%	2.1%	2.1%
Other	0.0%	0.0%	0.0%	0.0%	0.0%
Customer Category					
Temporary Service	70	71	72	73	74
Riverside Water Company Irrigators	38	38	38	38	38
Commercial & Industrial	4,620	4,718	4,818	4,920	5,025
City Irrigation	489	499	509	519	529
Single Family	58,931	59,280	59,639	60,009	60,390
Multi-family	1,217	1,224	1,231	1,238	1,245
Landscape	663	676	690	704	718
Total	**66,028**	**66,506**	**66,997**	**67,501**	**68,019**

3.1.2 Water Usage

Water sales are RPU's primary source of water revenues. Consequently, it is critical to examine and analyze potential shifts in short- and long-term water demands. Carollo evaluated several years of billing data to examine historical water demand patterns and potential developing trends. RPU also maintains an internal demand forecast used for system and financial planning. This forecast accounts for

these changing demand patterns, type of future development, price elasticity, and, due to the State mandated water restrictions, the reduction, and subsequent bounce-back in water demands.

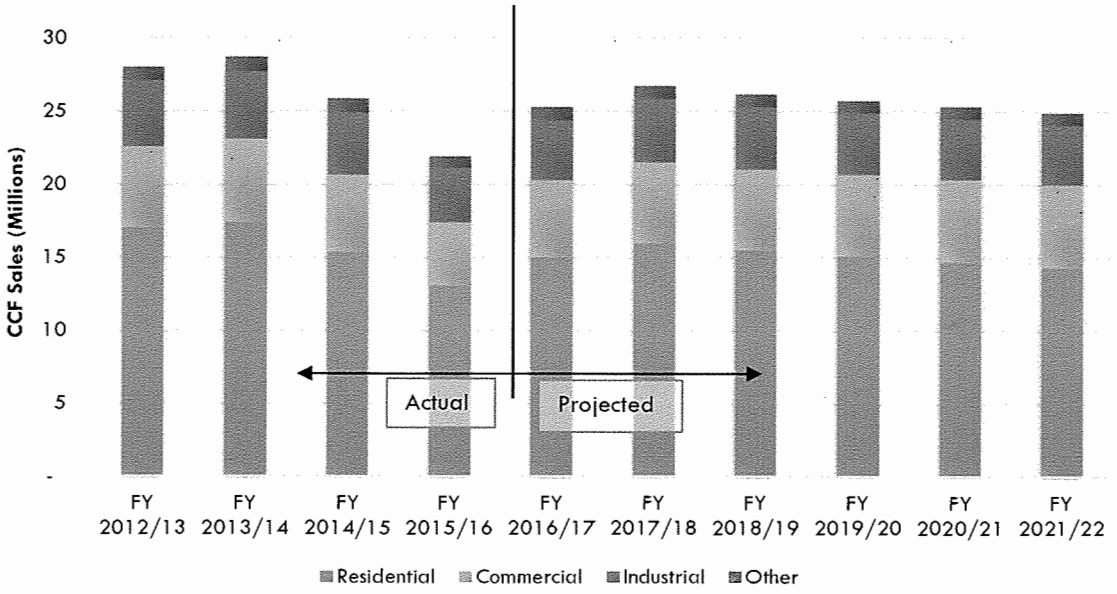
Mandatory and voluntary reductions in water usage caused by the ongoing drought have driven significant reductions in water demands. Conservation associated with the current drought began in FY 2014/15 as RPU's customers voluntarily curtailed usage. The total usage in FY 2014/15 of 25.8 million CCF of water represented a 10 percent decrease from the previous year (FY 2013/14) total of 28.7 million CCF. With the onset of State mandated conservation in July of 2015, RPU continued to see significant conservation through the end of FY 2015/16, with total sales in that year of only 21.9 million CCF. It is expected that a portion of that conservation will be permanent.

Based on RPU's water supplies exceeding projected water demands for the next three years, the City Council self-certified to a zero conservation standard in June 2016. Demand has rebounded through FY 2016/17, and RPU updated its usage forecasts accordingly. Based on discussion with RPU, Carollo used this forecast as the basis for calculating the proposed rate plan.

The rebound in consumption began in FY 2016/17 and is expected to last through FY 2017/18. It is expected that demand hardening, permanent conservation, and price elasticity will result in some permanent reductions to retail water demands. Retail sales are expected to reach a peak of about 26.7 million CCF in FY 2017/18, about 7 percent below FY 2013/14 demands. Retail sales are expected to decrease slightly in FY 2018/19, FY 2019/20, FY 2020/21, and FY 2021/22 due to price elasticity associated with future rate increases.

Figure 3-1 below shows the historical and projected demands that serve as the basis of the cost of service analysis. This forecast includes the State's modifications to the emergency regulations, self-certification to a zero conservation standard, and price elasticity to reflect the effects of the recommended rate increases. The 2015 Urban Water Master Plan forecasts differ slightly from these forecasts due to being developed when the State mandatory emergency drought regulations were implemented and includes a slightly higher retention of conservation. The current forecasts also differ from those submitted for self-certification due to the specific self-certification calculation requirements of the State.

FIGURE 3-1 WATER SALES FORECAST



Monthly water usage data for the past three fiscal years was analyzed in order to develop a reasonable projection of water demands for FY 2017/18 and subsequent years for each rate class. The projected increases in consumption were applied to each rate class and tier (where applicable) based on the amount of conservation that was realized form FY 2013/14 to FY 2015/16. Thus, the detailed projections assume that water use form each class and tier will rebound in proportion to the conservation that was realized in each class and tier.

3.2 WATER RATE CODES

RPU's water customers are currently each assigned to one of thirteen rate codes. Each rate code was analyzed independently to determine, and account for, distinct consumption patterns. Monthly and seasonal demand patterns were analyzed to establish overall consumption characteristics and each rate code's use of the system.

TABLE 3-2 RATE CLASS CHARACTERISTICS

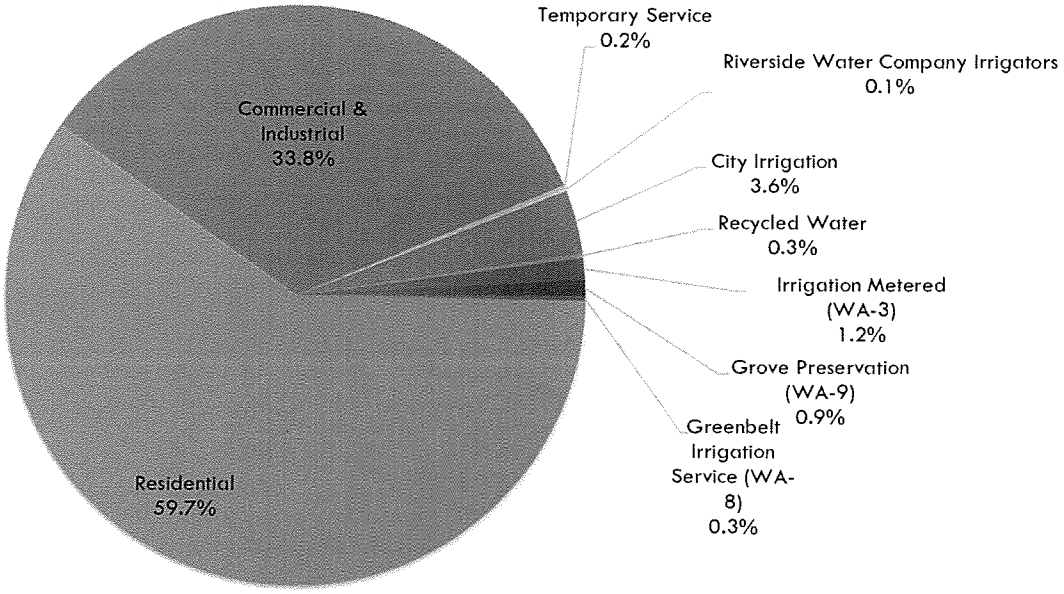
Customer Class		Rate Structure and Consumption Characteristics
Residential	WA-1	Meters serve both single and multiple unit residences; consumption peaks in summer months due to increased outdoor usage. Seasonal rates with a 4-tier inclining block structure.
Flat Rate Temporary Service	WA-2	Flat rate for temporary usage for construction, fire hydrant use, and bulk permit delivery. Consumption peaks heavily in summer.
Irrigation Metered Service w/ Residence	WA-3.1	Two tiered inclining block structure with very large tier 1 block (100 CCF). Consumption peaks marginally in summer. Closed to new customers as of May 31, 2003.
Irrigation Metered Service w/o Residence	WA-3.2	Flat rate for all usage. Consumption peaks during the summer months. Closed to new customers as of May 31, 2003.
Riverside Water Company Irrigators	WA-4	Three tiered inclining block structure for residential and commercial customers. Consumption peaks marginally in summer. RPU is contractually bound to serve these customers under a unique rate structure, resulting from the acquisition of the Riverside Water Company.
General Metered Service - Commercial	WA-6.1	Two tiered inclining block structure for meters from 5/8" to 2" serving commercial customers. Consumption peaks marginally in summer.
General Metered Service - Industrial	WA-6.2	Three tiered inclining block structure for meters from 3" to 12" serving industrial and institutional customers. Consumption peaks marginally in summer.
Special Metered Service - City Irrigation	WA-7	Flat rate for all usage by City of Riverside for irrigation of public facilities. Consumption peaks heavily in summer.
Greenbelt Irrigation Service	WA-8	Pass-through rate for customers who are able to take Gage Canal water and have installed a pressurized system. Used only for outdoor irrigation; consumption peaks heavily in summer.
Grove Preservation Service with Residence and Nominal Ornamental Landscaping	WA-9.1	Three tiered structure with declining tier 3 rate. Meters serve both indoor (residential) and outdoor usage; consumption peaks in summer due to increased outdoor usage.
Grove Preservation Service without residence or with separately metered Residence and more than Nominal Ornamental Landscaping	WA-9.2	Flat rate for all usage. Meters may serve outdoor usage; consumption peaks in summer due to increased outdoor usage.
Recycled Water Service	WA-10	Flat Rate for all usage. Meters serve outdoor usage; consumption peaks heavily in summer due to increased irrigation demands.

RPU also provides service to two other customers through special contracts: the University of California at Riverside (UCR) and the American Youth Soccer Organization (AYSO). UCR owns its own water rights in the Bunker Hill Basin, and under the current agreement is charged at the industrial rate for any water

delivered in excess of their water rights. AYSO receives untreated irrigation water from an adjacent well and under the agreement RPU recovers all production costs.

Figure 3-2 shows the percent of annual consumption from each customer rate code excluding the special contract classes based on FY 2015/16 billing data. Residential accounts from WA-1 are the primary users of water making up roughly 60 percent of annual water usage. The remaining 40 percent is split between commercial, industrial, irrigation, and other accounts.

FIGURE 3-2 PERCENT OF CONSUMPTION PER RATE CODE FY 2015/16



Note: Sum of percentages may be off due to rounding.

4 REVENUE REQUIREMENTS

4.1 INTRODUCTION

The revenue requirement analysis is a test of a utility's fiscal health, which evaluates the adequacy of current revenues and establishes rate revenue needs that are used to develop RPU's rate plan. The analysis accounts for RPU's revenues, expenses, debt, and reserve policies. As system revenues and reserve balances are insufficient, the revenue requirement analysis calculates the needed additional cash flows to meet RPU's funding goals.

The revenue requirement forecast is derived from RPU's financial pro forma, including major cost components: production costs, personnel costs, other operations and maintenance (O&M), debt service requirements; and rate funded capital outlays. Policy requirements are also considered in RPU's financial pro forma and used to derive the revenue requirement. The revenue requirements forecast of the pro forma incorporates RPU's FY 2017/18 adopted budget with adjustments based on actual performance to project costs thereafter. Additionally, applicable costs savings have been included based on actual costs in prior years. The relevant financial information for this analysis was provided by RPU including: current reserve ending balances, budgeted capital improvement plan expenditures, other future expenses, other future revenues, and other miscellaneous financial information.

The revenue requirement analysis is comprised of two tests:

- The **cash flow sufficiency test** compares projected system revenues to the cost to operate, maintain, and improve the water system. This test evaluates whether revenues meet expenses; when they do not, this test calculates the amount of rate revenue that must be raised to fund the projected expenditures.
- The second test is the **debt service coverage test.** Utility bond issuances regularly include a stipulation that the agency maintain sufficient cash flows to fund annual operating expenses and the annual debt service, plus an additional percent of that debt service. If cash flow falls below this ratio, this test calculates the additional revenue required.

The revenue requirement analysis determines if RPU must increase system revenues in order to meet its ongoing obligations. In the event that revenues are found to be deficient to meet ongoing expenses (cash flow test) and/or debt obligation (debt service coverage test), revenues must be increased to achieve the higher of the two needs.

The cash-flow sufficiency test compares projected cash requirements in each given year necessary to operate, maintain, and improve the utility systems. Cash requirements include O&M expenses, miscellaneous capital outlays, replacement funding, rate-funded capital expenditures, and policy-driven additions to reserves. RPU must maintain certain reserve targets for working capital, rate stabilization, capital emergency, capital system improvements, and debt service as outlined in the reserve policy.

The debt service coverage test measures the ability of the water utility to meet its debt obligations on an annual basis. When a municipality issues a bond, the bond Official Statement defines the financial obligations that must be met in order to remain in legal compliance. As part of the bond covenant as set forth in the Official Statement, the utility must collect a defined amount of annual revenue to illustrate that it has the financial capacity to repay bondholders. More specifically, annual net revenues, in excess of operations and maintenance, must equal to a minimum of 1.25 times the annual debt service payments for senior lien debt. However, as is the case for RPU's water utility that has maintained a AAA rating from Standard and Poor's, this coverage factor can be set at a higher level than is legally required in order to assist in maintaining or achieving a higher bond rating. For the purposes of this analysis, the pro forma targets a coverage factor of 2.0 times while maintaining a target minimum coverage factor of 1.75 times for financial planning purposes.

The pro forma recommendations presented within this report were developed by RPU staff based on best known information as of the writing of this report.

4.2 ONGOING COSTS AND OFFSETTING REVENUES

4.2.1 Operating and Maintenance Costs

Operation and maintenance costs (O&M) are expenditures that RPU incurs in the day-to-day operations of its water system - e.g., employee salaries and benefits, fuel, chemicals, power, supplies, and debt service. Other costs in the operating budget include indirect costs for services provided to RPU by other City departments or funds. The water O&M costs projected in the pro forma are the backbone of the revenue requirements analysis.

Table 4-1 summarizes the projected water O&M costs for FY 2017/18 through FY 2021/22.

Production Costs

Production costs are variable O&M costs incurred by RPU to provide water service. Specific items included in this category are electricity, gas, other utilities, and water production charges associated with each of RPU's groundwater sources.

Electricity costs account for the majority of production costs. In an effort to control production costs, RPU will be constructing solar power generating facilities that will be used to power wells, pumps, and other equipment at several of the production sites. The solar generating facilities are expected to lower annual production costs by nearly $0.8 million in FY 2017/18 with annual savings increasing to over $0.9 million per year by FY 2021/22.

Personnel Costs

Personnel costs include all of the direct and overhead costs associated with RPU staff. These costs are considered to be fixed costs, as staffing requirements generally do not change based on fluctuations in water demands.

Other O&M Costs

Other O&M costs include materials, supplies, and services, as well as services from other funds. Some of these costs are offset by services that RPU provides to other funds. In all, Other O&M costs are generally not impacted by water demands and are therefore considered to be fixed.

Additional O&M for CIP and Advanced Technology

Several of the CIP projects will be accompanied by annual O&M costs as projects are completed or programs are initiated. Estimated O&M costs associated with CIP projects were provided by RPU engineering staff and those associated with the Advanced Technology program were provided using estimated project implementation costs from the Strategic Technology Plan. Annual costs for this category are expected to increase from about $1.2 million in FY 2017/18 to about $2.7 million in FY 2021/22.

O&M costs associated with recycled water are included as a component of the additional O&M for CIP. Recycled water costs are expected to be about $140 thousand in each year of the projection. After that time, recycled water costs are expected to increase as the system is built-out and additional users come on-line.

General Fund Transfer

The Riverside City Charter requires RPU to annually transfer to the general fund an amount not to exceed to 11.5 percent of the previous year's gross operating revenues (the Water GFT). Riverside voters reaffirmed the Water GFT in June of 2013. Because the Water GFT is based upon revenues, the annual amount fluctuates with water demands.

TABLE 4-1 PROJECTED WATER O&M EXPENDITURES

Expenditures	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Production costs	$4,753,000	$4,757,000	$4,780,000	$4,802,000	4,819,000
Personnel costs	15,073,000	18,208,000	19,506,000	20,587,000	21,691,000
Other operating and maintenance costs	19,777,000	20,170,000	20,570,000	20,979,000	21,395,000
Additional O&M for CIP and Advanced Tech	1,165,000	1,117,000	1,719,000	2,306,000	2,745,000
Debt service requirements(1)	13,817,000	15,396,000	18,783,000	18,792,000	21,095,000
General fund transfer	6,639,000	7,105,000	7,763,000	8,298,000	8,858,000
Capital outlay financed by rates	5,074,000	9,787,000	6,702,000	7,098,000	6,516,000
Total Expenditures	**$66,298,000**	**$76,540,000**	**$79,823,000**	**$82,862,000**	**$87,119,000**

Notes:

(1) Debt service requirements include the amount due in any given year for current and future Revenue Bonds as well as the existing Pension Obligation Bonds, and General Fund Allocation and Debt Related Fiscal Charges (which are not included in the Total Annual Debt Service in Table 4-2).

Debt Service

In addition to O&M expenditures, RPU holds several outstanding debt obligations that provided funding for past capital projects and acquisitions. Table 4-2 shows RPU's outstanding water debt obligations and associated debt service for each year of the projection period. Additional debt that will be required to fund CIP expenditures is discussed in Section 4.3 of this report.

TABLE 4-2 OUTSTANDING WATER DEBT OBLIGATIONS AND DEBT SERVICE

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
2008B ($58.235M Fixed)	$3,952,000	$4,222,000	$3,852,000	$3,827,000	$3,851,000
2009A ($31.895M Fixed)	2,889,000	2,888,000	2,427,000	2,416,000	0
2009B ($67.790M Fixed BABs)	4,181,000	4,181,000	4,181,000	4,181,000	6,592,000
2009B Treasury Credit	(1,463,000)	(1,463,000)	(1,463,000)	(1,463,000)	(1,441,000)
2011A ($59.000M Variable)	3,435,000	3,159,000	3,989,000	4,008,000	3,976,000
Total Annual Debt Service[1]	**$12,994,000**	**$12,987,000**	**$12,986,000**	**$12,969,000**	**$12,978,000**

Notes: (1) Net of Treasury credit for Build America Bonds (BABs)

4.2.2 Offsetting Revenues

The rate revenue needs are defined as the amount of revenues that must be recovered through water rates in order to cover expenditures, less any offsetting revenues. Offsetting revenues include water conveyance revenue, wholesale water sales revenues, capacity charge revenues, settlement revenues, interest earnings, lease revenues, and other operating and non-operating revenues. Table 4-3 identifies the projected offsetting revenues for the upcoming five years.

TABLE 4-3 PROJECTED OFFSETTING REVENUES

Offsetting Revenues	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Interest income	$801,000	$1,660,000	$1,992,000	$1,495,000	$2,057,000
Miscellaneous income	9,898,000	10,269,000	10,390,000	10,517,000	10,647,000
Outside City Surcharge	1,507,000	1,550,000	1,595,000	1,640,000	1,687,000
Non-Rate Revenues in Sales Statistics	620,000	632,000	645,000	657,000	671,000
Total Offsetting Revenues	**$12,826,000**	**$14,111,000**	**$14,622,000**	**$14,309,000**	**$15,062,000**

RPU is able to take advantage of surplus local water supplies and sell an increased amount of water to other agencies in order to help offset rate increases for RPU retail customers.

4.3 CAPITAL IMPROVEMENT PLAN

4.3.1 Utility 2.0 CIP

Over the past several years, RPU has undertaken an effort to develop a detailed Capital Improvement Plan (CIP). Beginning with the Integrated Water Management Plan in 2013, RPU identified necessary improvements related to rehabilitation and replacement of existing infrastructure, enhancements to existing water supply, development of new sources of supply, expansion of the recycled water system, and rollout of new technologies. RPU staff has continued to refine the proposed projects, expenditures, and implementation schedule. The total cost of the CIP for FY 2017/18 through FY 2021/22, with capital costs assumed to escalate at 2.85 percent annually, is $171 million.

4.3.2 CIP Funding

Completion of the CIP will require RPU to utilize funding from several different sources. The pro forma has been developed to strike a balance between debt financing, use of reserves, and rate funding in order to minimize impacts to ratepayers while promoting financial sustainability. Figure 4-1 below shows the projected funding sources for each year of the CIP.

FIGURE 4-1 CIP FUNDING SOURCES

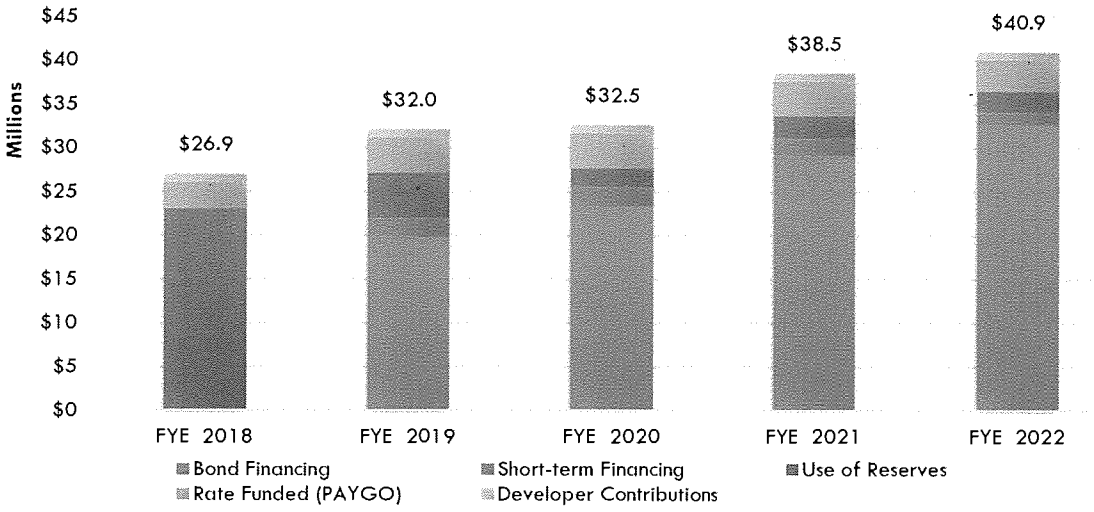


Table 4-4 shows the funding from each source by fiscal year of the rate projection period as well as the total funding from each source.

TABLE 4-4 CIP FUNDING BY SOURCE (MILLIONS)

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	Five-Year Total
Bond Financing	$0.00	$19.84	$23.34	$29.10	$32.71	$105.00
Short-term Financing	0.00	2.10	2.16	1.96	1.37	7.60
Use of Reserves	23.04	5.20	2.10	2.56	2.39	35.28
Rate Funded (PAYGO)	3.10	4.09	4.10	4.04	3.63	18.95
Developer Contributions	0.80	0.80	0.80	0.80	0.80	4.00
Total Annual CIP Funding	**$26.93**	**$32.03**	**$32.51**	**$38.46**	**$40.90**	**$170.83**

Notes:
(1) Totals may be off due to rounding.

4.3.3 Projected Debt Issuances

As shown in the table above, RPU anticipates issuing additional debt to fund the capital improvement program over the next 5 years. Based on the pro forma developed for this study, RPU will require a

total of nearly $113 million in financing proceeds to fund capital projects from FY 2017/18 through FY 2021/22.

Debt service associated with projected bond issuances and short term financing has been estimated based on typical financing assumptions and incorporated in to the cost of service analysis. Bond issuances and short-term financing are projected to fund capital projects for a three year period. The projected bond issuances and short term financing in FY2021/22 is in anticipation of the continuation of the 10 year plan and will fund projected capital projects over a 3 year period from FY 2021/22 through FY2023/24. Table 4-5 shows the anticipated bond issuances, short-term financing, and associated debt service.

TABLE 4-5 PROJECTED BOND AND SHORT-TERM ISSUANCES (MILLIONS)

Year of Issuance	Issuance Amounts (Millions)	Annual Debt Service (Millions)[1]
Revenue Bonds		
2019	$72.00	$4.16
2022	$108.00	$6.25
Short Term Financing		
2019	$6.22	$0.77
2022	$5.61	$0.69

Notes (1) Maximum annual debt service starting one fiscal year after the year of issuance.

4.4 RESERVE REQUIREMENTS

To accompany the Utility 2.0 CIP, RPU has developed a robust reserve policy, which is designed to promote fiscal sustainability, minimize borrowing costs, and providing a source of emergency funds to rapidly respond to market volatility, emergencies, demand reductions, or regulatory changes. The reserve policy guidelines were adopted by City Council on March 22, 2016 and later incorporated into the fiscal policy which was adopted by City Council on July 26, 2016.

The overall reserve target will be met by combining five risk categories that each have a target based on specific metrics. Table 4-6 provides a summary of the metrics that are used to calculate the unrestricted undesignated target minimum and maximum reserve levels for each risk category.

TABLE 4-6 UNRESTRICTED UNDESIGNATED RESERVE LEVEL METRICS

COMPONENT AND DESCRIPTION	MINIMUM TARGET	MAXIMUM LEVEL
Operating (Working Capital): maintain sufficient resources to pay budgeted operating and maintenance expenses recognizing the timing differences between payment of expenditures and receipt of revenues.	60 Days of Operating Expenses	90 Days of Operating Expenses
Rate Stabilization: mitigates rate shock due to temporary and transitional regulatory changes, loss of a major resource, sharp demand reduction, or market volatility.	7 Percent of Operating Revenues	15 Percent of Operating Revenues
Emergency Capital: provides funds to maintain ability to repair system after an emergency or natural disaster such as a flood, earthquake, or major storm.	1 Percent of Depreciable Assets	2 Percent of Depreciable Assets
System Improvements Capital: provide funds to maintain continuity of construction over fiscal years to be reimbursed by bond proceeds or other resources.	6 Months of Annual CIP	9 Months of Annual CIP
Debt Service: maintain ability to make debt service payments in an extreme event that may impact RPU's ability to provide services, thus impacting revenues at a time critical infrastructure repairs are needed to restore systems. The Debt Service Reserve is intended to prevent an event where RPU would be unable to pay its debt service obligations during such emergencies, or extreme market disruptions.	Maximum Annual Debt Service in Upcoming Fiscal Year	Maximum Annual Debt Service in Upcoming Fiscal Year

As part of the Five-Year Rate Plan, RPU will propose updating the reserve policy to include a line of credit (LOC) as available reserves to meet unrestricted undesignated reserve targets. An LOC is a low-cost mechanism that allows RPU to draw upon cash when needed, thus reducing required cash reserve levels, minimizing rate increases to maintain reserve levels, and increasing liquidity. The LOC is currently projected as the highest of the five-year maximum system improvements capital to provide for capital funding if bond proceeds or other resources are not available.

The reserve levels vary in each year based on the expenditures or revenues used to calculate each component. Table 4-7 shows the projected target minimum and maximum reserve levels for each year of the five year rate projection. The revenue requirements in the pro forma were set to include unrestricted undesignated reserves combined with the LOC to remain above the minimum targets identified.

TABLE 4-7 PROJECTED UNRESTRICTED UNDESIGNATED MIN & MAX RESERVE CALCULATIONS (MILLIONS)

Component	Target	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Working Capital	Minimum	$6.70	$7.27	$7.66	$8.00	$8.33
	Maximum	$10.05	$10.91	$11.48	$12.00	$12.49
Rate Stabilization	Minimum	$4.77	$5.18	$5.50	$5.85	$6.21
	Maximum	$10.23	$11.09	$11.79	$12.53	$13.31
Capital- Emergency	Minimum	$6.77	$7.09	$7.42	$7.81	$8.23
	Maximum	$13.53	$14.18	$14.85	$15.63	$16.46
Capital- System Improvements	Minimum	$16.02	$16.25	$19.23	$20.45	$22.81
	Maximum	$24.02	$24.38	$28.84	$30.68	$34.22
Debt Service (Max Annual Debt Service in upcoming FY)	Minimum	$9.39	$12.12	$12.29	$13.62	$17.32
	Maximum	$9.39	$12.12	$12.29	$13.62	$17.32
Total	**Minimum**	**$43.65**	**$47.92**	**$52.10**	**$55.73**	**$62.91**
	Maximum	**$67.23**	**$72.69**	**$79.26**	**$84.46**	**$93.81**
Proposed Line of Credit		**$34.22**	**$34.22**	**$34.22**	**$34.22**	**$34.22**

Notes:
(1) Totals may be off due to rounding.

4.5 REVENUE REQUIREMENT FORECAST

Overall, RPU must raise rate revenues in order to recover from the revenue losses occurring due to the State imposed water restrictions, as well as to fund future capital reinvestments. While the water utility will recover some additional revenue from the projected increases in water demands as the restrictions are lifted, these increased sales alone are not sufficient to fund RPU's needs. Table 4-8 presents the revenues, expenditures, and overall rate revenue increases for the forecast period beginning in FY 2017/18 through FY 2021/22.

TABLE 4-8 RESULTS OF REVENUE REQUIREMENT ANALYSIS (MILLIONS)

Revenues	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Revenue before annual rate and demand increase[1]	$54.10	$58.05	$63.67	$68.21	$72.95
Offsetting Revenues					
Interest income	0.80	1.66	1.99	1.50	2.06
Miscellaneous income	9.90	10.27	10.39	10.52	10.65
Outside City Surcharge	1.51	1.55	1.60	1.64	1.69
Other Charges for Service	0.62	0.63	0.64	0.66	0.67
Total Revenues Before Increase	**$66.93**	**$72.17**	**$78.29**	**$82.52**	**$88.01**
Expenditures					
Production costs	$4.75	$4.76	$4.78	$4.80	$4.82
Personnel costs	15.07	18.21	19.51	20.59	21.69
Other O&M costs	19.78	20.17	20.57	20.98	21.40
Additional O&M for CIP and Tech	1.17	1.12	1.72	2.31	2.75
Debt service requirements	13.82	15.40	18.78	18.79	21.10
General fund transfer	6.64	7.11	7.76	8.30	8.86
Capital outlay financed by rates	5.07	9.79	6.70	7.10	6.52
Total Expenditures	**$66.30**	**$76.54**	**$79.82**	**$82.86**	**$87.12**
Allocation to (Use of) Reserves Prior to Increases	**$0.63**	**($4.37)**	**($1.53)**	**($0.34)**	**$0.89**
Demand and Growth Increase[2]	6.56%	0.99%	0.80%	0.81%	0.83%
Rate Revenue Increase	8.75%	8.50%	8.50%	8.50%	8.50%
Month of Rate Increase	April	January	January	January	January
Revenues from Demand and Rate Increases	$4.01	$5.67	$4.60	$4.81	$5.10
Total Revenues	**$70.94**	**$77.84**	**$82.89**	**$87.32**	**$93.12**
Allocation to (Use of) Reserves After Increases	**$4.64**	**$1.30**	**$3.06**	**$4.46**	**$6.00**
Unrestricted Undesignated Reserves	*$40.22*	*$38.41*	*$40.19*	*$43.85*	*$45.64*
Debt Service Coverage Ratio[3]	2.29x	2.27x	2.00x	2.13x	2.07x

Notes:
(1) Projected revenues prior to each fiscal year's demand and rate increases, includes the impact of increases from previous years.
(2) Prior to inclusion of price elasticity adjustments.
(3) Net of BABs treasury credit.
(4) Totals may be off due to rounding.

The amount of revenue to be collected from user rates is defined by the total revenue requirements less any offsetting revenues. Table 4-9 presents the revenue required from user rates that provides the basis for the cost of service analysis and rate design. As of the completion of this analysis, RPU anticipates to implement rate increases in April of 2018, and in January of each following year. Because the rate increases will be implemented in the middle of each fiscal year, the rate revenue requirements for each

year include an "Adjustment for Mid-year Increase." This line item adjusts the required rate revenue to reflect a full year increase to match the full year of projected usage that is used to calculate the rates for each year.

TABLE 4-9 REQUIRED RATE REVENUE (MILLIONS)

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Total Expenditures	$66.30	$76.54	$79.82	$82.86	$87.12
Allocation to (Use of) Reserves After Increases	4.64	1.30	3.06	4.46	6.00
Less Offsetting Revenues:					
Interest Income	($0.80)	($1.66)	($1.99)	($1.50)	($2.06)
Miscellaneous income	(9.90)	(10.27)	(10.39)	(10.52)	(10.65)
Outside City Surcharge	(1.51)	(1.55)	(1.59)	(1.64)	(1.69)
Other Charges for Service	(0.62)	(0.63)	(0.64)	(0.66)	(0.67)
Required Rate Revenue	**$58.11**	**$63.72**	**$68.26**	**$73.01**	**$78.05**
Plus: Adjustment for Mid-Year Increase	$4.30	$2.98	$3.10	$3.31	$3.53
Plus: Adjustment for Transitional Rates[1]	$0.72	$0.62	$0.48	$0.31	$0.00
Revenue Requirements For Rate Design	**$63.13**	**$67.33**	**$71.85**	**$76.63**	**$81.58**

Notes:

(1) Line-item reflects a full fiscal year impact of the transition amount. For FY 2017/18, the actual impact will only reflect 3 months of transitional impacts, about $0.18 million, due to the timing of the proposed rate increases. The revenue impact associated with transitional rates will be offset using Interest Income. Projected impacts in millions for each fiscal year are as follows.

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Fiscal Year Transitional Impacts	$0.18	$0.67	$0.55	$0.39	$0.15

(2) Totals may be off due to rounding.

In addition to the adjustment to account for the mid-year rate increases, the required rate revenue for the rate design is adjusted to account for transitional rates. In order to mitigate the rate impacts to customers in rate classes that will be closed, RPU has proposed to transition Irrigation Metered Service (WA-3), Grove Preservation Service (WA-9), and WA-7 cemetery customers to the otherwise applicable rate classes in the fifth year of the rate plan. This transition will result in revenue impacts for FY 2017/18 through FY 2021/22 that will be offset using non-rate revenues from interest income. The adjustment shown in Table 4-9 above is included so that the revenue requirements for rate design reflect the use of interest income to offset the impact of the transitional rates.

5 WATER COST OF SERVICE ANALYSIS

With RPU's water utility's revenue requirements outlined—including needed rate increases—the next step is to link each cost item with a specific service to the system that it supports. This is commonly referred to as the cost of service analysis, or the functional cost allocation, because it connects each cost of the utility with a functional category or purpose that it funds. For instance, expenses related to the billing system are allocated under the umbrella of the customer service function, while baseline water purchases go to support the base demand function.

The costs incurred are generally responsive to the specific service requirements or cost drivers imposed on the system and its water resources by its customers. The principal service requirements that drive costs include the annual volume of water consumed, the peak water demands incurred, and the number of customers or meter equivalents in the system. Accordingly, these service requirements are the basis for the selection of the categories utilized in the functional allocation process.

The AWWA M1 Manual outlines the two most widely used methods for allocation of costs— the base-extra capacity method and the commodity demand methodology. Both methods recognize that the cost of serving a customer depends not only on the total volume of water used, but also on the rate of use or peak-demand requirements.

The proposed rates presented within this report are developed using a base-extra capacity method. In using this approach, costs are typically separated into three cost components: (1) Base (average), (2) Extra Capacity (related to sources of supply), (3) Customer. As noted in the AWWA M1 Manual, in detailed rate studies, such as the one performed for this study, some of these elements might be broken down further into two or more subcomponents.

Based on the City's expenditures and system characteristics, the Customer (or fixed monthly) component was separated into two subcomponents: (1) Customer (accounts) and (2) Capacity (meter equivalents). This bifurcation of the Customer component is done to better identify and allocate costs that vary based on capacity needs (as defined by the size of the meter) from those that should be equally shared by each customer account. Similarly, water supply costs were split into the four sources of supplies. These are designed to better distinguish that not all demand (and peaking) is equal. These calculated peaking factors are used as a proxy for determining and allocating the cost of providing extra-capacity in the system needed to serve those who use more. Different facilities, such as distribution and storage facilities, and the operation and maintenance costs associated with those facilities, are designed to meet the peaking demands of customers. Therefore, extra capacity costs[1] include the operations and maintenance costs and capital costs associated with meeting peak customer demand.

[1] The terms extra capacity, peaking, and capacity costs are used interchangeably.

5.1 FUNCTIONAL COST COMPONENTS

The objective of this cost-of-service study is to develop rate structures that proportionally recover costs from RPU's customers. RPU's budget was analyzed line-item by line-item and expenditures were distributed between the following system functions:

Customer: Fixed expenditures that relate to operational support activities including accounting, billing, customer service, and administrative and technical support. These expenditures are essentially common-to-all customers and are reasonably uniform across the different customer classes.

Capacity: Meter and capacity related costs, such as meter maintenance and peaking charges, that are included based on the meter's hydraulic capacity (measured in gallons per minute). Additionally, as the system's facilities are designed to meet peak demand, a portion of the infrastructure related costs are allocated to Capacity.

Base: Operating and capital costs incurred by the water system to provide a basic level of service to each customer.

Supply 1: Operating costs associated with the lowest cost source of water supply, Gage.

Supply 2: Operating costs associated with the second lowest cost source of supply, the Riverside North and South basins.

Supply 3: Operating costs associated with the second most expensive source of supply, Waterman.

Supply 4: Operating costs associated with the most expensive source of supply, Flume.

Outside City: Additional capital costs incurred to meet demands for water from the City's customers who reside outside of the City and who require additional infrastructure to receive water service. These costs have been excluded from the rate calculation as the Outside City surcharge will continue to be assessed as a percentage adjustment to the In-City rates. The percentage adjustment has been recalculated based on information provided by RPU engineering and operations staff as discussed later in this report.

In order to perform the functional allocation, the cost of service analysis combines information from the pro forma, RPU's detailed operating budget, historical billing data, and additional operational and system information provided by RPU. The allocation to each functional component was calculated based on the detailed budget and cost information, and applied to the revenue requirements calculated in the pro forma.

Table 5-1 below presents the overall allocation by expense category and division to each functional component. A table showing the line item detail of the functional allocation is included in Appendix B.

TABLE 5-1 FUNCTIONAL ALLOCATION SUMMARY

Division/Category	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As all Other	Total
Water Production and Operations	0.0%	0.0%	28.8%	20.8%	39.1%	11.3%	0.0%	0.0%	100%
Water Field Operations	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100%
Water Engineering	0.0%	41.8%	9.6%	8.4%	18.0%	6.1%	16.2%	0.0%	100%
Existing Debt Service	0.0%	72.2%	6.3%	5.5%	11.9%	4.1%	0.0%	0.0%	100%
Rate-Funded Capital and New Debt Service	0.0%	61.2%	0.0%	0.0%	19.1%	6.5%	13.2%	0.0%	100%
Charges From Other Funds	16.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	83.8%	100%
Notes:									
(1) Totals may be off due to rounding.									

5.1.1 Water Production and Operations

The first set of costs to allocate amongst the functional cost components are the Water Production and Operations costs. This allocation defines how RPU's water supply costs, which include the production, purchasing, storage, and distribution of water, are distributed among each of RPU's sources of supply.

Due to the abnormally low water demands in FY 2015/16 resulting from the State water restrictions, water supply allocations and associated cost allocations have been developed based on FY 2013/14 and FY 2014/15 supply and cost data. This methodology provided a more accurate representation of the total supply available to RPU retail customers, including both utilized and resilient supply. The allocations developed are then applied to the projected costs for each year of the projection period in the cost of service analysis.

Water Supply

All potable water produced by RPU is pumped from RPU's five groundwater basins and is treated at one of six treatment facilities, then blended and stored in the Linden-Evans Reservoir. This system provides a majority of RPU's potable water needs. RPU also has the ability to take imported water from the Metropolitan Water District in excess of these local supplies. Consequently, a significant portion of RPU's costs are related to the production and distribution of water from its groundwater resources. An allocation has been developed for the "Water Production and Distribution" division of RPU's operating budget to allocate those costs.

Available Supply

RPU pumps groundwater from several groundwater basins that underlie or are nearby the City. The sources are grouped into four distinct supply sources referred to as Gage, Riverside North and South, Waterman, and Flume. The amount of water available from each supply is governed by the adjudicated pumping rights held by RPU. The average production levels by source for FY 2013/14 and FY 2014/15 serve as the basis of supply availability for the cost of service analysis. Table 5-2 shows the total production from each source for FY 2013/14 and FY 2014/15, water used for purposes other than RPU retail, water losses, and the amount available for RPU retail customers. Based on the projected levels of demand, RPU's existing water supplies will continue to meet the demands of RPU's projected customer base.

TABLE 5-2 WATER PRODUCTION BY SOURCE

Source/Function	Gage	Riverside South/ North	Waterman	Flume	Distribution (After Linden Reservoir)
Total Production, AF					
FY 2013/14	27,514	17,019	26,022	6,041	76,596
FY 2014/15	27,495	15,319	23,680	3,642	70,136
Loss Above Linden Evans					
FY 2013/14	(597)	(369)	(565)	(131)	(1,662)
FY 2014/15	(634)	(353)	(546)	(84)	(1,617)
Potable Wheeled to WMWD					
FY 2013/14	(1,702)	(1,053)	(1,610)	(374)	(4,739)
FY 2014/15	(1,912)	(1,065)	(1,646)	(253)	(4,876)
Potable Wholesale to Western					
FY 2013/14	0	0	0	0	0
FY 2014/15	0	0	0	0	0
Potable to Home Garden					
FY 2013/14	(166)	(103)	(157)	(37)	(463)
FY 2014/15	(158)	(88)	(136)	(21)	(402)
Delivered to UCR					
FY 2013/14	(328)	(203)	(311)	(72)	(914)
FY 2014/15	(352)	(196)	(303)	(47)	(897)
Water Loss Below Linden					
FY 2013/14	(1,393)	(862)	(1,318)	(306)	(3,879)
FY 2014/15	(1,558)	(868)	(1,342)	(206)	(3,975)
Potable to RPU Customers					
FY 2013/14	23,327	14,429	22,062	5,122	64,939
FY 2014/15	22,882	12,749	19,707	3,031	58,369

Water Supply and Production Costs

In FY 2013/14 and FY 2014/15 and through the projection period, RPU produced and anticipates continuing to produce all of its water needs locally from the groundwater basins to which it owns pumping and export rights. Each basin has a specific cost associated with water production. Costs associated with water supply are tracked in the Water Production and Operations Division of RPU's water operating budget. Those costs are then allocated to each source of supply as well as distribution by operations and engineering staff based on several factors including pumping charges or dues for each basin, the amount of water produced from each basin, the level of treatment required for water from each basin, and the amount of maintenance required for facilities in each basin. Table 5-3 below presents a summary of the cost of water allocation for based on the average of FY 2013/14 and FY 2014/15.

TABLE 5-3 SOURCE OF SUPPLY COST ALLOCATION AND UNIT COSTS

FY 2013/14	Gage + Rialto/Colton Supply 1	Riverside South/ North Supply 2	Waterman Supply 3	Flume Supply 4	Distribution (After Linden Reservoir)
Total Allocated Costs (Millions)	**$2.871**	**$2.906**	**$3.534**	**$1.381**	**$5.089**
Less:					
LMC paid labor, Lab, Elec, etc.	($0.782)	$0.000	($0.207)	$0.000	$0.000
DBCP (Shell) paid GAC, Legal fees, O & M	0.000	(0.561)	0.000	0.000	0.000
Adjusted Production Cost (Millions)	**$2.089**	**$2.345**	**$3.327**	**$1.381**	**$5.089**
Total Allocation	**15%**	**16%**	**23%**	**10%**	**36%**
					RPU Retail
Production (AF)	34,095	25,279	26,022	7,165	**65,854**
Unit Cost (per AF)	**$61.26**	**$92.77**	**$127.85**	**$192.80**	**$77.27**

FY 2014/15	Gage + Rialto/Colton Supply 1	Riverside South/ North Supply 2	Waterman Supply 3	Flume Supply 4	Distribution (After Linden Reservoir)
Total Allocated Costs (Millions)	**$3.017**	**$2.809**	**$3.527**	**$1.256**	**$4.375**
Less:					
LMC paid labor, Lab, Elec, etc.	($0.784)	$0.000	($0.180)	$0.000	$0.000
DBCP (Shell) paid GAC, Legal fees, O & M	0.000	(0.538)	0.000	0.000	0.000
Adjusted Production Cost (Millions)	**$2.233**	**$2.271**	**$3.347**	**$1.256**	**$4.375**
Total Allocation	**17%**	**17%**	**25%**	**9%**	**32%**
					RPU Retail
Production (AF)	33,024	22,730	23,680	4,130	**59,265**
Unit Cost (per AF)	**$67.61**	**$99.91**	**$141.35**	**$304.06**	**$73.82**

Notes:
(1) Includes water Wheeled to UCR.
(2) Totals may be off due to rounding.

The available water supplies have been prioritized based on unit costs. Water from Gage, the lowest cost source, is considered priority 1 supply (Supply 1), water from Riverside North and South is priority 2 supply (Supply 2), water from Waterman is priority 3 supply (Supply 3), and water from Flume (the most expensive source) is priority 4 supply (Supply 4). Costs associated with distribution (after the Linden-Evans reservoir) are considered to be a base cost, and are therefore distributed to each supply in proportion to the total amount of water available from that supply. Table 5-4 below shows the calculated costs associated with each source of supply and the resulting allocation of costs to Supply 1 through Supply 4. Water Production and Operations costs are allocated based on the "Total Cost, Supply and Distribution" allocation since that division includes costs for both producing and treating water from RPU's groundwater basins, and distributing it to customers.

TABLE 5-4 SOURCE OF SUPPLY ALLOCATIONS

Source of Supply	Supply 1 Gage	Supply 2 Riverside South/North	Supply 3 Waterman	Supply 4 Flume	Base Distribution
Supply Source Unit Cost (per AF)					
FY 2013/14	$61.26	$92.77	$127.85	$192.80	$77.27
FY 2014/15	67.61	99.91	141.35	304.06	73.82
Distribution Unit Cost					
FY 2013/14	$77.27	$77.27	$77.27	$77.27	$77.27
FY 2014/15	73.82	73.82	73.82	73.82	73.82
Total Unit Cost With Distribution					
FY 2013/14	$138.53	$170.04	$205.12	$270.07	$154.54
FY 2014/15	141.43	173.73	215.17	377.88	147.64
Available for RPU Retail[1]					
FY 2013/14	23,327	14,429	22,062	5,122	64,939
FY 2014/15	22,882	12,749	19,707	3,031	58,369
Supply Source Costs					Total
FY 2013/14	$1,429,000	$1,339,000	$2,821,000	$987,000	$6,576,000
FY 2014/15	1,547,000	1,274,000	2,786,000	922,000	6,529,000
Combined	**$2,976,000**	**$2,613,000**	**$5,607,000**	**$1,909,000**	**$13,105,000**
Percent	**23%**	**20%**	**43%**	**15%**	**100%**
Total Cost, Supply and Distribution					Total
FY 2013/14	$3,232,000	$2,454,000	$4,525,000	$1,383,000	$11,594,000
FY 2014/15	3,236,000	2,215,000	4,240,000	1,145,000	10,836,000
Combined	**$6,468,000**	**$4,669,000**	**$8,765,000**	**$2,528,000**	**$22,430,000**
Percent	**29%**	**21%**	**39%**	**11%**	**100%**

Notes:
(1) Does not include water Wheeled to UCR.

Continued water conservation has led to a surplus in the amount of water supply available to RPU. Though the entirety of RPU's available supply is not currently being used to serve retail customers, those customers benefit from the resiliency provided by that supply. However, in an effort to offset the need for rate increases, RPU has elected to increase wholesale water sales to other agencies. Revenues from these sales will help to support RPU operations and capital expenditures in light of the decreased retail demands and revenues. In the event that demands bounce back, or one of the supply sources is lost or reduced, the surplus supply will be used to serve retail customers.

5.1.2 Water Field Operations

RPU's expenses related to its Water Field Operations are allocated as a Base cost and recovered proportionally from each unit of water sold. The costs included in this category are not related to water production or distributions, and are therefore considered to be equal for every unit of water sold regardless of its source of supply.

5.1.3 Water Engineering

Staff in RPU's water engineering group split their time between supporting the capital program and supporting operations. Engineering staff working on capital projects charge their time directly to those projects, administrative staff costs within the Water Engineering category are budgeted as O&M expenditures. According to RPU, 51 percent of administrative staff time is spent on the CIP, 19.7 percent is spend on distribution, and 29.3 percent is spent on production and supply. Thus personnel costs in the Water Engineering category have been allocated at 51 percent to Capacity, 19.7 percent to Base to recover distribution costs, and the remaining 29.3 percent is split based on the water supply allocation. Non-personnel costs within the Water Engineering include consultant services, equipment and software purchases, insurance, and other operational expenses. As these costs are associated primarily with water supply and usage beyond the baseline level, they have been layered onto the supply costs and allocated at 22.7 percent to Supply 1, 19.9 percent to Supply 2, 42.8 percent to Supply 3, and 14.6 percent to Supply 4. These allocation factors are based on the amount of water available for retail from each source. Appendix E shows the calculations used to develop the allocations.

5.1.4 Debt Service

RPU has five outstanding debt obligations as well as pension obligations that are, for the purposes of the model, combined into one expense referred to as Debt Service. An analysis was completed to allocate the existing debt service obligations to supply related debt and non-supply related debt based on the types of projects that were funded by each debt issue. Based on that analysis, 28 percent of outstanding debt service costs are allocated based on the water supply allocations, with the remaining 72 percent of debt service costs allocated to Capacity. An additional benefit of this methodology is that revenue to cover the majority of debt service is reliable as it is collected entirely through the fixed charge.

5.1.5 General Fund Transfer

The City's General Fund Transfer is based on the total amount of gross operating revenue collected by RPU, thus it is allocated As All Others, meaning that it will be allocated between the functional cost

components in the same proportion as the aggregate of all other expenses. This allocation effectively matches the general fund transfer allocation to the overall rate revenue allocation.

5.1.6 Charges from Other Funds

Charges from Other Funds are associated primarily administrative services provided to RPU's water division from other funds within RPU or the City general fund. Of those costs, about 16 percent are related to utility billing. Because billing costs do not relate to the amount of water consumed or the capacity required to serve each customer, they are allocated to the Customer component, and collected equally from all customers. The remaining 84 percent of costs are allocated As All Others.

5.1.7 Additional O&M for CIP and Advanced Tech

Additional O&M expenses will be required to operate a variety of soon to be built capital projects and for the advanced technology program. Costs associated with CIP projects are related primarily to water supply enhancements and are therefore allocated to the highest cost water in the Supply 4 category.

Advanced Technology expenditures will be incurred primarily to operate the water production and distribution systems, therefore the O&M costs will be allocated as supply and distribution at 29 percent to Supply 1, 21 percent to Supply 2, 39 percent to Supply 3, and 11 percent to Supply 4.

5.1.8 Rate-Funded Capital and New Debt Service

Rate Funded Capital and New Debt Service expenditures have been based on assigning each CIP project to the Capacity, Supply 3 and Supply 4, or Base categories.

Projects allocated to Capacity include distribution, transmission projects, and reservoir projects as well as technology projects. These projects make up about 61 percent of the proposed CIP through FY 2021/22.

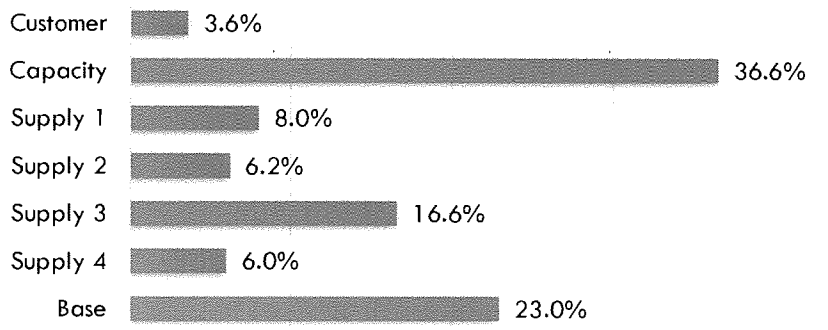
Projects allocated to Supply 3 and Supply 4 are projects that are intended to enhance water supplies and reliability. Specific projects include groundwater recharge, recycled water, and treatment plant projects and make up about 26 percent of the proposed CIP through FY 2021/22. The costs of these projects is split between the Supply 3 and Supply 4 Categories based on the supply allocation.

Projects allocated to Base include booster station and pressure reducing station rehabilitation, meter replacements, and well rehabilitation projects. These projects make up about 13 percent of the proposed CIP through FY 2021/22.

5.1.9 Final Allocation

Once each cost is allocated, a single allocation of each of RPU's expenses is used as the basis for allocating costs amongst customer classes. This is presented in the results of the functional allocation in Figure 5-1. The Capacity and Customer components collectively represent approximately 40 percent of RPU's costs that will comprise the fixed charge. The combined 60 percent of costs are allocated to the Base and Supply components and will be the basis for the variable rates.

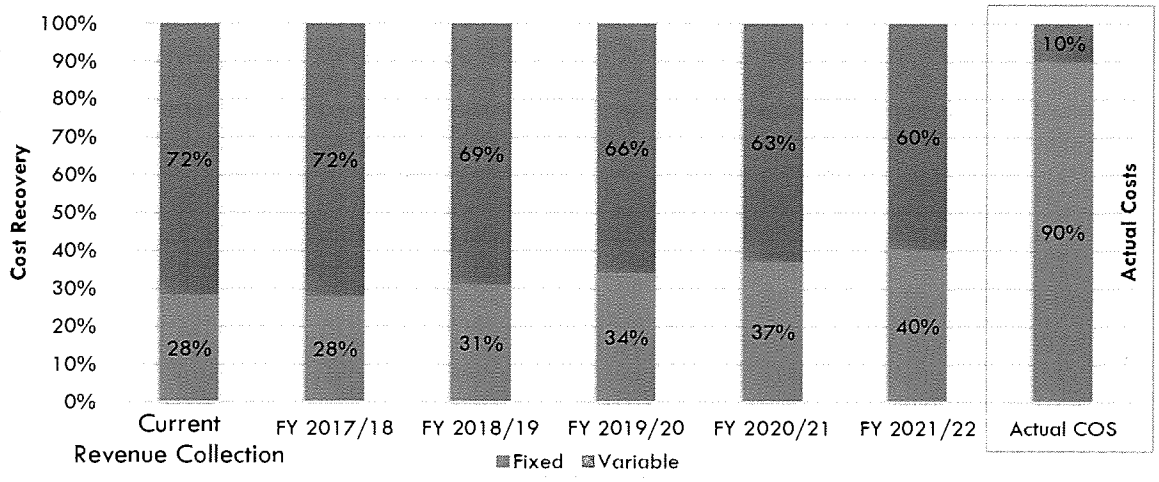
FIGURE 5-1 FUNCTIONAL ALLOCATION RESULTS



Note: Totals in figure may be off due to rounding.

The functional allocation results discussed above represent a shift toward collecting a greater share of revenues through the fixed charge in an effort to stabilize revenues and better match RPU's water costs, which are approximately 90 percent fixed. Any time costs or revenues are shifted from variable to fixed components, low volume customers may see a higher rate impact on a percentage basis. In an effort to mitigate impacts to low volume users, the shift to increased fixed revenue recovery will be phased in over the 5 year rate plan. Fixed charges will account for roughly 28 percent of revenues in year 1 (FY 2017/18) and ramp up to about 40 percent of revenues by year 5 (FY 2021/22). Figure 5-2 below shows the percentage of fixed and variable revenue recovery for each year of the projection period under the proposed rates.

FIGURE 5-2 FIXED AND VARIABLE COST RECOVERY



5.2 ALLOCATION OF COSTS TO CUSTOMER RATE CODES

The next step in the cost of service analysis is the allocation of costs to each rate class. This step utilizes the results of the functional allocation and the customer usage and account data, to proportionally allocate costs based on the level of service provided to each rate class.

5.2.1 Rate Class Updates

RPU's existing rate structure, as previously mentioned, has 10 rate classes with 13 individual rate codes. As a component of the cost of service analysis, the existing rate codes were evaluated and updated to provide an enhanced nexus between rate class and customer characteristics. The analysis identified three key updates to RPU's rate classes.

Residential Accounts

Currently, WA-1 is the rate code that encapsulates a majority of RPU's residential customers. It is often difficult for a single rate code to adequately address both Single-Family Residences (SFR) and Multi-Family Residences (MFR) whose consumption patterns and account characteristics differ greatly. Taking this into consideration, this study splits WA-1 and makes a distinction between SFR and MFR customers.

Landscape Irrigation Accounts

Additionally, RPU provides service to a number of accounts that function as Landscape Irrigation accounts. Currently, these customers are found in three different rate codes (WA-1, WA-6.1, and WA-6.2) despite providing a similar benefit to customers and requiring a similar cost to RPU. As a result, RPU intends to reclassify all Landscape accounts as such and create a new rate code that properly recovers the costs of providing them with commercial landscape irrigation services.

Commercial and Industrial Accounts

Lastly, Commercial and Industrial accounts, which have historically been treated as separate rate codes WA-6.1 and WA-6.2, will be combined into a single class with a uniform seasonal rate. These classes provide a similar level of service, and although total usage per account varies based on meter size, the annual consumption profile is consistent.

The allocations and rates discussed throughout this report are based on the proposed updates to RPU's rate classes discussed above.

5.2.2 Water Supply Allocation

The available supply from each priority and the allocation of supply costs to each priority is used to allocate costs to each customer class, and to usage in each tier where applicable. Allocations are based on the five year average projected consumption from each customer class for FY 2017/18 through FY 2021/22. The allocation of available supply to each customer class was performed using the five step process described below:

1. **Allocate first increment of demand as dedicated Supply 1 for essential usage.**
   Indoor residential demands are given top priority for water in Supply 1 as these demands are considered to be essential for public health and safety. The amount of Supply 1 water dedicated to cover these demands is based on the tier 1 consumption for WA-1 single family and WA-1 multi-family customers, and estimated based on 9 CCF per month per account for WA-4 customers. This step exhausts about 6.00 million CCF of the available 10.60 million CCF of Supply 1 water. The remaining Supply 1 water (4.60 million CCF) is available to be allocated to all customers in step two of the supply allocation.

2. **Allocate supply to the second increment of demand to all classes based on annualized three month minimum usage.**
   The annualized 3 month minimum demand is assumed to represent the basic minimum level of usage for each customer class. For classes that were allocated a designated share of Supply 1 that dedicated share is subtracted from the annualized 3 month minimum demand prior to the allocation of supply. Step two of the allocation exhausts all remaining Supply 1 water (4.60 million CCF), all available Supply 2 water (6.24 million CCF), and a portion of Supply 3 water (1.97 million CCF).

3. **Allocate supply to the third increment of needed supply based on annualized winter consumption.**
   Annualized winter demand represents the next increment of demand from each customer class. It represents annual demands associated with usage levels using RPU's seven-month winter (November through May). The supply allocated to each class in step one and step two is subtracted from the annualized winter demand prior to the allocation of remaining supply 3 water. Step 3 of the allocation exhausts 3.00 million CCF of Supply 3 water, leaving 4.63 million CCF to be allocated in step four.

4. **Allocate supply to the remaining demand based on total usage.**
   Step four supplies to cover the remaining demand from each customer class based on total usage. The supply allocated to each class in step one, step two, and step three is subtracted from the total annual demand prior to the allocation of remaining supply 3 water and Supply 4. Step 4 of the allocation exhausts the majority of remaining Supply 3 water (3.84 million CCF). The Supply 3 water remaining after step 4 (0.79 million CCF) and all of the Supply 4 water (1.87 million CCF), is considered resilient supply and is reallocated in step five.

5. **Spread unallocated Supply 4 water over Supply 3 and Supply 4 to account for supply resiliency.**
   The remaining supply 4 water is reallocated to each customer class based on each's allocation of Supply 3 and Supply 4 water. This reallocation is intended to reflect the supply resiliency afforded to each class by the excess supply 4 water. Resilient supply is not allocated to WA-7 accounts since they are considered to be interruptible and would be cut off in the event that supplies became limited.

Supply Resiliency

Holding a basis in available water from each source and the amount of usage from each class, the supply allocations used to allocate production and operations costs to each customer class are intended to reflect the strain that each class places on RPU's available sources of supply. The resiliency component discussed in step 5 of the allocation represents the amount of excess supply that is available to serve increased peak usage within each class. The costs that are ultimately allocated using these factors are projected based only on the amount of usage expected, rather than the total potential usage from each supply source. The costs associated with resilient supplies are only those to maintain access to those supplies, and do not include costs for water that is not produced. Table 5-5 shows a summary of the water supply allocated to cover demand in each step of the allocation. A detailed table showing the allocation of supplies in each step to each customer class is included for reference in Appendix F.

TABLE 5-5 SUPPLY ALLOCATION SUMMARY

Class Allocation		Supply 1	Supply 2	Supply 3	Supply 4	Total
Total Available for RPU Retail	**CCF**	**10,600,000**	**6,235,000**	**9,582,000**	**1,870,000**	**28,287,000**
Step 1: Dedicated Supply	**Allocated**	**6,003,000**	**0**	**0**	**0**	**6,003,000**
Remaining Available After Step 1		4,597,000	6,235,000	9,582,000	1,870,000	22,284,000
Step 2: Annualized 3-Month Minimum	**Allocated**	**4,597,000**	**6,235,000**	**1,971,000**	**0**	**12,803,000**
Remaining Available After Step 2		0	0	7,611,000	1,870,000	9,481,000
Step 3: Annualized Winter	**Allocated**	**0**	**0**	**2,986,000**	**0**	**2,986,000**
Remaining Available After Step 3		0	0	4,626,000	1,870,000	6,496,000
Step 4: Remaining Usage	**Allocated**	**0**	**0**	**3,835,000**	**0**	**3,835,000**
Remaining Available After Step 4		0	0	791,000	1,870,000	2,661,000
Allocation to Each Supply		**10,600,000**	**6,235,000**	**8,791,000**	**0**	
Reallocation of Remaining Supply 4		0	0	791,000	1,870,000	
Final Allocation		**10,600,000**	**6,235,000**	**9,582,000**	**1,870,000**	**28,287,000**

Table 5-6 shows the results of the supply allocation with allocated supplies for each customer class, as well as each class's percentage share of each supply. The percentage shares shown are used to allocate the costs associated with each supply to each customer class.

TABLE 5-6 SUPPLY ALLOCATION RESULTS

Total With Reallocation of Remaining Supply 4				
Rate Code[1]	Supply 1	Supply 2	Supply 3	Supply 4
Temporary Service	3,000	4,000	52,000	11,000
Riverside Water Company Irrigators	8,000	5,000	16,000	3,000
Commercial & Industrial	2,243,000	3,042,000	2,849,000	590,000
City Irrigation	177,000	240,000	547,000	0
Single Family	7,550,000	2,442,000	5,188,000	1,074,000
Multi-family	292,000	57,000	100,000	21,000
Landscape	328,000	445,000	830,000	172,000
Total[2]	**10,600,000**	**6,235,000**	**9,582,000**	**1,870,000**
Percentage Allocation			Includes Resiliency Component	
Rate Code[1]	Supply 1	Supply 2	Supply 3	Supply 4
Temporary Service	0.0%	0.1%	0.5%	0.6%
Riverside Water Company Irrigators	0.1%	0.1%	0.2%	0.2%
Commercial & Industrial	21.2%	48.8%	29.7%	31.5%
City Irrigation	1.7%	3.9%	5.7%	0.0%
Single Family	71.2%	39.2%	54.1%	57.4%
Multi-family	2.8%	0.9%	1.0%	1.1%
Landscape	3.1%	7.1%	8.7%	9.2%
Total[2]	**100%**	**100%**	**100%**	**100%**

Notes:
(1) WA-1 accounts are included in SFR and MFR rate codes, WA-10 accounts are included in WA-7. WA-3.1 and WA-9.1 accounts are included with SFR. WA-3.2 and WA-9.2 accounts are included with WA-6.1. WA-5 has no normal usage and is therefore not allocated a share of supply. WA-8 accounts are not supplied with RPU water and are therefore not allocated a share of supply.
(2) Totals may be off due to rounding.

5.2.3 Rate Code Characteristics

Table 5-7 presents the total service units, otherwise known as the customer class characteristics, of each rate code. These totals are used to proportionally allocate the functional cost components between each rate code. The accounts and MEUs presented are the five year average of expected accounts for FY 2017/18 through FY 2021/22. The supply allocations are shown in CCF are those discussed above in Section 5.2.2 and include each class's share of resilient supply. Lastly, estimated total usage shows each class's share of annual retail demands.

TABLE 5-7 RATE CODE CHARACTERISTICS

Allocation Factor	Accounts	%	MEUs[3]	%	Supply 1	%	Supply 2	%
Temp. Service	72	0.1%	674	0.7%	3,000	0.0%	4,000	0.1%
Riv. Water Co.	38	0.1%	75	0.1%	8,000	0.1%	5,000	0.1%
Com. & Ind.	4,820	7.2%	22,931	24.1%	2,243,000	21.2%	3,042,000	48.8%
City Irrigation	509	0.8%	1,632	1.7%	177,000	1.7%	240,000	3.8%
Single Family	59,650	89.0%	65,354	68.7%	7,550,000	71.2%	2,442,000	39.2%
Multi-family	1,231	1.8%	1,459	1.5%	292,000	2.8%	57,000	0.9%
Landscape	690	1.0%	2,975	3.1%	328,000	3.1%	445,000	7.1%
Total	**67,010**	**100.0%**	**95,101**	**100.0%**	**10,601,000**	**100.0%**	**6,235,000**	**100.0%**

Allocation Factor	Supply 3	%	Supply 4	%	Estimated Total Usage	%
Temp. Service	52,000	0.5%	11,000	0.6%	51,000	0.2%
Riv. Water Co.	16,000	0.2%	3,000	0.2%	29,000	0.1%
Com. & Ind.	2,849,000	29.7%	590,000	31.5%	7,488,000	29.8%
City Irrigation	547,000	5.7%	0	0.0%	916,000	3.6%
Single Family	5,188,000	54.1%	1,074,000	57.4%	14,746,000	58.7%
Multi-family	100,000	1.0%	21,000	1.1%	440,000	1.8%
Landscape	830,000	8.7%	172,000	9.2%	1,453,000	5.8%
Total	**9,582,000**	**100.0%**	**1,871,000**	**100.0%**	**25,123,000**	**100.0%**

Notes:

(1) WA-1 and WA-10 are no longer distinct rate classes and have been absorbed by the other rate classes.

(2) Meter Equivalent Units – relate the capacity required to serve each connection to the system based on the expected maximum flow from meters of each size

(3) Totals may be off due to rounding.

5.2.4 Customer Rate Code Allocation

To allocate costs of service to the different customer rate codes, each functional cost component must be split and divided appropriately amongst the rate codes. Each functional cost component is divided amongst the rate codes in proportion to each rate code's share of the total annual service units of the respective component. For the fixed components, the Customer component unit cost is based on the number of accounts and the Capacity component is based on meter equivalent units. The Base component is allocated based on the total sales volume. The Supply 1, 2, 3, and 4 components are allocated based on each class's respective supply allocations and adjusted to account for the interruptible rates that will be charged to City Irrigation and recycled water customers. No interruptible adjustments are made for the Customer, Capacity, or Base allocations.

The adjustment for interruptible customers is based on debt service and capital costs. Interruptible users are only responsible for the portion of debt service costs allocated to Capacity, and the portion of new debt service and rate funded capital costs that are allocated to Capacity or Base. These users are not considered to benefit from investments in water supply resiliency because they will be required to stop using water in the event that system wide usage must be curtailed, or if a system failure or other event leads to a decrease in available supplies. Thus, the allocation of supply costs is adjusted to remove the debt service and capital costs that are associated with developing or enhancing water supply sources from the interruptible users' share of costs.

Table 5-8 shows the percentage allocation adjustments that are made to the each of the supply costs for due to the interruptible rates. The costs allocated to the interruptible customers are lowered based on the percentages and the reduction amount is reallocated to the non-interruptible rate classes who benefit from the past and future water supply projects. Detail showing the items that are applied to the interruptible rates and the calculation of the percentage adjustments is included for reference in Appendix B.

TABLE 5-8 INTERRUPTIBLE SERVICE ALLOCATION ADJUSTMENTS

	Supply 1	Supply 2	Supply 3	Supply 4
Percentage Adjustment for Interruptible Service	-2.9%	-3.7%	-9.1%	-8.3%

Table 5-9 shows the effective supply cost allocations after the interruptible service adjustment is made for the City Irrigation customers. These adjusted allocations are used to allocate supply costs to each customer class. Additional details of this calculation can be found in Appendix C.

TABLE 5-9 SUPPLY ALLOCATIONS WITH INTERRUPTIBLE SERVICE ADJUSTMENTS

	Supply 1		Supply 2	
	Baseline Allocation	Adjusted Allocation	Baseline Allocation	Adjusted Allocation
Temporary Service	0.0%	0.0%	0.1%	0.1%
Riverside Water Company Irrigators	0.1%	0.1%	0.1%	0.1%
Commercial & Industrial	21.2%	21.2%	48.8%	48.9%
City Irrigation	1.7%	1.6%	3.8%	3.7%
Single Family	71.2%	71.3%	39.2%	39.2%
Multi-family	2.8%	2.8%	0.9%	0.9%
Landscape	3.1%	3.1%	7.1%	7.1%
Total	100%	100%	100%	100%
	Supply 3		Supply 4	
	Baseline Allocation	Adjusted Allocation	Baseline Allocation	Adjusted Allocation
Temporary Service	0.5%	0.5%	0.6%	0.6%
Riverside Water Company Irrigators	0.2%	0.2%	0.2%	0.2%
Commercial & Industrial	29.7%	29.9%	31.5%	31.5%
City Irrigation	5.7%	5.2%	0.0%	0.0%
Single Family	54.1%	54.4%	57.4%	57.4%
Multi-family	1.0%	1.0%	1.1%	1.1%
Landscape	8.7%	8.7%	9.2%	9.2%
Total	100%	100%	100%	100%

Notes:
(1) Totals may be off due to rounding.

Table 5-10 shows the allocation of the functional cost components to each of the rate codes in FY 2017/18. This process is repeated for each year of the rate projection period to calculate rates for each fiscal year. Appendix E shows the allocation of costs to each customer class for each year of the rate projection period.

TABLE 5-10 ALLOCATION OF COSTS TO CUSTOMER CLASS

Function	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base
Allocation Factor	Accounts	MEUs	Supply 1	Supply 2	Supply 3	Supply 4	Total Usage
Temporary Service	$2,000	$114,000	$2,000	$3,000	$68,000	$26,000	$36,000
Riverside Water Company Irrigators	1,000	13,000	4,000	4,000	22,000	8,000	20,000
Commercial & Industrial	114,000	3,878,000	1,289,000	2,307,000	3,772,000	1,438,000	5,205,000
City Irrigation	12,000	276,000	99,000	175,000	655,000	0	637,000
Single Family	1,415,000	11,055,000	4,340,000	1,853,000	6,867,000	2,618,000	10,252,000
Multi-family	29,000	247,000	168,000	43,000	132,000	50,000	306,000
Landscape	16,000	503,000	188,000	337,000	1,098,000	419,000	1,010,000
Total	**$1,589,000**	**$16,086,000**	**$6,090,000**	**$4,722,000**	**$12,614,000**	**$4,559,000**	**$17,466,000**
Notes:							
(1) Totals may be off due to rounding.							

The allocations of functional cost components to each rate code shown in the above Table 5-10 are then recovered over each customer class's projected accounts, MEUs, and usage to derive the variable and fixed rates for each rate code. The functional cost components allocated to the customer classes for each fiscal year are recovered over the various service units from for that specific year.

5.3 TYPES OF COST ALLOCATION

Not only are costs proportionately allocated between customer rate codes, but it is important to design rates that are proportionate at various demand levels within a customer class. Once the costs are allocated to rate codes, the next step is to equitably allocate the variable rate components (Base, Peak, and Max) to users within the group. In meeting Proposition 218 requirements, Carollo analyzed how these services vary between rate codes and within rate codes. Additionally, RPU's water costs were aligned to promote water use efficiency while placing a greater share of the costs on those customer who proportionately place greater demands on the water system and its water resources.

5.3.1 Water Use Characteristics

Both the design of water system (capacity & infrastructure) and the cost of the City's overall water portfolio are governed by peaking

As RPU pays different prices to pump water from each of its sources, water use at inefficient or excessive levels costs the agency significantly more than water used at efficient levels. Under RPU's existing structure, the cost of water is separated and the costs of producing water from more expensive sources are allocated to those customers who consume water at levels in excess of basic needs essential for public health and safety and above minimal living needs and thus place a greater demand on the system. Through a tiered rate structure, customers who consume above efficient levels are charged progressively more for each CCF of water they consume. If RPU's rate structure did not include a tiered structure, then the costs of producing water from each source would be uniformly blended and increased usage would increase the cost to all users.

However, this update to the rate structure largely maintains RPU's existing rate structure where a number of the existing rate codes charge different prices in different tiers. In order to maintain this structure and update the rates so as to apportion the cheapest source of water to those users who use the least amount of water, Carollo analyzed water use across rate codes as well as within each rate code. The peaking factors provided below in Table 5-11 illustrate that each customer class uses water differently. Some customer rate codes tend to consume more during the peak season (summer) or only during a peak month in comparison to their average usage.

TABLE 5-11 PEAKING FACTORS

Ratio of Consumption	Max Month/ Annual Average	Max Month/ Winter Average	Max Month/ Min Month
Temporary Service	263%	291%	3112%
Riverside Water Company Irrigators	197%	248%	441%
Commercial & Industrial	124%	140%	174%
City Irrigation	160%	214%	439%
Single Family	130%	155%	191%
Multi-family	125%	138%	162%
Landscape	142%	177%	276%

In RPU's existing rate structure, some rate codes are charged a different rate during summer in order to more accurately charge those customers whose consumption drives the need for oversizing of infrastructure and the additional transmission of water from the Linden-Evans Reservoir. This study updates these existing seasonal rates, as well as develops seasonal rates for the three new rate codes: SFR, MFR, and Landscape. The rate codes that are charged a higher seasonal summer rate are assumed, based on historic billing data, to have a larger portion of their consumption occur during peak periods relative to other rate codes. Consequently, these rate codes are responsible for a larger share of the oversized capacity built into the system to serve peak users.

6 WATER RATE DESIGN ANALYSIS

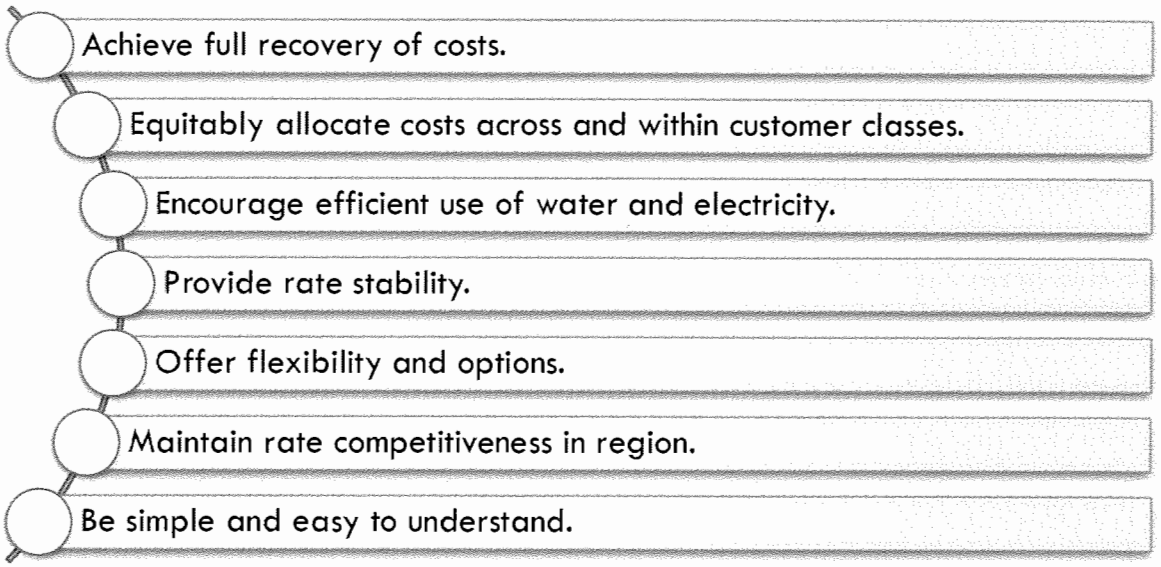
The rate design analysis links the rate code costs identified in Section 5 with the water rates necessary to achieve cost recovery. The focus of this process is to achieve full cost recovery and substantiate that each rate code is paying their fair and proportionate share of system costs.

6.1 SELECTING RATE STRUCTURES

Once costs have been equitably allocated to each customer class, RPU does have some flexibility in designing the rate structure in order to meet its policy objectives. In determining the appropriate rate level and structure, Carollo analyzed various rate design alternatives and the corresponding customer and utility implications. Beyond the identified study objectives, Carollo identified additional criteria for considerations and discussed them at length with RPU staff. Listed below are RPU's ratemaking principles:

Ratemaking Principles

RPU rate structures will be designed to provide a transition to rates that align with the transformational changes occurring in the electric and water industries. RPU's rates shall be designed to achieve the following goals:



Given the numerous and, at times, competing elements, selection of an appropriate rate structure is complex. There is no single structure that meets all objectives equally, nor are all objectives or elements valued the same by the utility or customers. Each criteria or element has merit and plays an important

role in the rates implementation and overall effectiveness. These elements and competing objectives were discussed and evaluated at length throughout the financial and rate study process.

6.2 PROPOSED WATER RATES

Based on discussion with RPU staff and careful review of the cost of service analysis, Carollo recommends that RPU implement the following rate design modifications:

- Increase the percentage of costs recovered by the fixed charge to better reflect how actual costs are incurred. This adjustment helps RPU meet its objective of increased revenue stability and predictability.
- Implement a uniform fixed monthly service charge for each meter size. This charge will be assessed to all rate codes including Irrigation Metered Service (WA-3.1, WA-3.2) and Special Metered Service (WA-7), who have historically been subject to a minimum monthly charge rather than a fixed service charge.
- Separate SFR and MFR customers that are currently tracked together in Residential (WA-1).
- Implement a three-tier rate structure for SFR customers with seasonally adjusted rates.
- Revise SFR Tier 1 allotment from 15 CCF to 9 CCF per month, which assumes 55 gallons per day per person at four persons per SFR dwelling.
- Implement a two-tier rate structure for MFR customers with two, three, or four dwelling units with tier allocations based on the number of dwelling units served by each account. MFR accounts with more than 4 dwelling units will be assessed the Commercial and Industrial Rate.
- The MFR Tier 1 allotment will be set at 7 CCF based on 3 persons per household and 55 gallons per person per day.
- Combine Commercial (WA-6.1) and Industrial (WA-6.2) accounts into one rate class with a uniform, seasonally adjusted rate.
- Implement a uniform landscape rate which is seasonally adjusted and separate from the Commercial and Industrial Rates.
- Combine Special Metered Service (WA-7) accounts, which are used by the City for irrigation of public facilities, with Recycled Water (WA-10).
- Transition Irrigation Metered Service (WA-3) and Grove Preservation Metered Service (WA-9) customers to the otherwise applicable rate classes. Services with residences (WA-3.1 and WA-9.1) will be transitioned to the SFR rate class, while services without residences (WA-3.2 and WA-9.2) will be transitioned to the commercial and industrial rate class as they serve primarily commercial nursery operations.
- Transition cemeteries that have historically been charged under the Special Metered Service (WA-7) rate to the otherwise applicable rate classes. Meters that serve offices or other structures will transition to the Commercial and Industrial rate, while those that serve exclusively irrigation will transition to the Landscape rate.

6.3 FIXED CHARGES

The fixed charge is intended to provide a stable revenue source that is related to how customers use the system. The proposed fixed charge is a combination of the Customer and Capacity functional components. The Customer component recovers costs that apply to all accounts in the system, regardless of usage or the size of the connection to the system. The proposed fixed charge is designed to collect costs associated with capital expenditures (debt service, rate funded capital, and a portion of engineering) based on each customer's capacity share as measured by MEUs. The customer share accounts for billing and administrative costs that are independent of each customer's capacity share and therefore equal for each account.

6.3.1 Fixed Monthly Service Charges

To determine the fixed charge, the meter unit cost is multiplied by the meter capacity ratios previously developed by RPU to calculate the meter capacity cost. These ratios are based on ratios identified in the AWWA M6 Manual 'Water Meters - Selection, Installation, Testing, and Maintenance' and represent the types of meters used by Riverside. The ratios are calculated using the average of maximum flow for meters of each size.

The meter Capacity cost is then added to the Customer cost to calculate the cost based fixed charges. Historically, the fixed expenses associated with Irrigation (WA-3.1 and WA-3.2) and Special (WA-7) Metered Services have been recovered through the variable rate and the associated minimum monthly charge. As proposed, Irrigation (WA-3.1 and WA-3.2) and Special (WA-7) Metered Services customers will pay the fixed monthly service charge, rather than the minimum monthly charge. Table 6-1 presents the results of this calculation for FY 2017/18.

While an increased fixed charge provides a stable source of revenues for the utility, increasing the fixed charge reduces the amount allocated to the commodity rates, and thus has the incidental effect of reducing incentives for conservation. The proposed revenue adjustments, as a percentage, do not equal or necessarily correlate to an equivalent percentage increase to rates or monthly bills. The results of the cost of service analysis and rate redesign will affect users differently based on their meter size and water consumptions habits.

This calculation is repeated for each year based on the allocated Customer and Capacity Costs, and the projected number of accounts and MEUs to calculate the charges for each year of the rate projection period. As discussed in Section 5 the increased allocation of costs to fixed components, and therefore the increase in fixed charges will be phased in over the Five Year Rate Plan.

TABLE 6-1 COMPONENTS TO PROPOSED FIXED CHARGE

Meter Size	Capacity Ratio	Customer Component	Capacity Component	Total Monthly Charge[1]
3/4" & 5/8"	1.00	$2.01	$14.39	$16.40
1"	1.67	2.01	24.03	26.04
1.5"	3.33	2.01	47.91	49.92
2"	5.33	2.01	76.69	78.70
3"	10.00	2.01	143.88	145.89
4"	16.67	2.01	239.85	241.86
6"	36.67	2.01	527.60	529.61
8"	60.00	2.01	863.27	865.28
10"	93.33	2.01	1,342.82	1,344.83
12"	133.33	2.01	1,918.33	1,920.34
Notes	(1) Totals may be off due to rounding.			

Table 6-2 presents the proposed fixed charges for each year of the rate plan.

TABLE 6-2 PROPOSED MONTHLY FIXED CHARGES

Meter Size	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
3/4" & 5/8"	$16.40	$19.21	$22.29	$25.64	$29.24
1"	26.04	30.50	35.38	40.69	46.40
1.5"	49.92	58.47	67.82	77.99	88.93
2"	78.70	92.16	106.91	122.93	140.16
3"	145.89	170.85	198.17	227.87	259.80
4"	241.86	283.23	328.52	377.75	430.67
6"	529.61	620.20	719.36	827.16	943.03
8"	865.28	1,013.27	1,175.29	1,351.40	1,540.69
10"	1,344.83	1,574.84	1,826.63	2,100.35	2,394.54
12"	1,920.34	2,248.78	2,608.32	2,999.17	3,419.25

6.4 VARIABLE RATES

The variable rates are developed for each customer class group and are designed to recover the costs proportionate to water demands. Cost of service based rates were developed for each customer class based on the principle of maintaining vertical and horizontal customer-class equity. Customer classes, such as single-family residential or commercial, only pay for their assigned share of costs of service, and within each customer class, each account will pay a fair share of the costs assigned to that customer class. The water commodity rate for each customer class group is calculated based on the customer class' cost (required revenues) and the forecasted water demands.

Seasonally Adjusted Rates

Like RPU's current rate structure, the proposed variable rates for several customer classes will be seasonally adjusted. Rates are increased in the summer months in order to reflect the increased costs associated with providing water during times of peak usage. The seasonal adjustment also provides the additional benefit of promoting efficient usage throughout the year.

Under the existing rate structure, summer months include June through October and winter months include November through May. Based on current water usage patterns these seasonal definitions were found to be in alignment with customer usage patterns, and were therefore maintained for the proposed rates. The seasonal adjustment to the rates was made by allocating a greater share of costs to the tier three summer rate based on the annualized summer to annual average usage peak factor. This peak factor is calculated for each of the seasonally adjusted classes by dividing the average summer consumption by the average annual consumption as shown in Table 6-3 below.

TABLE 6-3 SEASONAL PEAK FACTORS

Rate Class	Summer	Winter	Annual	
Number of Months	5	7	12	
Total Seasonal Usage (FY 2017/18)	**CCF**	**CCF**	**CCF**	
SFR	7,978,000	7,701,000	15,679,000	
MFR	221,000	247,000	468,000	
Commercial and Industrial	3,801,000	4,057,000	7,858,000	
Landscape	814,000	711,000	1,525,000	
Riverside Water Company Irrigators	15,580	13,460	29,100	
Average Monthly Usage	**CCF**	**CCF**	**CCF**	**Peak Factor[1]**
SFR	1,596,000	1,100,000	1,307,000	**1.22**
MFR	44,000	35,000	39,000	**1.13**
Commercial and Industrial	760,000	580,000	655,000	**1.16**
Landscape	163,000	102,000	127,000	**1.28**
Riverside Water Company Irrigators	3,120	1,920	2,420	**1.29**

Notes:

(1) Annualized summer to annual average peak factor calculated by dividing 'Summer: Average Monthly Usage' by 'Annual: Average Monthly Usage'.

(2) Totals may be off due to rounding.

6.4.1 Single Family Residential Rates

Given ongoing drought and calls for conservation, and RPU's continued investment in supply resiliency, it is important that the proposed water rate structure promotes efficient water usage and passes the true cost of providing water service on to the customers who utilize that service. The continuation of a seasonally adjusted tiered rate structure for single-family customers is to maintain those objectives. The

study reviewed the appropriateness and applicability of several rate structure alternatives for the Single Family residential customer class.

Maintaining the Current Structure – The current single family rates are fixed tiered rates with a four-block inclining structure and seasonally adjusted rates. While this four tier structure, which is intended to proportionally recover the cost to provide peak water demands, also promotes conservation through the increasing price structure, it has resulted in a high level of revenue variability due to the large difference in rates between Tier four and Tiers one, two, and three, most notable in the summer. Additionally, it was found that only a very small percentage of total SFR usage was within Tiers 3 and 4, about 7 percent and 5 percent respectively.

Modifying the Structure, Three Tiers – Several fixed tier, three tiered rate structure alternatives were developed and reviewed. These options included seasonal and non-seasonal rates, various methods to set tier breaks, and various methods to allocate costs to each tier.

Proposed Rate Structure

The proposed single-family rate structure is designed to proportionately allocate a greater share of the costs of service to those whose higher water usage generates additional costs to the water utility. The proposed rate structure is an inclining block rate structure designed to reflect RPU's various sources of supply coupled with the typical usage patterns and needs of a SFR customer.

The proposed rates have been developed with a three-tiered inclining block structure, with rates that vary seasonally. The CCF allotments for each tier will remain constant throughout the course of the year. The proposed tier allotments have been set based on water needs for each customer and on the actual usage patterns observed in the customer billing data.

Tier 1 Allotment – Indoor Usage: The proposed tier one allotment is 9 CCF per account per month. This allotment was calculated based on an assumed 4 persons per household and 55 gallons per capita per day.

Tier 2 Allotment – Efficient Outdoor Usage: The tier two allotment is an additional 26 CCF per month above the tier one allotment. This allotment maintains RPU's existing tier two breakpoint of 35 CCF per month, and is in alignment with the average maximum month consumption per SFR account.

Tier 3 – High Usage: Any usage above 35 CCF will be charged the tier three rate.

Seasonal adjustment of the tier three rates helps to reflect the additional cost of seasonal peaking on the system.

Proposed Single Family Rates

Volumetric rates for each tier are calculated by allocating the variable costs to be collected from the SFR rate class to each tier based on usage per tier, and supply available in each tier. Base costs are allocated equally to all usage as they are considered to be independent of source of supply costs. Costs for each priority of supply (Supply 1, Supply 2, Supply 3, and Supply 4) are allocated to each tier based on exhausting the lowest cost source of supply to each tier before allocating costs associated with the next source of supply. Supply cost allocation to each tier were developed based on the five year

average consumption per tier, and the five year average supply allocated to single family residential customers to maintain consistency.

Based on current demand levels, RPU has some available, unused supplies. These supplies provide a critical level of resiliency for the water system and are available to meet high-level, peak demands as other supply sources become restricted. As noted in the report above, RPU is able to sell some of these supplies to offset its operational costs and rate impacts. However, because these supplies provide the greatest level of benefit to high volume users, costs associated with supply resiliency are allocated into tier 3, to reflect the supply available for high volume users and the peak strain that they place on the system. But for the fact that RPU's customers peak on the system, new local supplies and the associated facilities would not have been developed. A direct example of these cost investments is the John W. North Water Treatment Plant.

Table 6-4 below shows the development of the allocation of each supply cost to each tier based on the five year average consumption over the rate planning period. The allocations are based on the five year average to correspond to the allocation of available supplies to each customer class discussed in Section 5.2.2. Though the resilient supply allocated into tier 3 shows an excess of available supply, the costs allocated into each tier reflect only costs that RPU will actually incur. The resilient supply costs considered in the analysis include only those that will be incurred based on the projected usage, and the fixed costs incurred to maintain access to those supplies. Variable costs associated with resilient supplies such as electricity or chemicals are not included in the analysis.

TABLE 6-4 SINGLE FAMILY RESIDENTIAL SUPPLY ALLOCATION

		Tier 1	Tier 2	Tier 3
Cons per Tier	**Five Year Average**	**5,678,000**	**6,642,000**	**2,406,000**
Allocated Supply		**Tier 1**	**Tier 2**	**Tier 3**
Supply 1	7,550,000	5,678,000	1,872,000	0
Supply 2	2,442,000	0	2,442,000	0
Supply 3	5,188,000	0	2,328,000	2,860,000
Supply 4	1,074,000	0	0	1,074,000
Supply Cost Allocation Per Tier		Tier 1	Tier 2	Tier 3
Supply 1		75%	25%	0%
Supply 2		0%	100%	0%
Supply 3		0%	45%	55%
Supply 4		0%	0%	100%
Base	All Usage	39%	45%	16%

The allocations shown in Table 6-5 above are then used to allocate supply costs to each tier. Table 6-5 below shows an example of the allocation for FY 2017/18.

TABLE 6-5 SINGLE FAMILY SUPPLY COST PER TIER (FY 2017/18)

	Allocated Costs	Tier 1	Tier 2	Tier 3
Supply 1	$4,340,000	$3,264,000	$1,076,000	$0
Supply 2	1,853,000	0	1,853,000	0
Supply 3	6,867,000	0	3,081,000	3,786,000
Supply 4	2,618,000	0	0	2,618,000
Base	10,252,000	3,953,000	4,624,000	1,675,000
Total Allocated Costs Per Tier[1]	**$25,930,000**	**$7,217,000**	**$10,634,000**	**$8,079,000**
Notes:				
(1) Totals may be off due to rounding.				

After costs have been allocated to each tier, they are split between winter and summer based upon the projected usage per tier in each season. The seasonal rate adjustment for tier three is created by allocating costs for summer consumption in tier three using the annualized summer to annual average peak factor. A corresponding allocation is made to the allocated winter tier three costs to maintain revenue neutrality over the entire year. The allocation results in a seasonal differential in the tier three rate that is equal to the peak factor, thus the tier three rate in summer is 1.22 times the tier 3 rate in winter. The costs allocated to each tier in each season are then divided by the projected usage for the corresponding tier and season to calculate the volumetric rates. The single family rate calculation for FY 2017/18 is shown in Table 6-6 below.

TABLE 6-6 SINGLE FAMILY RATE CALCULATION (FY 2017/18)

Projected Usage		Summer	Winter	Total[1]
Tier 1		2,598,000	3,447,000	6,045,000
Tier 2		3,763,000	3,309,000	7,072,000
Tier 3		1,617,000	945,000	2,562,000
Total		**7,978,000**	**7,701,000**	**15,679,000**
Projected Costs		Summer	Winter	Total
Tier 1		$3,102,000	$4,115,000	$7,216,000
Tier 2		5,658,000	4,975,000	10,634,000
Tier 3	Peak: 1.22	5,463,000	2,616,000	8,079,000
Total		**$14,223,000**	**$11,706,000**	**$25,929,000**
Volumetric Rates		Summer	Winter	
Tier 1		**$1.20**	**$1.20**	
Tier 2		**$1.51**	**$1.51**	
Tier 3		**$3.38**	**$2.77**	
Notes:				
(1) Totals may be off due to rounding.				

The calculation is repeated for each year of the analysis based on each years' projected usage and allocated costs to develop the rate presented in Table 6-7. Appendix H provides additional detail of the SFR rate calculations.

TABLE 6-7 PROPOSED SFR RATES

Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 9	$1.20	$1.27	$1.33	$1.40	$1.46
Tier 2	1.64	10-35	1.51	1.59	1.67	1.76	1.84
Tier 3	2.26	>35	2.77	2.93	3.08	3.23	3.38
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 9	$1.20	$1.27	$1.33	$1.40	$1.46
Tier 2	1.83	10-35	1.51	1.59	1.67	1.76	1.84
Tier 3	2.85	>35	3.38	3.58	3.76	3.94	4.12
Tier 4	4.10						
Notes:							
(1) Existing residential customers are currently charged WA-1 rates.							
(2) WA-1 had four tiers. Tier 1: First 15. Tier 2: 16 to 35. Tier 3: 36-60. Tier 4: >60.							

Single Family Revenue Volatility

As discussed previously, one of the goals of the rate design analysis was to create a rate structure that decreases revenue volatility, while conforming to the requirements of Proposition 218, and RPU's other rate setting principles. Under the existing rates, the most volatile source of revenue is variable revenue from high usage single family customers, particularly those whose consumption falls within tier four. With the current rates, and based on projected usage for FY 2017/18, customers using over 70 CCF (about 3 percent of accounts) would be responsible for about 20.4 percent of SFR revenues. The proposed rate structure mitigates volatility by reducing the number of tiers from tiers from 4 to 3, and decreasing the pricing differential between tiers to match supply related costs.

Figure 6-1 shows the percent of customers within each usage block as well as the projected usage by each block for FY 2017/18. The left axis corresponds to the green bars which show the total annual usage expected from accounts falling within each monthly usage group. The right axis corresponds to the blue line showing the percent of accounts within each monthly usage group.

FIGURE 6-1 SFR USAGE GROUPS

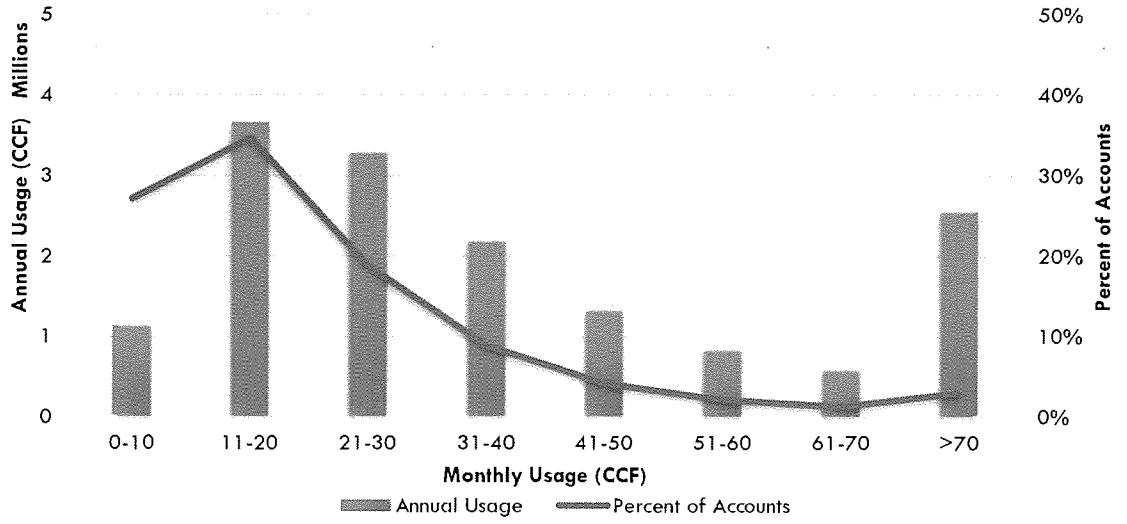
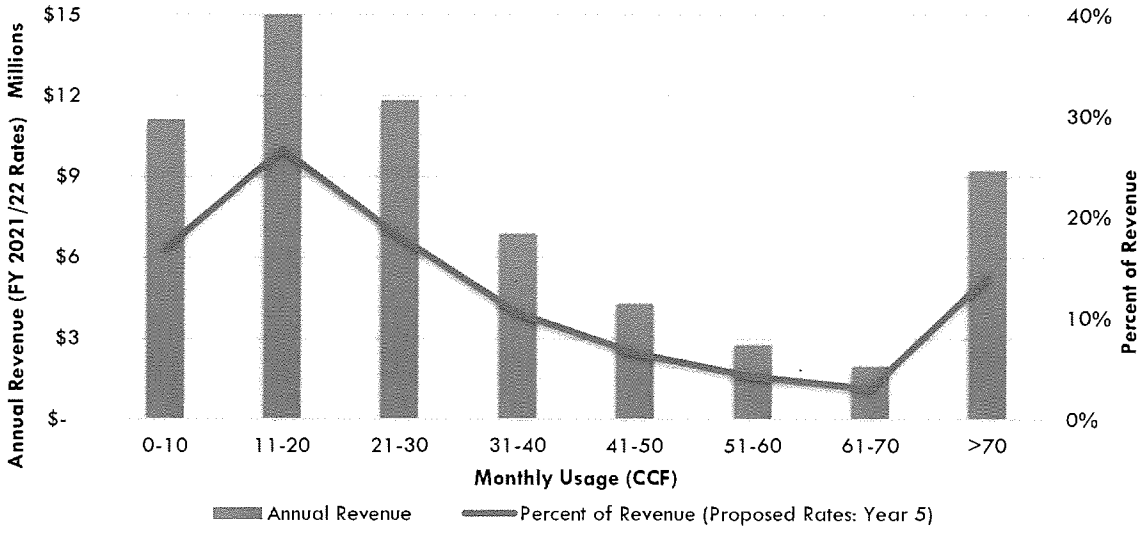


Figure 6-2 shows the revenue generated by single family users at varying levels of consumption for FY 2017/18. The left axis corresponds to the blue bars that show the annual revenue expected from users within each usage group. The right axis corresponds to the orange line that shows the percent of annual revenues from users within each group.

FIGURE 6-2 SFR REVENUE BY USAGE GROUP



As shown, the highest users, those above 70 CCF per month, account for 14.1 percent of SFR revenues under the proposed structure.

Single Family Bill Impact Analysis

Due to the changes in the rate structure, monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. The primary rate structure updates, and their impact on customer bills is discussed below. Note that the calculated bills and impacts presented within this report do not include RPU's Water Conservation Surcharge.

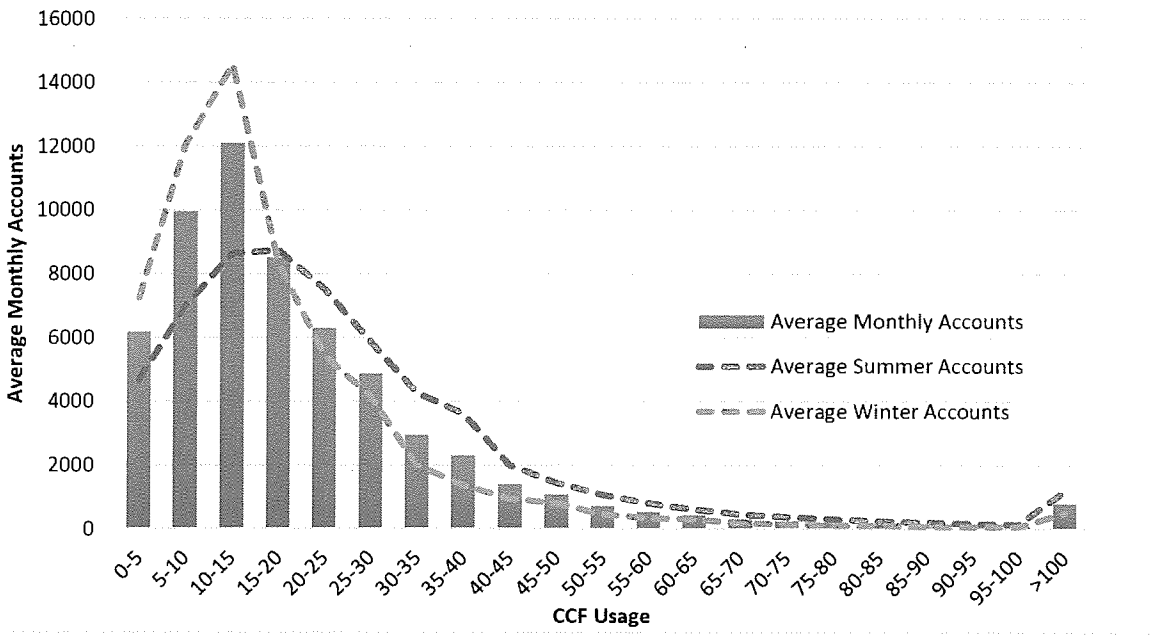
Phase-in of Increased Fixed Charges: The phase-in of increased fixed revenue recovery over the rate plan period will result in slightly higher percentage increases for low usage customers, however on a dollar basis, the lower usage customers will see a lower increase than higher usage customers.

Decreased Tier 1 Allotment: The decrease of the Tier 1 breakpoint from 15 CCF to 9 CCF will impact customers whose usage typically falls above 9 CCF per month. Due to the lowered breakpoint, more of their usage will be charged at the higher Tier 2 rate rather than the Tier 1 rate. A portion of this increase will be offset by the change in the Tier 2 rate, with will drop to $1.51 in FY 2017/18 from the current rates of $1.64 (winter) and $1.83 (summer).

Change to Three-tiered Structure: The change to a three-tiered structure from the current rate's four-tiered structure aims to decrease revenue volatility by decreasing the amount of revenues from the largest users. It also allows the tiered rates to be better tied to RPU's water supplies. As a result of this change, the highest users will no longer be subject to the Tier 4 rate, all usage above 35 CCF will be charged at the Tier 3 rate. Due to the combining of Tiers 3 and 4, along with the other cost of service updates, the Tier 3 rate is will increase from the current rates of $2.26 (winter) and $2.85 (summer) to $2.77 (winter) and $3.38 (summer).

An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Figure 6-3 below shows the average distribution of the number of customer accounts at each usage level. On an annual average basis, the majority of customers, about 89 percent, use less than 40 CCF per month. About one percent of customers have an average use of more than 100 CCF per month. The usage distribution varies based on the season with more accounts at higher levels of monthly consumption in the summer, and more accounts at lower levels of consumption in the winter.

FIGURE 6-3 SINGLE FAMILY MONTHLY USAGE DISTRIBUTION



Further analysis of billing data and projected consumption for FY 2017/18 was completed to determine winter and summer usage at various consumption percentiles, and the bill impacts were calculated for each percentile. For this analysis the percentiles define the levels of consumption at which a given percentage of the customers fall at or below. For example, the 10th percentile corresponds to monthly usage of 5 CCF or below in the winter and 8 CCF or below in the summer. The customer attributes for each percentile are shown below in Table 6-8.

TABLE 6-8 SINGLE FAMILY TEST CUSTOMERS

Percentile	Winter CCF	Summer CCF	Average Annual Use	Assumed Meter Size
10th	5	8	6	3/4"
25th	9	15	12	3/4"
50th (Median)	15	24	19	3/4"
75th	24	36	29	1"
90th	37	54	44	1"

Figure 6-4 below shows the average monthly bill increase for each percentile in FY 2017/18 (Year 1) and the average monthly bill increase from FY 2018/19 through FY 2021/22 (Years 2 to 5). The average monthly bill for a 50th percentile (median) customer will increase by $4.06 per month in FY 2017/18, with an average monthly increase of $4.60 for years 2 through 5.

FIGURE 6-4 SINGLE FAMILY AVERAGE MONTHLY BILL INCREASES

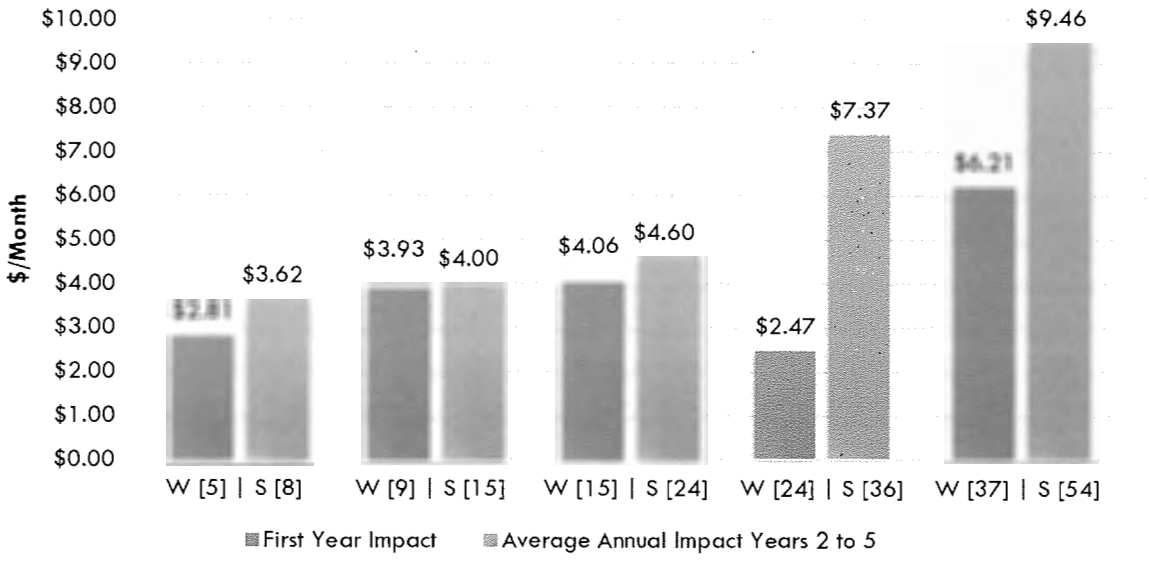


Table 6-9 below presents the average monthly bills for each user under the current rates and under the proposed rates in FY 2017/18 (Year 1) and in FY 2021/22 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5. As discussed previously, the lower users will see higher percentage increases due to the phase-in of increased fixed revenue recovery, and the modification of the tier structure. However, as shown in the last column, the overall dollar change from the current rates to the proposed rates in Year 5 increases incrementally as consumption levels rise.

TABLE 6-9 SINGLE FAMILY MONTHLY BILL IMPACTS

Percentile	CCF Usage Win | Sum	Avg Monthly Current Bill	Avg Monthly New Bill - Yr 1	Annual Avg % Yr 1	Avg Monthly New Bill - Yr 5	Annual Avg % Yr 2 to 5	5-Year Increase Current to Yr 5
10th	5 | 8	$21.09	$23.90	13.35%	$38.37	12.56%	$17.28
25th	9 | 15	$27.05	$30.98	14.52%	$46.98	10.98%	$19.93
50th	15 | 24	$37.87	$41.92	10.72%	$60.32	9.52%	$22.46
75th	24 | 36	$65.35	$67.82	3.78%	$97.29	9.44%	$31.94
90th	37 | 54	$99.89	$106.09	6.21%	$143.94	7.93%	$44.06

6.4.2 Multi-Family Residential Rates

Due to the high variance in account characteristics among individual customers, traditional tiered rate structures are often not a good fit for multi-family accounts. While multi-family usage is relatively homogeneous per dwelling unit, the number of units per complex varies widely. Relying only on account total information to develop and impose rates would penalize large complexes rather than excessive use or peaking. Therefore, tiered rate structures for multi-family accounts are typically developed based on allotments per dwelling unit rather than allotments per account.

Larger complexes, those with five or more dwelling units, exhibit consumption patterns that are more closely matched to commercial customers rather than other residential customers. In the absence of rates per dwelling unit, these customers are best served by a uniform volumetric rate.

Under the existing rate structure, multi-family accounts are charges under varying rate codes, some under the SFR WA-1 residential rate, and other under the Commercial and Industrial (WA-6.1 or WA-6.2) rate. The cost of service analysis and rate design aimed to identify all multi-family accounts regardless of their current rate class, and analyze the account and usage characteristics to develop multi-family specific rates, or find the most appropriate rate class to group the accounts.

Through billing system and property data analysis, RPU was able to identify the multi-family accounts and the number of dwelling units associated with each. The tiered multi-family rates will be limited to accounts with two, three, or four dwelling units. All larger accounts with five or more dwelling units will be migrated to the proposed Commercial and Industrial rate, as the usage for these properties better aligns with this class of user - more stable month or month water demands that vary by property size rather than based on seasonal peak usage.

Proposed Multi-Family Rates

The proposed rates have been developed with a two-tiered inclining block structure, with rates that vary seasonally. The per dwelling unit CCF allotments for each tier will remain constant throughout the course of the year. The proposed tier allotments have been set based on water needs for each customer and on the actual usage patterns observed in the customer billing data. Of the customers to be included in the multi-family rates, average monthly consumption per multi-family account for FY 2015/16 was 29 CCF; while the average monthly consumption per dwelling unit was 11 CCF. Setting tier allotments on a per dwelling unit basis helps to place all accounts on an even playing field, and enables tiered rates to appropriately standardize multi-family accounts to target efficiency and peaking, rather than demand alone.

- Tier 1 Allotment – Indoor Usage: The proposed tier one allotment is 7 CCF per account per month. This allotment was calculated based on an assumed 3 persons per household and 55 gallons per capita per day.
- Tier 2: Any usage above 7 CCF per dwelling unit will be charged the tier two rate.

Similar to SFR rates, seasonal adjustment of the tier two rates helps to promote year-round efficient water usage. The seasonal adjustment to the rates was made by allocating a greater share of costs to the tier three summer rate based on the annualized summer to annual average usage peak factor.

The rate calculation for the multi-family rates follows a process nearly identical to that outlined for the SFR rates above, but with only two tiers rather than three. Detailed calculations for the multi-family rates are included for reference in Appendix H. Table 6-10 below shows the proposed multi-family rates.

TABLE 6-10 PROPOSED MULTI-FAMILY RATES

Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 7 per DU	$1.20	$1.27	$1.33	$1.39	$1.46
Tier 2	1.64	>7 per DU	1.72	1.82	1.91	2.01	2.10
Tier 3	2.26						
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 7 per DU	$1.20	$1.27	$1.33	$1.39	$1.46
Tier 2	1.83	>7 per DU	1.95	2.07	2.17	2.28	2.38
Tier 3	2.85						
Tier 4	4.10						

Notes:
(1) Most applicable multi-family customers are currently charged WA-1 rates, though a small number are charged the WA-6.1 rate.
(2) WA-1 had four tiers. Tier 1: First 15. Tier 2: 16 to 35. Tier 3: 36-60. Tier 4: >60.

Multi-Family Bill Impact Analysis

Monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. Overall, the implementation of per dwelling unit rates in FY 2017/18 will result in lower increases and possible decreases for accounts that provide service to 3 or 4 dwelling units. The lowered increases or decreases are due to the accounts with more dwelling units no longer being subject to the current Tier 2, Tier 3, and Tier 4 rates simply because they serve a greater number of dwelling units and therefore use more water. Note that the calculated bills and impacts presented within this report do not include RPU's Water Conservation Surcharge.

After the initial structure change, increases are expected to be relatively proportional for accounts with different numbers of dwelling units but with similar consumption per dwelling unit. Figure 6-5 below shows the average monthly bill increases for multi-family customers currently on the SFR rate with two, three, and 4 dwelling units and average usage levels of 10 CCF and 12 CCF per month in winter and summer respectively.

FIGURE 6-5 MULTI-FAMILY AVERAGE MONTHLY BILL INCREASES

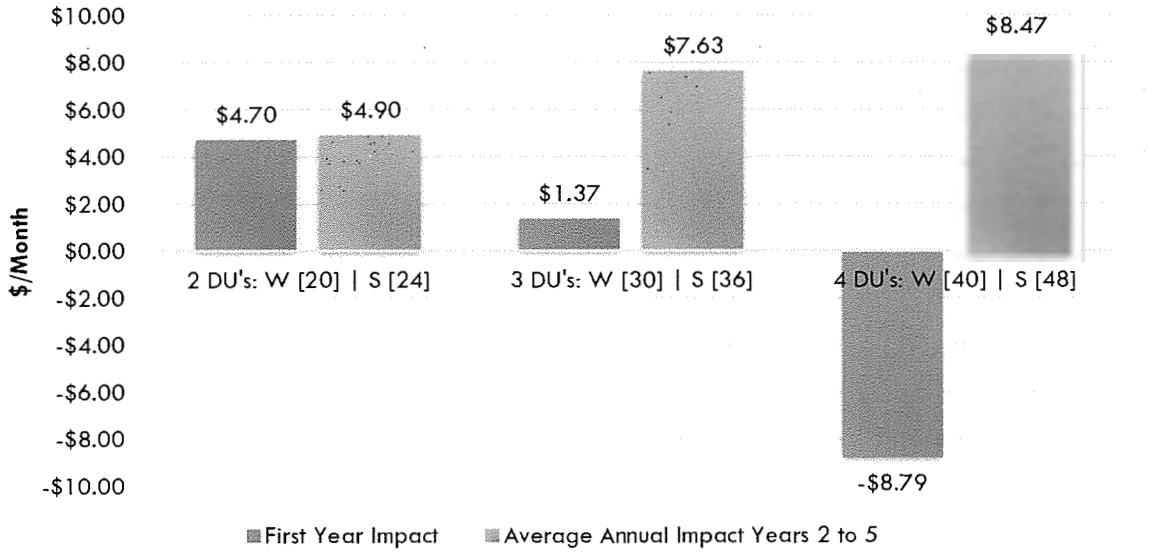


Table 6-11 below presents the average monthly bills for each user under the current rates and under the proposed rates in FY 2017/18 (Year 1) and in FY 2021/22 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5. As discussed previously, larger accounts will see smaller percentage increases or decreases in Year 1 due to the change to the per dwelling unit rate structure. After the initial change, increases for each user are expected to normalize.

TABLE 6-11 MULTI-FAMILY MONTHLY BILL IMPACTS

Customer Size	CCF Usage	Avg Monthly	Avg Monthly	Annual Avg %	Avg Monthly	Annual Avg %	5-Year Increase
	Win | Sum	Current Bill	New Bill - Yr 1	Yr 1	New Bill - Yr 5	Yr 2 to 5	
2 DU's	20 | 24	$42.65	$47.35	11.01%	$66.95	9.05%	$24.30
3 DU's	30 | 36	$71.09	$72.46	1.92%	$102.96	9.18%	$31.87
4 DU's	40 | 48	$96.72	$87.93	-9.08%	$121.81	8.49%	$25.10

6.4.3 Commercial and Industrial Rates

Under the existing rate structure, commercial and industrial users are each charged under distinct rate codes with fixed usage tiers. Non-residential users with meter sizes from 5/8-inch through 2-inch fall into the Commercial rate class (WA-6.1), and are subject to a two tiered, seasonally adjusted rates. The tier one allotment for commercial users is set at 550 CCF per month. Users with meter sizes of 3-inches or greater are placed in the Industrial rate class (WA-6.2) and are subject to a three tiered rate with Tier

1 from 0 to 550 CCF, Tier 2 from 551 to 5500 CCF, and any usage above 5500 CCF charged at the Tier 3 rate.

Though the difference in tier allotments between the commercial and industrial rate classes does afford some level of refinement, a high degree of variation does still exists between users with each class. For example, in FY 2015/16, average monthly consumption ranged from less than 15 CCF for 5/8-inch meters to almost 140 CCF for 2 inch meters. For Industrial WA-6.2 customers, average usage varied from about 440 CCF to over 1,800 CCF. This variation in usage illustrates the heterogeneity of accounts within the commercial and industrial classes, and points to the conclusion that the traditional tiers structure is not the best fit for commercial and industrial users. Unlike multi-family customers, there is no readily available methodology for creating appropriately sized tiered rates. As such, the proposed rates consist of a seasonally adjusted uniform rate structure that covers both the Commercial WA 6.1 and Industrial WA-6.2 accounts.

Proposed Commercial and Industrial Rates

The proposed Commercial and Industrial rates are calculated in a manner similar to the SFR rates shown above, however the calculation can be simplified because the proposed rates are a uniform rather than tiered. As an example, Table 6-12 below shows the calculation of the Commercial and Industrial rates for FY 2017/18. The total volumetric costs allocated to the commercial and industrial customers are split between summer and winter based on the annualized summer to annual average peak factor. Those seasonal costs are then divided by the projected consumption for each season to calculate the volumetric rates. Detailed calculations of the Commercial and Industrial rates are provided for reference in Appendix H.

TABLE 6-12 COMMERCIAL AND INDUSTRIAL RATE CALCULATION (FY 2017/18)

Projected Usage		Summer	Winter	Total
Total (WA-6.1 and WA-6.2 Combined)		3,801,000	4,057,000	**7,858,000**
Projected Costs		Summer	Winter	Total
Total Costs	Peak: 1.16	$7,299,000	$6,712,000	**$14,011,000**
Volumetric Rates		**Summer**	**Winter**	
Rate for All Usage		$1.93	$1.66	

Table 6-13 below shows the proposed Commercial and Industrial rates for each year of the rate plan. Existing rates are included for reference in Appendix H.

TABLE 6-13 PROPOSED COMMERCIAL AND INDUSTRIAL RATES

Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.66	$1.69	$1.72	$1.75	$1.77
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.93	$1.97	$2.00	$2.03	$2.05
(1) WA-6.1 had two tiers. Tier 1: First 550. Tier 2: >550.							
(2) WA-6.2 had three tiers. Tier 1: First 550. Tier 2: 551 to 5500. Tier 3: >5500.							

Commercial and Industrial Bill Impact Analysis

Due to the changes in the rate structure, monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. The primary rate structure updates, and their impact on customer bills is discussed below. Note that the calculated bills and impacts presented within this report do not include RPU's Water Conservation Surcharge.

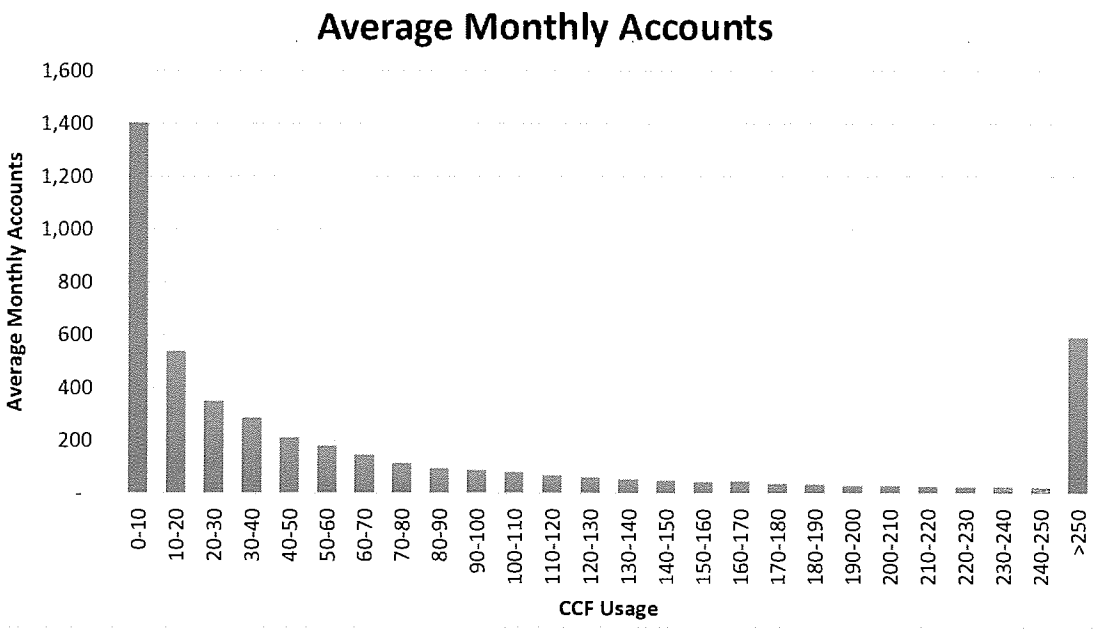
Uniform Fixed Charges: Historically, commercial and industrial users paid fixed charges that were lower than those assessed to residential customers. Under the proposed rate structure, fixed charges for each meter size will be the same for all customer classes. For most commercial users, this change will result in a higher increase in FY 2017/18 as compared to the expected increases for FY 2018/19 through FY 2021/22. This change will have more of an impact to the lowest usage commercial and industrial customers because the fixed charge is a greater proportion of their bill.

Phase-in of Increased Fixed Charges: The phase-in of increased fixed revenue recovery over the rate plan period will result in slightly higher percentage increases for low usage customers, however on a dollar basis, the lower usage customers will see a lower increase than higher usage customers.

Change to Uniform Seasonally Adjusted Rates: The change to a seasonally adjusted uniform rate from the current rate's two-tiered (commercial) or three-tiered (industrial) structure better suits the widely varied characteristics and usage patterns of commercial and industrial customers. Further, it will help to decrease revenue volatility by decreasing the amount of revenues from the largest and most variable users. As a result of this change, the highest users will no longer be subject to Tier 2 or Tier 3 rates.

An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Figure 6-6 below shows the average distribution of the number of customer accounts at each usage level. As shown, the commercial and industrial class exhibits greater variability in its usage distribution as compared to the SFR class due to the wide array of business types and sizes that it encompasses. The usage distribution varies based on the season with more accounts at higher levels of monthly consumption in the summer, and more accounts at lower levels of consumption in the winter.

FIGURE 6-6 COMMERCIAL AND INDUSTRIAL MONTHLY USAGE DISTRIBUTION



Further analysis of billing data and projected consumption for FY 2017/18 was completed to determine winter and summer usage at various consumption percentiles, and the bill impacts were calculated for each percentile. The customer attributes for each percentile are shown below in Table 6-14.

TABLE 6-14 COMMERCIAL AND INDUSTRIAL TEST CUSTOMERS

Percentile	Winter CCF	Summer CCF	Average Annual Use	Assumed Meter Size
10th	2	3	2	3/4"
25th	9	12	10	3/4"
50th (Median)	33	43	37	1"
75th	100	146	119	2"
90th	318	415	358	3"

Figure 6-7 below shows the average monthly bill increase for each percentile in FY 2017/18 (Year 1) and the average monthly bill increase from FY 2018/19 through FY 2021/22 (Years 2 to 5). The average monthly bill for a 50th percentile (median) customer will increase by $14.31 per month in FY 2017/18, with an average monthly increase of $6.16 for years 2 through 5.

FIGURE 6-7 COMMERCIAL AND INDUSTRIAL AVERAGE MONTHLY BILL INCREASES

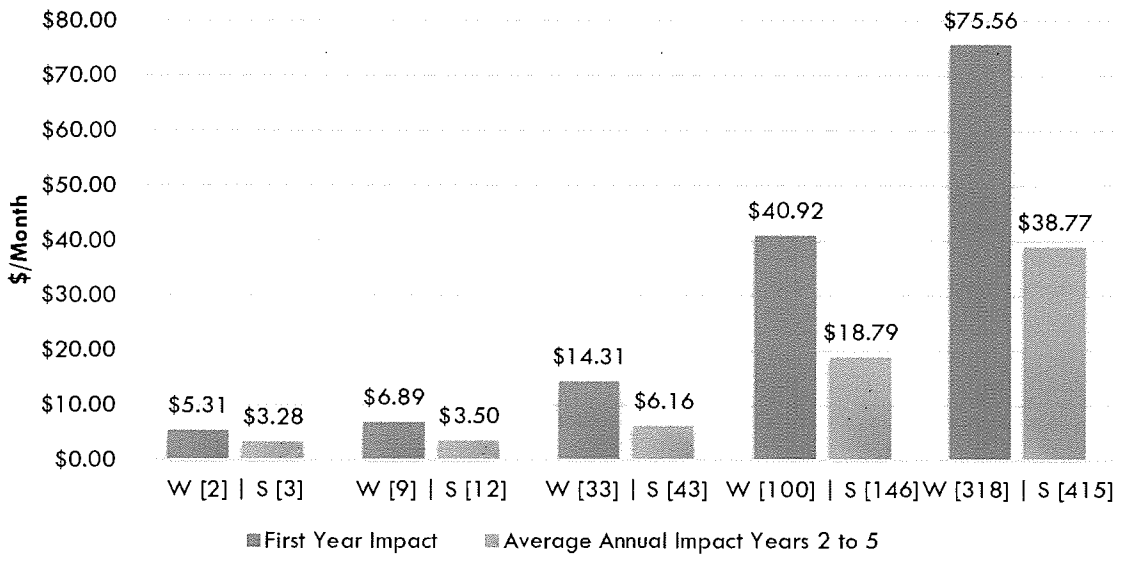


Table 6-15 below presents shows the average monthly bills for each user under the current rates and under the proposed rates in FY 2017/18 (Year 1) and in FY 2021/22 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5. As discussed previously, the Year 1 percentage increase is greater than the percentage increase for years 2 through 5 due to the implementation of fixed charges that are uniform among the customer classes. Further, the smaller users will see higher percentage increases in Years 2 to 5 due to the phase-in of increased fixed revenue recovery, and the modification of the tier structure. However, as shown in the last column, the overall dollar change from the current rates to the proposed rates in Year 5 increases incrementally as consumption levels rise.

TABLE 6-15 COMMERCIAL AND INDUSTRIAL MONTHLY BILL IMPACTS

Percentile	CCF Usage	Avg Monthly	Avg Monthly	Annual Avg %	Avg Monthly	Annual Avg %	5-Year Increase
	Win | Sum	Current Bill	New Bill - Yr 1	Yr 1	New Bill - Yr 5	Yr 2 to 5	
10th	2 | 3	$15.44	$20.75	34.39%	$33.87	13.03%	$18.43
25th	9 | 12	$27.88	$34.77	24.72%	$48.78	8.84%	$20.91
50th	33 | 43	$78.27	$92.57	18.28%	$117.20	6.07%	$38.93
75th	100 | 146	$252.02	$292.94	16.24%	$368.12	5.88%	$116.10
90th	318 | 415	$711.99	$787.55	10.61%	$942.61	4.60%	$230.62

6.4.4 Landscape Irrigation Rates

Under the existing rate structure, landscape irrigation users are placed into varying rate classes. Most users with meter sizes from 5/8-inch through 2 inch fall into the Commercial rate class (WA-6.1) and most users with meter sizes of 3-inches or greater are placed in the Industrial rate class (WA-6.2). A small number of users flagged as Landscape irrigation accounts are currently in the WA-1 (Residential) class. Landscape users typically place a higher peak burden on the water system as they use water heavily in the hottest and driest summer months, with significantly less usage in the winter. Thus, it is appropriate to separate Landscape users into a unique rate class that reflects the increased burden that they place on the system.

Proposed Landscape Irrigation Rates

The proposed Landscape rates are calculated using the same methodology as the Commercial and Industrial rates above. As an example, Table 6-16 below shows the calculation of the landscape rates for FY 2017/18. Detailed calculations of the Landscape rates are provided for reference in Appendix H.

TABLE 6-16 LANDSCAPE IRRIGATION RATE CALCULATION (FY 2017/18)

Projected Usage		Summer	Winter	Total
Usage		814,000	711,000	**1,525,000**
Projected Costs		Summer	Winter	Total
Total Costs	Peak: 1.28	$1,815,000	$1,238,000	**$3,053,000**
Volumetric Rates		**Summer**	**Winter**	
Rate for All Usage		$2.24	$1.75	

Table 6-17 below shows the proposed Landscape rates for each year of the rate plan. Existing rates are included for reference in Appendix H.

TABLE 6-17 PROPOSED LANDSCAPE IRRIGATION RATES

Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tiered	Varies	All Usage	$1.75	$1.78	$1.81	$1.84	$1.86
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tiered	Varies	All Usage	$2.24	$2.28	$2.32	$2.36	$2.38

Landscape Irrigation Bill Impact Analysis

Due to the changes in the rate structure, monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. The primary rate structure updates, and their impact on customer bills is discussed below. Note that the calculated bills and impacts presented within this report do not include RPU's Water Conservation Surcharge.

Unique Rate Class for Landscape Irrigation: Under the existing rate structure landscape irrigation customers have been combined with commercial and industrial customers. However, due the unique demands that landscape irrigation customers place on the system, the proposed rate structure includes a specific landscape irrigation rate. Because the landscape users exhibit a greater seasonal peak, their volumetric rates will be higher than those proposed for the commercial and industrial class and the overall increase in FY 2017/18 will be greater for landscape irrigation customers.

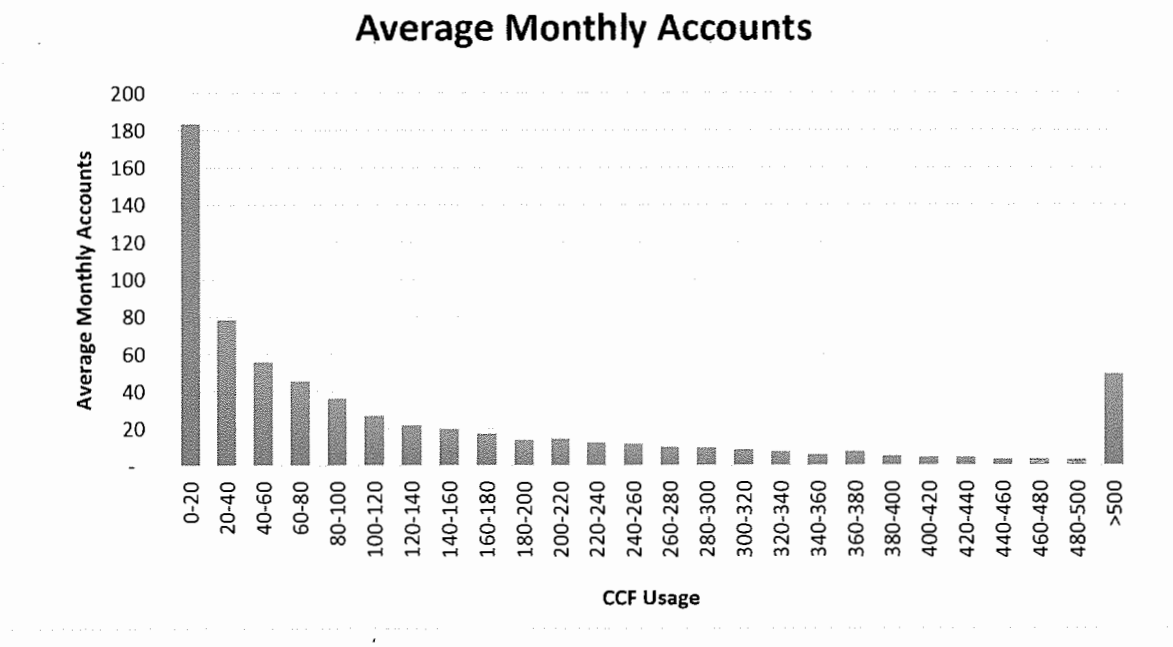
Uniform Fixed Charges: Historically, landscape irrigation customers paid fixed charges that were lower than those assessed to residential customers. Under the proposed rate structure, fixed charges for each meter size will be the same for all customer classes. For most users, this change will result in a higher increase in FY 2017/18 as compared to the expected increases for FY 2018/19 through FY 2021/22. This change will have more of an impact to the lowest usage landscape customers because the fixed charge is a greater proportion of their bill.

Phase-in of Increased Fixed Charges: The phase-in of increased fixed revenue recovery over the rate plan period will result in slightly higher percentage increases for low usage customers, however on a dollar basis, the lower usage customers will see a lower increase than higher usage customers.

Change to Uniform Seasonally Adjusted Rates: The change to a seasonally adjusted uniform rate from the current rate's two-tiered (commercial) or three-tiered (industrial) structure better suits the widely varied characteristics and usage patterns of landscape irrigation customers. Further, it will help to decrease revenue volatility by decreasing the amount of revenues from the largest and most variable users. As a result of this change, the highest users will no longer be subject to Tier 2 or Tier 3 rates.

An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Figure 6-8 below shows the average distribution of the number of customer accounts at each usage level. As shown, the landscape irrigation class exhibits a large degree of variability in monthly usage. The usage distribution varies based on the season with more accounts at higher levels of monthly consumption in the summer, and more accounts at lower levels of consumption in the winter.

FIGURE 6-8 LANDSCAPE IRRIGATION MONTHLY USAGE DISTRIBUTION



Further analysis of billing data and projected consumption for FY 2017/18 was completed to determine winter and summer usage at various consumption percentiles, and the bill impacts were calculated for each percentile. The customer attributes for each percentile are shown below in Table 6-18.

TABLE 6-18 LANDSCAPE IRRIGATION TEST CUSTOMERS

Percentile	Winter CCF	Summer CCF	Average Annual Use	Assumed Meter Size
10th	6	8	7	3/4"
25th	19	32	24	3/4"
50th (Median)	63	106	81	1.5"
75th	165	285	215	2"
90th	356	555	439	3"

Figure 6-9 below shows the average monthly bill increase for each percentile in FY 2017/18 (Year 1) and the average monthly bill increase for FY 2018/19 through FY 2021/22 (Years 2 to 5).

FIGURE 6-9 LANDSCAPE IRRIGATION AVERAGE MONTHLY BILL INCREASES

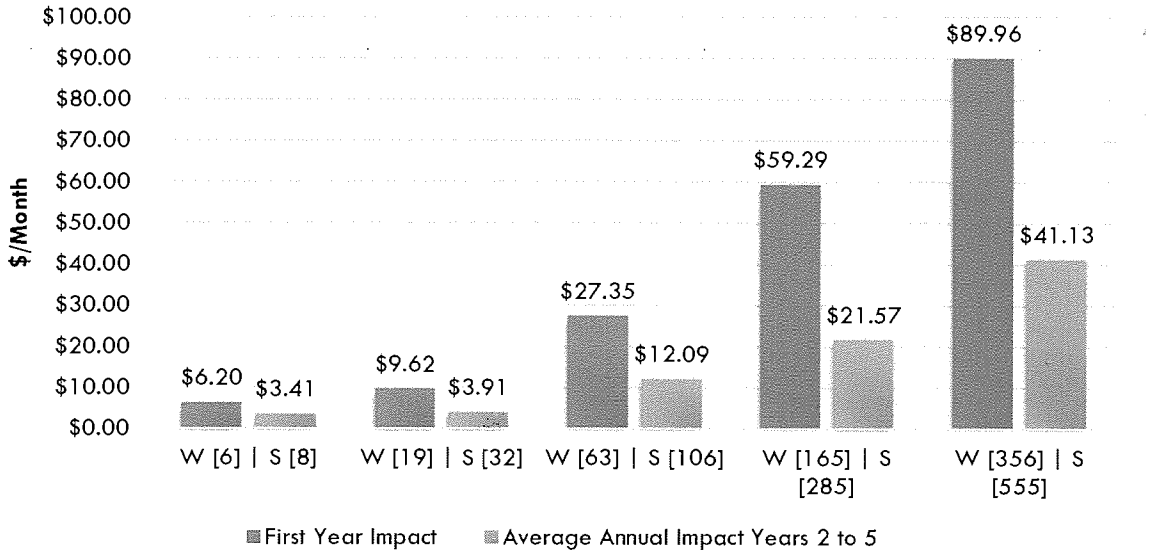


Table 6-19 below presents shows the average monthly bills for each user under the current rates and under the proposed rates in FY 2017/18 (Year 1) and in FY 2021/22 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5. As discussed previously, the year 1 percentage increase is greater than the percentage increase for years 2 through 5 due to the implementation of fixed charges that are uniform among the customer classes and due to the landscape irrigation customers being separated into a unique rate class. Further, the smaller users will see higher percentage increases due to the phase-in of increased fixed revenue recovery, and the modification of the tier structure. However, as shown in the last column, the overall dollar change from the current rates to the proposed rates in Year 5 increases incrementally as consumption levels rise.

TABLE 6-19 LANDSCAPE IRRIGATION MONTHLY BILL IMPACTS

Percentile	CCF Usage	Avg Monthly	Avg Monthly	Annual Avg %	Avg Monthly	Annual Avg %	5-Year Increase
	Win | Sum	Current Bill	New Bill - Yr 1	Yr 1	New Bill - Yr 5	Yr 2 to 5	
10th	6 | 8	$22.44	$28.64	27.64%	$42.27	10.22%	$19.83
25th	19 | 32	$50.91	$60.53	18.90%	$76.19	5.92%	$25.28
50th	63 | 106	$168.82	$196.17	16.20%	$244.52	5.66%	$75.70
75th	165 | 285	$408.37	$467.66	14.52%	$553.96	4.32%	$145.59
90th	356 | 555	$846.97	$936.93	10.62%	$1,101.43	4.13%	$254.46

6.4.5 Temporary Service Rates WA-2

The Temporary Service WA-2 rate class is primarily used by developers or contractors to provide water service for construction sites and by agricultural customers to fill spraying trucks for grove maintenance. The current rate structure consists of a daily meter rental fee of $9.02 per day, with a maximum rental charge of $271.20 per month. The rate for all usage is $2.71 per CCF, there is no monthly fixed charge. Under the proposed rate structure, Temporary Service users would continue to pay a meter rental fee and volumetric charge.

Fees and Charges for Fire Hydrant Meters

Temporary service customers at construction sites are served via a metered connection to a fire hydrant. The daily rental fee that they pay includes a component to cover the cost of the 3-inch meter and backflow prevention unit that is connected to serve each customer, as well as a daily fixed service charge component based on the proposed fixed service charges.

The meter cost component is calculated by dividing the annualized cost of the meter by the estimated annual days in service, then applying an adjustment to account for the 11.5 percent general fund transfer. The meter cost component is escalated each year based on the capital escalation factor of 2.85 percent per year. The daily fixed service charge component is calculated by multiplying the proposed monthly charge for a 3-inch meter by 12 and dividing by 360. Table 6-20 below shows the calculation of the daily rental fee for FY 2017/18.

TABLE 6-20 TEMPORARY SERVICE DAILY RENTAL FEE CALCULATION (FY 2017/18)

Daily Rental Fee	FY 2017/18
Meter Cost	$2,500
Depreciable Life (Years)	5
Annualized Cost	$500
Utilization	25%
Annual Days in Service	90
Daily Meter Cost	$5.56
General Fund Transfer (GFT)	11.5%
Daily Meter Cost With GFT	**$6.19**
3" Meter Charge	$145.89
Daily Fixed Charge	**$4.86**
Daily Meter Cost With GFT	$6.19
Daily Fixed Charge	$4.86
Total Daily Rental Fee	**$11.06**

Table 6-21 shows the calculation of the maximum monthly charge for FY 2017/18. The maximum monthly charge is calculated by adding 30 days of the daily meter cost with the general fund transfer to the proposed monthly fixed service charge for a 3-inch meter.

TABLE 6-21 TEMPORARY SERVICE MAXIMUM MONTHLY CHARGE CALCULATION

Maximum Monthly Charge	FY 2017/18
Daily Meter Cost With GFT (30 Days)	$185.84
3" Meter Charge (Monthly)	$145.89
Annualized Cost	**$331.73**

Table 6-22 below shows the proposed daily rental fees and maximum monthly charges for each year of the rate plan. Detailed calculations of the daily rental fee and maximum monthly charge are included for reference in Appendix H.

TABLE 6-22 PROPOSED TEMPORARY SERVICE DAILY RENTAL FEES AND MAXIMUM MONTHLY CHARGES

	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Daily Rental Fee	$9.02	$11.06	$11.89	$12.81	$13.80	$14.86
Maximum Monthly Charge	$271.20	$331.73	$356.69	$384.01	$413.71	$445.64

Proposed Temporary Service Rates

The proposed Temporary Service rates are calculated using a similar methodology as the Commercial and Industrial rates above, however the calculation is simplified because the rates are not seasonally adjusted. As an example, Table 6-23 below shows the calculation of the Temporary Service rates for FY 2017/18. Detailed calculations of the Temporary Service rates are provided for reference in Appendix H.

TABLE 6-23 TEMPORARY SERVICE RATE CALCULATION (FY 2017/18)

Projected Usage	
Total CCF	54,000
Projected Costs	
Total Costs	$135,000
Volumetric Rates	
Rate for All Usage	$2.50

Table 6-24 below shows the proposed Temporary Service rates for each year of the rate plan. Though the volumetric charge represents a decrease as compared to the existing rates, imposition of a prorated daily fixed charge will result in an increase overall for most Temporary Service Users.

TABLE 6-24 PROPOSED TEMPORARY SERVICE RATES

	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$2.71	$2.50	$2.56	$2.60	$2.64	$2.67

6.4.6 Riverside Water Company Irrigators WA-4

The Irrigation metered service WA-4 rates provide service to primarily residential customers located in a specific region of RPU's service area who were shareholders in the Riverside Water Company. When RPU acquired Riverside Water Company and as a condition of acquisition, these customers transferred water rights from the Riverside Water Company to RPU. This rate class is closed to new users and RPU intends to phase it out in accord with the acquisition agreement. The current rate structure is a three tiered volumetric rate with a tier one allotment of 15 CCF per month, and a tier two allotment of 55 CCF per month. All usage over 70 CCF per month is charges at the tier three rate. The rates are seasonally adjusted.

Proposed Riverside Water Company Irrigators WA-4 Rates

Based on the customer data analysis, the existing tier breaks are appropriate, the proposed rates maintain the current structure and update the volumetric rates based on the cost of service analysis. Volumetric rates for each tier are calculated using the same methodology as that used to calculate the SFR rates described previously. Detailed calculations for the rates are included for reference in Appendix H. Table 6-25 below shows the proposed Riverside Water Company Irrigators rates.

TABLE 6-25 PROPOSED RIVERSIDE WATER COMPANY IRRIGATORS WA-4 RATES

Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.26	$1.30	$1.37	$1.43	$1.48
Tier 2	1.75	16-70	1.51	1.57	1.65	1.72	1.78
Tier 3	1.77	>70	2.35	2.43	2.56	2.67	2.77
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.26	$1.30	$1.37	$1.43	$1.48
Tier 2	1.76	16-70	1.51	1.57	1.65	1.72	1.78
Tier 3	1.87	>70	3.02	3.13	3.30	3.44	3.56

6.4.7 Interruptible City Irrigation and Recycled Water WA-7

In general, interruptible service and rates are most appropriate for customers whose service can be reliably curtailed or service can be shut off without implication for public health and safety. For RPU the accounts that fall into that category are the City irrigation accounts, primarily those for parks and medians irrigation, and recycled water accounts, because the water consumed is used exclusively for irrigation. Equally as important, because the City is the customer, RPU has certainty that service can be shut off on demand for extended periods of time without breaching service requirements or agreements.

The rates for WA-7 users are developed to reflect the interruptible nature of the service, and therefore do not include costs associated with supply resiliency. In the event that system wide usage must be curtailed, or if a system failure or other event leads to a decrease in available supplies, the interruptible accounts can be shut off, leaving their share of supply available to serve other users.

Recycled water users have historically been charged for service under a unique rate code, WA-10. Moving forward, recycled water users will be combined with Interruptible WA-7 users as the usage patterns, customer characteristics, and the level of service provided is similar among each class.

An additional modification to the Interruptible WA-7 rate structure is the inclusion of the fixed monthly service charge. Previously, Special WA-7 accounts paid a minimum monthly charge calculated based on a minimum level of usage for each account based on meter size.

Proposed WA-7 Rates

The proposed Interruptible WA-7 rates are calculated using the same methodology as that discussed above for Temporary Service WA-2. As an example, Table 6-26 below shows the calculation of the Interruptible WA-7 rates for FY 2017/18. Detailed calculations of the Interruptible WA-7 rates are provided for reference in Appendix H.

TABLE 6-26 INTERRUPTIBLE CITY IRRIGATION RATE CALCULATION WA-7 (FY 2017/18)

Projected Usage	
Total CCF	961,000
Projected Costs	
Total Costs	$1,565,000
Volumetric Rates	
Rate for All Usage	$1.63

Table 6-27 below shows the proposed WA-7 rates for each year of the rate plan.

TABLE 6-27 INTERRUPTIBLE CITY IRRIGATION WA-7 PROPOSED RATES

	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$0.80 to $1.14	$1.63	$1.67	$1.70	$1.72	$1.74

Interruptible City Irrigation Bill Impact Analysis

Due to the changes in the rate structure, monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. The primary rate structure updates, and their impact on customer bills is discussed below. Note that the calculated bills and impacts presented within this report do not include RPU's Water Conservation Surcharge.

Increased Volumetric Rates: The costs of service analysis showed that the volumetric rates for interruptible city irrigation users needed to be increased significantly. The proposed plan adjusts the rates to the updated cost of service level in FY 2017/18, resulting in large first year increases.

Uniform Fixed Charges: Under the current rate structure, interruptible city irrigation customers paid a minimum monthly charge rather than a monthly fixed charge. Under the proposed rate structure, fixed charges for each meter size will be the same for all customer classes.

Phase-in of Increased Fixed Charges: The phase-in of increased fixed revenue recovery over the rate planning period will result in slightly higher percentage increases for low usage customers, however on a dollar basis, the lower usage customers will see a lower increase than higher usage customers.

An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Billing data and projected consumption for FY 2017/18 was analyzed to determine winter and summer usage at various consumption percentiles, and the bill impacts were calculated for each percentile. The customer attributes for each percentile are shown below in Table 6-28.

TABLE 6-28 INTERRUPTIBLE CITY IRRIGATION TEST CUSTOMERS

Percentile	Winter CCF	Summer CCF	Average Annual Use	Assumed Meter Size
10th	4	5	4	3/4"
25th	10	12	11	3/4"
50th (Median)	31	31	31	1"
75th	106	123	113	1.5"
90th	381	529	443	2"

Figure 6-10 below shows the average monthly bill increase for each percentile in FY 2017/18 (Year 1) and the average monthly bill increase for FY 2018/19 through FY 2021/22 (Years 2 to 5).

FIGURE 6-10 INTERRUPTIBLE CITY IRRIGATION AVERAGE MONTHLY BILL INCREASES

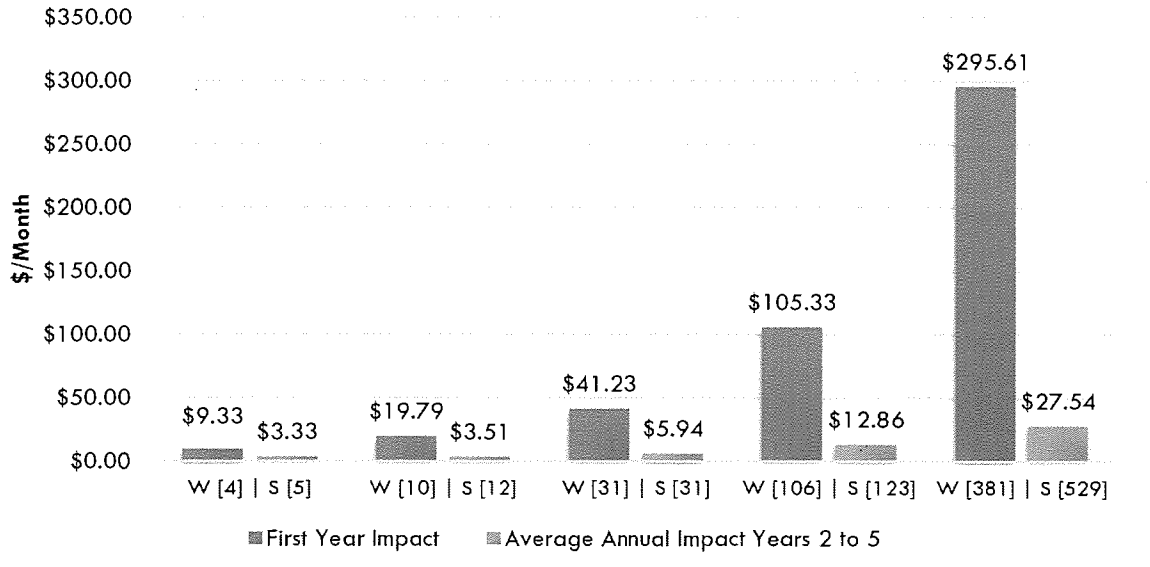


Table 6-29 below presents shows the average monthly bills for each user under the current rates and under the proposed rates in FY 2017/18 (Year 1) and in FY 2021/22 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5. Year 1 increases are significant due to the large increase in the volumetric rate and the switch to fixed charges rather than minimum charges. During years 2 to 5, smaller users will see higher percentage increases due to the phase-in of increased fixed revenue recovery. However, as shown in the last column, the overall dollar change from the current rates to the proposed rates in Year 5 increases incrementally as consumption levels rise.

TABLE 6-29 INTERRUPTIBLE CITY IRRIGATION MONTHLY BILL IMPACTS

Percentile	CCF Usage	Avg Monthly	Avg Monthly	Annual Avg %	Avg Monthly	Annual Avg %	5-Year Increase
	Win | Sum	Current Bill	New Bill - Yr 1	Yr 1	New Bill - Yr 5	Yr 2 to 5	
10th	4 | 5	$14.27	$23.60	65.38%	$36.93	11.84%	$22.66
25th	10 | 12	$14.27	$34.06	138.67%	$48.09	9.01%	$33.82
50th	31 | 31	$35.34	$76.57	116.67%	$100.34	6.99%	$65.00
75th	106 | 123	$128.92	$234.25	81.71%	$285.70	5.09%	$156.78
90th	381 | 529	$504.64	$800.25	58.58%	$910.40	3.28%	$405.76

6.5 TRANSITIONAL RATES

As a component of the cost of service analysis, RPU's rate classes were reviewed and customer data was analyzed to test the nexus between rate class and account and usage characteristics. As a result of this analysis, it was determined that several rate classes that have historically been treated as distinct classes, would be more appropriately placed within RPU's general SFR, Commercial, or Landscape rate classes. The effected customers include all customers in the Irrigation Metered Service (WA-3.1 and WA-3.2), Grove Preservation Service (WA-9.1 and WA-9.2), and cemetery customers in Special Metered Service WA-7.

In order to mitigate the rate impacts to effected customers, RPU has decided to migrate the customers to the appropriate rate classes over the rate projection period. As a result, transitional rates for each of the classes were developed to smooth the increases over four or five years depending on the rate class. All of the affected rate classes are or will be closed to new users going forward.

6.5.1 Irrigation WA-3.1 Transition to SFR

The Irrigation WA-3.1 rates provide service to residential customers that have historically consumed large amounts of water for irrigation. The current rate structure is a two tiered volumetric rate with a minimum monthly charge rather than the fixed service charge. The tier one allotment is 100 CCF per month and the rates are not seasonally adjusted.

Based on the customer data analysis, Irrigation WA-3.1 users would be most appropriately served by the SFR rate class, as their account characteristics are in line with those of large SFR customers. Table 6-17 below shows the transitional rates for customers currently included in Irrigation WA-3.1, these customers will be fully transitioned in FY 2021/22, at which point they will be assessed the SFR rates.

Irrigation WA-3.1 customers currently pay a minimum monthly charge rather than the monthly fixed service charge. The customers will begin to pay the monthly fixed service charge starting in year 1 (FY 2017/18). Table 6-30 shows the transitional rates for Irrigation WA-3.1 customers.

TABLE 6-30 TRANSITIONAL IRRIGATION WA-3.1 RATES

	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$0.81	First 100	$0.90	$1.14	$1.45	$1.84	SFR Rates
Tier 2	1.26	>100	1.71	2.17	2.76	3.50	

6.5.2 Grove Preservation WA-9.1 Transition to SFR

The Grove Preservation Service WA-9.1 rates provide service to residential customers that have historically consumed large amounts of water for irrigation. The current rate structure is a three tiered volumetric rate with a tier one allotment of 15 CCF per month, and a tier two allotment of 45 CCF per month. All usage over 60 CCF per month is charged at the tier three rate. The rates are not seasonally adjusted.

Based on the customer data analysis, Grove Preservation WA-9.1 users would be most appropriately served by the SFR rate class, as their account characteristics and usage patterns are in line with those of large SFR customers. Table 6-18 below shows the transitional rates for customers currently included in Grove Preservation WA-9.1, these customers will be fully transitioned in FY 2021/22, at which point they will be assessed the SFR rates.

Grove Preservation WA-9.1 customers currently pay a monthly fixed service charge that is significantly lower than that of SFR customers. The customers will begin to pay the updated monthly fixed service charge starting in year 1 (FY 2017/18). Table 6-31 shows the transitional rates for Grove Preservation WA-9.1 customers.

TABLE 6-31 TRANSITIONAL GROVE PRESERVATION WA-9.1 RATES

	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$0.91	First 15	$1.10	$1.33	$1.62	$1.97	SFR Rates
Tier 2	1.58	16-60	1.12	1.37	1.66	2.03	
Tier 3	1.07	>60	1.50	1.88	2.36	2.97	

6.5.3 Irrigation WA-3.2 Transition to Commercial and Industrial

The Irrigation WA-3.2 service rates provide service to non-residential customers for irrigation of commercial nurseries or groves. This rate class is closed to new users. The current rate structure is a uniform volumetric rate with a minimum monthly charge rather than the fixed service charge. The rates are not seasonally adjusted.

Based on the customer data analysis, Irrigation WA-3.2 users would be most appropriately served by the Commercial and Industrial rate class, as their account characteristics and usage patterns are in line with those of non-residential customers. Table 6-19 below shows the transitional rates for customers currently included in Irrigation WA-3.2, these customers will be fully transitioned in FY 2021/22, at which point they will be assessed the Commercial and Industrial rates.

Irrigation WA-3.2 customers currently pay a minimum monthly charge rather than the monthly fixed service charge. The customers will begin to pay the monthly fixed service charge starting in year 1 (FY 2017/18). Table 6-32 shows the transitional rates for Irrigation WA-3.2 customers.

TABLE 6-32 TRANSITIONAL IRRIGATION WA-3.2 TRANSITIONAL RATES

	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$1.26	$1.35	$1.48	$1.63	$1.79	Commercial & Industrial Rates

6.5.4 Grove Preservation WA-9.2 Transition to Commercial and Industrial

The Grove Preservation WA-9.2 service rates provide service non-residential customers for irrigation of commercial nurseries or groves. Grove Preservation WA-9.2 customers require 2 meters, one to serve residential needs, and one to serve outdoor needs. RPU has indicated that several of the Grove Preservation WA-9.2 customers operate commercial nurseries. The current rate structure is a uniform volumetric rate that is not seasonally adjusted.

Based on the customer data analysis, Grove Preservation WA-9.2 users would be most appropriately served by the Commercial and Industrial rate class, as their account characteristics and usage patterns are in line with those of non-residential customers. Table 6-20 below shows the transitional rates for customers currently included in Grove Preservation WA-9.2, these customers will be fully transitioned in FY 2021/22, at which point they will be assessed the Commercial and Industrial rates.

Grove Preservation WA-9.1 customers currently pay a monthly fixed service charge that is significantly lower than that of SFR customers. The customers will begin to pay the updated monthly fixed service charge starting in year 1 (FY 2017/18). Table 6-33 shows the transitional rates for WA-9.2 customers.

TABLE 6-33 TRANSITIONAL GROVE PRESERVATION WA-9.2 RATES

	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$1.07	$1.18	$1.34	$1.53	$1.74	Commercial & Industrial Rates

6.5.5 Special Service WA-7 Cemeteries Transition to Commercial or Landscape

Two cemeteries, with a total of 7 meters, are currently charged under the Special WA-7 rates, which are intended to provide interruptible service to City Irrigation accounts. Because the cemeteries are not owned or operated by the City, RPU does not have certainty to immediately curtail or interrupt usage. Thus, these accounts are not eligible for the interruptible rate.

Meters that serve exclusively irrigation will be transitioned to the Landscape rate class, those that serve both structures and irrigation will be transitioned to the Commercial and Industrial rate class. These customers will be fully transitioned in FY 2021/22, at which point they will be assessed the Landscape or the Commercial and Industrial rates. As Special WA-7 customers, these cemeteries currently pay a minimum monthly charge rather than the monthly fixed service charge. The customers will begin to pay the monthly fixed service charge starting in year 1 (FY 2017/18). Table 6-34 and Table 6-35 show the transitional rates for cemetery customers.

TABLE 6-34 TRANSITIONAL SPECIAL SERVICE WA-7 CEMETERIES RATES TO COMMERCIAL AND INDUSTRIAL

	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$1.14	$1.19	$1.35	$1.53	$1.74	Commercial & Industrial Rates

TABLE 6-35 TRANSITIONAL SPECIAL SERVICE WA-7 CEMETERIES RATES TO LANDSCAPE

	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$1.14	$1.21	$1.39	$1.61	$1.87	Landscape Rates

6.6 OUTSIDE CITY SURCHARGE

Along with customers within the City of Riverside, RPU provides water service to about 4,000 residential, commercial, industrial, and landscape accounts that are located outside of City limits. Because these customers lie outside City limits, RPU incurs additional capital and operating costs to provide them with water service. In order to recover those costs, the rates charged to outside City users include a percentage surcharge based on the incremental capital and operational costs that they require. The current Outside City Surcharge is 50 percent, thus users pay 1.5 times the In-City rate for comparable service.

Proposed Outside City Surcharge

The Outside City Surcharge was updated as a component of the cost of service analysis. The calculation of the updated surcharge includes three main steps: (1) determine the incremental costs associated with providing service to outside City users, (2) determine the amount of revenue generated by outside City

users without applying the surcharge, and (3) divide the incremental costs (step 1) by the revenue without the surcharge (step 2) to determine the required Outside City Surcharge.

Incremental Costs

The incremental capital and O&M costs were determined based on information provided by RPU's engineering and operations departments. The Outside City user's share of capital assets (facilities and pipelines), energy needs, and flow was determined based on RPU's hydraulic model and system schematic. Capital costs are annualized based on accounting depreciation assuming a 50 year life for pipelines and a 30 year life for facilities. The annual cost was then escalated at 2.85 percent per year, consistent with the capital escalation factor used throughout the pro forma and COSA.

Energy costs are estimated based on the amount of energy required to serve outside City users annually (KWh) and an assumed energy cost. Energy costs are escalated at 2 percent per year consistent with the O&M escalation factors in the pro forma. Table 6-36 summarizes the costs associated with serving outside City users. Detailed calculations of the capital and energy costs are included for reference in Appendix D.

TABLE 6-36 PROJECTED OUTSIDE CITY COSTS

Outside City Costs	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Capital Costs	$1,437,000	$1,478,000	$1,520,000	$1,563,000	$1,608,000
Energy Costs	71,000	73,000	75,000	77,000	79,000
Total Outside City Costs	**$1,508,000**	**$1,551,000**	**$1,595,000**	**$1,640,000**	**$1,687,000**

Revenues without Surcharge

The estimated revenues from outside City users without the surcharge were calculated by applying the proposed inside City volumetric rates presented within this report to the projected outside City usage, and adding the expected fixed revenues based on the number of accounts and MEUs. Table 6-37 below summarizes the projected revenues, detailed calculations are included for reference in Appendix D.

Surcharge Calculation

The proposed outside City surcharge of 43 percent has been calculated by dividing the total incremental costs for FY 2017/18 through FY 2021/22 by the projected revenues without the surcharge for the same period. Using this five year approach mitigates year-over-year changes to the surcharge, while recovering cost equitably from outside City users. Table 6-38 below presents the calculation of the proposed Outside City Surcharge, detailed calculations are included for reference in Appendix D.

TABLE 6-37 OUTSIDE CITY REVENUES WITHOUT SURCHARGE

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Variable Revenues					
Landscape	$210,000	$213,000	$218,000	$222,000	$225,000
MFR	11,000	11,000	12,000	12,000	12,000
SFR	1,723,000	1,759,000	1,792,000	1,828,000	1,851,000
WA-4	1,000	1,000	1,000	1,000	1,000
Commercial and Industrial	381,000	389,000	396,000	404,000	409,000
Total Variable Revenues	**$2,326,000**	**$2,374,000**	**$2,419,000**	**$2,467,000**	**$2,498,000**
Fixed Revenues					
All Outside City Users	**$908,000**	**$1,071,000**	**$1,253,000**	**$1,453,000**	**$1,670,000**
Total Outside City Revenues Without Surcharge	**$3,234,000**	**$3,445,000**	**$3,672,000**	**$3,920,000**	**$4,168,000**

Notes:
(1) Totals may be off due to rounding.

TABLE 6-38 OUTSIDE CITY SURCHARGE CALCULATION

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	Five Year Sum
Variable Revenue Without Surcharge	$2,326,000	$2,374,000	$2,419,000	$2,467,000	$2,498,000	$12,084,000
Annual Fixed Revenue Without Surcharge	908,000	1,071,000	1,253,000	1,453,000	1,670,000	$6,355,000
Total Revenue Without Surcharge	**$3,234,000**	**$3,445,000**	**$3,672,000**	**$3,920,000**	**$4,168,000**	**$18,439,000**
Surcharge Costs to Collect	**$1,507,000**	**$1,550,000**	**$1,595,000**	**$1,640,000**	**$1,687,000**	**$7,979,000**
					Calculated Surcharge	**43%**

Notes:
(1) Totals may be off due to rounding.

6.7 DEMAND REDUCTION RATES AND PASS THROUGH ADJUSTMENTS

The proposed rates contain several components aimed at enhancing revenue stability for RPU's water operations including increased fixed charges and restructuring of variable rates. To accompany and augment those components, additional rate structure elements are proposed to give RPU the flexibility to adapt to changes in usage, revenues, and costs.

Demand reduction rates will allow RPU to react to revenue shortfalls driven by sustained decreases in sales due to drought, supply limitations, or other circumstances. Pass through costs adjustments will allow RPU to more easily adapt to unforeseen changes in operating or capital costs.

6.7.1 Demand Reduction Rates

In light of the current water demand uncertainty and need for financial resiliency, the COSA developed rates for demand reduction surcharges. Demand Reduction Surcharges are charges that may be imposed by RPU during levels of extreme water demand reductions. The objective of these rates is to provide cost recovery to the agency if customers' potable water usage declines as a result of expanded or future water shortage conditions. As discussed previously, many of RPU's costs are fixed, in that they do not fluctuate with changes in water demands.

As presented previously, RPU is forecasted to have water sales of roughly 26.7 million CCF in FY 2017/18. Based on an extreme water curtailment period, the RPU estimated three potential demand reduction scenarios. Because the ongoing drought has led to projected water usage that is much lower than historic norms, additional cutbacks in the drought scenarios have been capped to 30 percent.

Demand Reduction Stage 1 would equate to a slight reduction in demands (15 percent).

Demand Reduction Stage 2 would equate to a larger reduction in demands (20 percent).

Demand Reduction Stage 3 would equate to the maximum expected reduction in demands (30 percent).

To safeguard against these significant financial implications, RPU is proposing to implement the following Demand Reduction Surcharge rates. Once in effect, these surcharges will help to provide revenues needed to continue to meet RPU's expenditures and debt obligations, despite significant reductions in demand/sales.

Proposed Demand Reduction Rates

The Proposed Demand Reduction rates are designed to recover revenues through both RPU's fixed monthly service charge and the water commodity charges. For example, in scenario 1 (15 percent reduction), 10 percent of the forecasted shortfall would be funded through a fixed surcharge on a meter equivalent basis. The remaining costs would be collected by increases to the volumetric rates. This approach recovers a portion of RPU's fixed expenditures in proportion to each customer's reserved capacity within the system and the remaining portion based on each customer's usage of the system and water purchases.

The tables below present the proposed Demand Reduction rates for each reduction scenario. The rates presented are for the specified usage reduction. Additionally, the rate calculations are based on assumed water demand reductions by customer class and class tier. Because it is not possible to exactly predict how customer demands might change across customer classes and tiers, it is important for RPU to monitor revenues and adjust if and as necessary. The usage reductions by tier are reasonable, based on usage pattern changes, but cannot be guaranteed.

Stage 1 Demand Reduction: 15 Percent

The Stage 1 demand reduction rates have been calculated assuming a 15 percent departure from the sales forecast in each year of the projection. Ten percent of the reduction in revenues will be recovered through the fixed service charge on a per MEU basis, the remaining 90 percent will be recovered through increases to the volumetric rates.

TABLE 6-39 FIXED SERVICE CHARGES FOR 15 PERCENT REDUCTION

Meter Size	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
3/4" & 5/8"	$13.99	$17.09	$19.91	$22.99	$26.35	$29.95
1"	23.29	27.19	31.67	36.56	41.88	47.60
1.5"	46.60	52.23	60.80	70.17	80.37	91.31
2"	74.49	82.39	95.89	110.67	126.73	143.98
3"	142.52	152.81	177.84	205.23	235.00	266.96
4"	237.57	253.40	294.89	340.29	389.64	442.61
6"	475.19	555.00	645.86	745.27	853.32	969.29
8"	760.29	906.82	1,055.26	1,217.67	1,394.20	1,583.66
10"	1,092.85	1,409.44	1,640.14	1,892.56	2,166.91	2,461.38
12"	1,330.40	2,012.65	2,342.07	2,702.51	3,094.27	3,514.74

TABLE 6-40 VOLUMETRIC RATES FOR 15 PERCENT REDUCTION

SFR Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 9	$1.29	$1.36	$1.43	$1.50	$1.57
Tier 2	1.64	10-35	1.76	1.86	1.97	2.07	2.17
Tier 3	2.26	>35	3.62	3.85	4.07	4.29	4.52
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 9	$1.29	$1.36	$1.43	$1.50	$1.57
Tier 2	1.83	10-35	1.76	1.86	1.97	2.07	2.17
Tier 3	2.85	>35	4.29	4.55	4.81	5.07	5.33
Tier 4	4.10						
MFR Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 7 per DU	$1.41	$1.49	$1.57	$1.65	$1.72
Tier 2	1.64	>7 per DU	1.81	1.92	2.02	2.13	2.23
Tier 3	2.26						
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 7 per DU	$1.41	$1.49	$1.57	$1.65	$1.72
Tier 2	1.83	>7 per DU	2.07	2.20	2.32	2.44	2.55
Tier 3	2.85						
Tier 4	4.10						
Commercial and Industrial Volumetric Rates							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.97	$2.01	$2.03	$2.06	$2.07
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.22	$2.26	$2.29	$2.32	$2.33

Landscape Volumetric Rates							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.87	$1.91	$1.93	$1.95	$1.97
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.61	$2.66	$2.70	$2.73	$2.75
WA-2 Temporary Service Volumetric Rates							
		Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage		Varies	$2.98	$3.03	$3.08	$3.11	$3.14
WA-4 Riverside Water Co Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.41	$1.45	$1.54	$1.61	$1.67
Tier 2	1.75	16-70	1.92	1.99	2.11	2.21	2.29
Tier 3	1.77	>70	2.81	2.90	3.08	3.21	3.34
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.41	$1.45	$1.54	$1.61	$1.67
Tier 2	1.76	16-70	1.92	1.99	2.11	2.21	2.29
Tier 3	1.87	>70	4.14	4.28	4.53	4.72	4.91
WA-7 Interruptible Volumetric Rates							
	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$0.80 to $1.14		$1.90	$1.93	$1.96	$1.98	$2.00

Stage 2 Demand Reduction: 20 Percent

The Stage 2 demand reduction rates have been calculated assuming a 20 percent departure from the sales forecast in each year of the projection. Fifteen percent of the reduction in revenues will be recovered through the fixed service charge on a per MEU basis, the remaining 85 percent will be recovered through increases to the volumetric rates.

TABLE 6-41 FIXED SERVICE CHARGES FOR 20 PERCENT REDUCTION

Meter Size	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
3/4" & 5/8"	$13.99	$17.78	$20.61	$23.70	$27.06	$30.67
1"	23.29	28.35	32.83	37.74	43.07	48.79
1.5"	46.60	54.53	63.12	72.52	82.74	93.69
2"	74.49	86.07	99.62	114.43	130.53	147.79
3"	142.52	159.73	184.83	212.29	242.13	274.11
4"	237.57	264.92	306.54	352.05	401.51	454.53
6"	475.19	580.36	671.48	771.14	879.44	995.52
8"	760.29	948.31	1,097.19	1,260.00	1,436.94	1,626.58
10"	1,092.85	1,473.98	1,705.37	1,958.41	2,233.40	2,528.13
12"	1,330.40	2,104.85	2,435.25	2,796.58	3,189.25	3,610.11

TABLE 6-42 VOLUMETRIC RATES FOR 20 PERCENT REDUCTION

SFR Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 9	$1.33	$1.41	$1.48	$1.55	$1.62
Tier 2	1.64	10-35	1.85	1.97	2.08	2.19	2.30
Tier 3	2.26	>35	3.98	4.24	4.50	4.76	5.02
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 9	$1.33	$1.41	$1.48	$1.55	$1.62
Tier 2	1.83	10-35	1.85	1.97	2.08	2.19	2.30
Tier 3	2.85	>35	4.66	4.97	5.26	5.56	5.87
Tier 4	4.10		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
MFR Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 7 per DU	$1.45	$1.53	$1.61	$1.70	$1.78
Tier 2	1.64	>7 per DU	1.89	2.01	2.12	2.23	2.34
Tier 3	2.26						
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 7 per DU	$1.45	$1.53	$1.61	$1.70	$1.78
Tier 2	1.83	>7 per DU	2.16	2.29	2.42	2.54	2.67
Tier 3	2.85						
Tier 4	4.10						
Commercial and Industrial Volumetric Rates							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.06	$2.10	$2.12	$2.14	$2.15
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.32	$2.36	$2.38	$2.41	$2.42
Landscape Volumetric Rates							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$1.93	$1.97	$1.99	$2.01	$2.03
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.67	$2.72	$2.76	$2.79	$2.81
WA-2 Temporary Service Volumetric Rates							
		Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage		Varies	$3.04	$3.10	$3.14	$3.17	$3.19
WA-4 Riverside Water Co Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.49	$1.54	$1.64	$1.71	$1.77
Tier 2	1.75	16-70	2.16	2.23	2.38	2.49	2.59
Tier 3	1.77	>70	2.94	3.04	3.23	3.37	3.50
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.49	$1.54	$1.64	$1.71	$1.77
Tier 2	1.76	16-70	2.16	2.23	2.38	2.49	2.59
Tier 3	1.87	>70	4.22	4.37	4.63	4.83	5.02
WA-7 Interruptible Volumetric Rates							
	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$0.80 to $1.14		$1.98	$2.01	$2.03	$2.05	$2.07

Stage 3 Demand Reduction: 30 Percent

The Stage 3 demand reduction rates have been calculated assuming a 30 percent departure from the sales forecast in each year of the projection. 25 percent of the reduction in revenues will be recovered through the fixed service charge on a per MEU basis, the remaining 75 percent will be recovered through increases to the volumetric rates.

TABLE 6-43 FIXED SERVICE CHARGES FOR 30 PERCENT REDUCTION

Meter Size	Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
3/4" & 5/8"	$13.99	$19.86	$22.70	$25.81	$29.20	$32.81
1"	23.29	31.81	36.33	41.27	46.64	52.37
1.5"	46.60	61.43	70.10	79.57	89.85	100.83
2"	74.49	97.12	110.79	125.71	141.92	159.22
3"	142.52	180.46	205.79	233.44	263.49	295.56
4"	237.57	299.49	341.47	387.32	437.12	490.28
6"	475.19	656.39	748.32	848.71	957.76	1,074.16
8"	760.29	1,072.71	1,222.92	1,386.93	1,565.09	1,755.26
10"	1,092.85	1,667.49	1,900.94	2,155.84	2,432.74	2,728.29
12"	1,330.40	2,381.29	2,714.64	3,078.63	3,474.02	3,896.05

TABLE 6-44 VOLUMETRIC RATES FOR 30 PERCENT REDUCTION

SFR Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 9	$1.43	$1.51	$1.59	$1.67	$1.75
Tier 2	1.64	10-35	2.05	2.19	2.32	2.46	2.59
Tier 3	2.26	>35	4.93	5.30	5.68	6.07	6.48
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 9	$1.43	$1.51	$1.59	$1.67	$1.75
Tier 2	1.83	10-35	2.05	2.19	2.32	2.46	2.59
Tier 3	2.85	>35	5.62	6.05	6.47	6.90	7.36
Tier 4	4.10						
MFR Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.13	First 7 per DU	$1.55	$1.64	$1.73	$1.81	$1.90
Tier 2	1.64	>7 per DU	2.04	2.17	2.30	2.42	2.55
Tier 3	2.26						
Tier 4	2.75						
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 7 per DU	$1.55	$1.64	$1.73	$1.81	$1.90
Tier 2	1.83	>7 per DU	2.31	2.46	2.60	2.74	2.89
Tier 3	2.85						
Tier 4	4.10						
Notes:							
Commercial and Industrial Volumetric Rates							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.24	$2.26	$2.28	$2.29	$2.29
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.51	$2.54	$2.56	$2.57	$2.57

Landscape Volumetric Rates							
Winter Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.04	$2.07	$2.09	$2.10	$2.11
Summer Rates	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	Varies	All Usage	$2.76	$2.80	$2.83	$2.86	$2.87
WA-2 Temporary Service Volumetric Rates							
		Existing	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage		Varies	$3.11	$3.16	$3.19	$3.21	$3.23
WA-4 Riverside Water Co Volumetric Rates							
Winter Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.70	$1.76	$1.87	$1.95	$2.03
Tier 2	1.75	16-70	2.55	2.65	2.80	2.91	3.02
Tier 3	1.77	>70	3.14	3.25	3.46	3.61	3.76
Summer Rates	Existing	CCF Allotment	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.14	First 15	$1.70	$1.76	$1.87	$1.95	$2.03
Tier 2	1.76	16-70	2.55	2.65	2.80	2.91	3.02
Tier 3	1.87	>70	4.29	4.44	4.72	4.92	5.12
WA-7 Interruptible Volumetric Rates							
	Existing		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
All Usage	$0.80 to $1.14		$2.13	$2.15	$2.17	$2.18	$2.19

6.7.2 Pass-Through Cost Adjustments

The revenue requirements projection and the proposed rates developed for the cost of service analysis rate design are based on best known information and projections. This report and its appendices identify and delineate the underlying assumptions including demands, projected costs, cost escalation factors, and other information used to develop the projections. Though the projections are based on the best information available, changes to costs outside of RPU's control such as power or chemicals can occur, causing operating expenditures to differ from those projected. The cost adjustment is a mechanism used by utilities to allow for the recovery of non-budgeted or unanticipated changes in costs like power or chemical costs. If implemented, the cost adjustment will be applied to CCF sold and will be reviewed and revised annually.

In 2008, the California legislature adopted California Assembly Bill 3030 (AB 3030), which allows agencies to modify the adopted rate program based upon inflation or increases to costs of wholesale water. As part of its Proposition 218 rate noticing process, RPU may notice its formula for such cost escalations and subsequently make specific pass-through cost adjustments if cost escalation, such as for the price of energy, exceeds the noticed cost assumptions. These adjustments do require a re-noticing of RPU's customers, but gives RPU some flexibility to adapt to changing costs without opening the adopted rate plan to another Proposition 218 protest process.

Pass-through costs adjustments will reflect only the incremental increase between the applicable cost increases that were assumed to develop the proposed rates, and the actual cost increases realized by RPU.

7 LEGAL REQUIREMENTS

7.1 INTRODUCTION

Carollo's analysis provides the record illustrating how RPU develops rates in conformance with cost of service principles. The discussion below sets forth the legal framework under which Carollo evaluated RPU's rates.

RPU's water rates and rate setting process must adhere to California constitutional and statutory requirements. Procedural requirements apply to the rate-setting process. The principal substantive requirements governing the rates are that revenues recovered through the rates do not exceed costs, and that the costs recovered from users do not exceed the cost for such service. The cost of service principles used for this analysis include these substantive requirements.

RPU's water rate structure includes tiered rates for some customer classes. The use of tiered water rates has been determined to be consistent with constitutional requirements pertaining to reasonable cost of service. The 2015 opinion in Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano ("*San Juan*") upheld tiered water rates under California Constitution Article XIII D (enacted by Proposition 218), noting that the tiers must correspond to the actual cost of furnishing service at a given level of usage. However, the *San Juan* Court held that the City of San Juan Capistrano did not attempt to calculate the actual costs of providing water at various tier levels. In reaching its conclusions, the *San Juan* Court treated all of the tiers as property-related services subject to Article XIII D, as interpreted by the California Supreme Court in its 2006 decision in *Bighorn-Desert View Water Agency v. Verjil*, 39 Cal. 4th 205 (2006) ("*Bighorn*"), that charges for domestic water delivery are charges for a property-related service. On the facts and arguments presented in San Juan, the Court found no basis for altering its application of Article XIII D in either Article XIII C ("Proposition 26") or Article X, Section 2 ("Article X").

Further judicial and legislative interpretation may provide additional guidance in the use of tiered water rates, including the application of Proposition 26's provisions concerning levies, charges and exactions other than property-related fees and the application of Article X. For the purposes of this cost of service analysis, it has been assumed that RPU's tiered water and recycled water rate structures are to be analyzed under the requirements of Article XIIID and implementing statutory provisions, described below.

7.2 ARTICLE XIII D

In November 1996, California voters approved Proposition 218, which amended the California Constitution by adding Article XIII C and Article XIII D. Article XIII D placed substantive limitations on the use of the revenue collected from property-related fees and on the amount of the fee that may be imposed on each parcel. The substantive requirements, contained in Article XIII D, Section 6, include that the amount of a fee "shall not exceed the proportional cost of the service attributable to the parcel,"

and that revenues from the rates "shall not exceed the funds required to provide the service" and "shall not be used for any purpose other than that for which the fee was imposed." Additionally, Proposition 218 established procedural requirements for imposing new, or increasing existing, property-related fees.

Following the passage of Proposition 218, there have been a number of court rulings interpreting and applying its language, and implementing statutes have also been enacted. In *City of Palmdale v. Palmdale Water District*, the court recognized that California Constitution Article X, Section 2 may be harmonized with Article XIII D, section 6 to allow for budget based and tiered rates that promote water conservation, provided conservation is attained in a manner that "shall not exceed the proportional cost of the service attributable to the parcel". As noted in *San Juan*, the 2011 *Palmdale* decision recognized that budget based water rates on their own do not violate Proposition 218. In *Palmdale*, the district failed to demonstrate a basis for the more restrictive tiered budgets and progression through the tiers in the irrigation customer class as compared to the other customer classes.

The *San Juan* decision rejected the argument that for purposes of the proportional cost allocation required by Article XIII D, the agency's calculation is a matter within legislative or quasi-legislative discretion shielded from judicial review. It did recognize some degree of latitude in making such calculations. The *San Juan* Court notes, for example, that it is not necessary to figure a rate for each parcel and it is permissible to allocate cost within tiers, as long as tiers are based on usage and not budgets. The opinion also explains that the time frame for the calculation of true water cost, particularly capital cost, may be long and calculation on a billing-cycle by billing-cycle basis is not required.

Cost and revenue projections are necessarily based on the best available information, and demand and consumption will be affected by weather and other factors that cannot be predicted. See *San Juan*, fn 11 (acknowledging projections of Metropolitan Water District rates as included in rate-setting process). Projections such as this may result in operating surplus and carryover, maintaining cost of service standards on a year over year basis through the inclusion of these amounts in subsequent years' budget processes.

7.3 CALIFORNIA ASSEMBLY BILL 2882

Among the legislative enactments implementing Proposition 218 is California Assembly Bill (AB) 2882, which became law at the beginning of 2009. AB 2882 (Sections 370-374 of the California Water Code) defined the elements of allocation-based conservation pricing under Proposition 218, including the appropriate property characteristics (i.e., number of occupants, land use, irrigable area, and local climate data) to establish a reasonable basic use allocation. While rates for all water used within the basic allocation must be established following cost causation principles, AB 2882 provides authority for higher charges on increments of water used in excess of the basic use allocation.

This statute creates a framework under which water agencies may establish cost-of-service based rates while simultaneously allowing for the deterrence of wasteful water use. Under AB 2882, the elements of

an allocation-based conservation water rate structure compliant with the mandates of both Article X and Proposition 218 are:

1. Water bills must be based on metered water use.
2. A water allocation of "basic use" must be established, providing a reasonable amount of water for each customer's basic needs based on property characteristics. Allocation factors may include, but are not limited to, number of occupants, type of land use, size of irrigated area, and local climate data.
3. All water used within the basic use allocation must be a basic volumetric unit rate that is established following cost causation principles for the cost of water service.
4. A "conservation charge" can be imposed on all increments of water use in excess of the basic use allocation. The conservation charge must also be a volumetric charge and should be designed to encourage water conservation and efficiency.

The cost of service analysis of RPU's water rate structures is performed within the requirements of Article XIII D. While RPU is not recommending a water budget based rate structure at this time, the cost of service allocation as presented within this report does consider the framework of AB 2882, allowing the City to more easily transition to that type of rate structure in the future as and if desired. RPU's water rates are designed to both recover costs proportionally from system users as well as encourage conservation. RPU's cost of service approach thereby conforms to the requirements of Article XIII D.

7.4 ARTICLE XIII C

The application of Proposition 26 in the structuring of water rates is presently undetermined. The *San Juan* decision briefly touched upon one aspect of the Article XIII C provisions enacted by Proposition 26, finding that tiered water charges would not appropriately be characterized as penalties. Other aspects of the application of Proposition 26 to tiered rate structures may be addressed in future judicial decisions and legislative enactments.

The voters in the State approved Proposition 26 on November 2, 2010. Proposition 26 amended Article XIII C of the State Constitution to expand the definition of "tax" to include "any levy, charge, or exaction of any kind imposed by a local government" with listed exceptions. By means of these exceptions, Article XIII C classifies several types of charges, in addition to property-related charges, that are not taxes, such as charges for specific services or benefits, regulatory charges and penalties.

Article XIII C's definition of "tax" lists the following exceptions: (1) a charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege; (2) a charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product; (3) a charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative

enforcement and adjudication thereof; (4) a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property; (5) a fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law; (6) a charge imposed as a condition of property development; and (7) assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

Proposition 26 also provides that the local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity. Like the proportionality requirements of Article XIII D, assessment of rates under these requirements, if applicable, would be supported by the cost of service approach.

7.5 ARTICLE X

Article X, enacted as an amendment to the California Constitution in 1928 pursuant to an electoral initiative, provides that:

> *"It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."*

Article X conveys further that the right to water does not "extend to the waste or unreasonable use" of water. California Water Code Section 100 restates the policy that the waste of water shall be prevented. As indicated above, judicial interpretation in the *Palmdale* and *San Juan* decisions analyzed tiered water rates as property-related charges and, as such, found them to be compliant with Article XIII D provided that the tiers correspond to the actual cost of furnishing service at a given level of usage. Pricing signal was assumed to result from this manner of design. The use of tiered structures in compliance with Article XIII D restrictions was found to work in harmony with Article X. Further refinement through judicial and legislative interpretation may provide more specific guidance in this area, such as on the use of pricing signals.

APPENDIX

The following pages present details of the calculations completed for the Cost of Service and Rate Design Study.

APPENDIX A — REVENUE REQUIREMENT AND FINANCIAL INFORMATION

City of Riverside - Water Utility

PROJECTED STATEMENT OF OPERATIONS AND RETAINED EARNINGS

For the Fiscal Years Ending

	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022
	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)
Operating revenues:					
Residential	$ 38,532	$ 42,003	$ 44,650	$ 47,346	$ 50,169
Commercial	10,650	11,869	12,974	14,176	15,488
Industrial	9,278	10,114	10,845	11,625	12,458
Other sales	1,776	1,920	2,035	2,162	2,298
Water Conveyance	3,127	3,170	3,214	3,258	3,304
Water Conservation	853	989	1,058	1,130	1,206
Other	4,986	5,056	5,127	5,199	5,273
Total operating revenues	69,202	75,121	79,903	84,897	90,196
Reserve for uncollectible	(181)	(198)	(212)	(226)	(241)
Total operating revenue, net of allowance	69,021	74,923	79,691	84,671	89,955
Operating expenses:					
Production costs	5,540	5,580	5,641	5,702	5,761
Electrical savings	(787)	(823)	(861)	(900)	(942)
Personnel expense	21,222	24,480	25,903	27,112	28,347
Supplies & services	8,693	8,867	9,044	9,225	9,410
Special projects	144	144	144	144	144
Service from other funds	10,940	11,159	11,382	11,610	11,842
Less charges to other	(6,149)	(6,272)	(6,397)	(6,525)	(6,656)
Additional O&M for CIP and Advanced Tech	1,165	1,117	1,719	2,306	2,745
Water Conservation Programs	1,310	989	1,058	1,130	1,206
Depreciation	13,374	14,894	15,588	16,409	17,283
Total operating expenses	55,452	60,134	63,221	66,212	69,140
Operating income	13,570	14,789	16,470	18,459	20,815
Non-operating revenues (expenses):					
Interest income	801	1,660	1,992	1,495	2,057
Interest expense (inc amort)	(8,503)	(9,400)	(10,689)	(10,227)	(12,277)
Line of Credit	(103)	(103)	(103)	(103)	(103)
Gain on sale of capital assets	132	132	132	132	132
Other (misc. income)	2,050	2,330	2,357	2,390	2,424
Non-operating revenues(expenses)	(5,622)	(5,381)	(6,311)	(6,313)	(7,767)
Income before CIA and operating transfers	7,947	9,408	10,159	12,146	13,048
General fund contribution	(6,639)	(7,105)	(7,763)	(8,298)	(8,858)
Contributions in aid of construction-Cash	1,600	1,600	1,600	1,600	1,600
Net income (Loss)	2,908	3,903	3,996	5,448	5,790
Net position, July 1	308,301	311,210	315,113	319,109	324,557
Net position, June 30	$ 311,210	$ 315,113	$ 319,109	$ 324,557	$ 330,347

CASH RESERVES AND REVENUE REQUIREMENTS

Fiscal Year	2018	2019	2020	2021	2022
Unrestricted cash and reserves:					
Undesignated reserves	$ 40,226	$ 38,405	$ 40,191	$ 43,850	$ 45,637
Water property reserve	5,000	5,000	5,000	5,000	5,000
Customer deposits reserve	433	433	433	433	433
Capital repair/replacement reserve	2,250	2,250	2,250	2,250	2,250
Legally restricted cash and cash equivalents:					
Reserved for debt service - monthly set aside	6,163	8,423	8,575	8,742	11,817
Reserved for bond construction	-	51,978	29,208	105	75,066
Reserved for short term financing construction	-	4,119	1,956	-	4,236
Reserve for Water Conservation	1,426	1,426	1,426	1,426	1,426
Total	$ 55,498	$ 112,034	$ 89,039	$ 61,806	$ 145,865

Revenue Requirements

Fiscal Year	2018	2019	2020	2021	2022
Production costs	$ 4,753	$ 4,757	$ 4,780	$ 4,802	$ 4,819
Personnel costs	15,073	18,208	19,506	20,587	21,691
Other operating and maintenance costs	19,777	20,170	20,570	20,979	21,395
Additional O&M for CIP and Advanced Tech	1,165	1,117	1,719	2,306	2,745
Debt service requirements	13,817	15,396	18,783	18,792	21,095
General fund transfer	6,639	7,105	7,763	8,298	8,858
Capital outlay financed by rates	5,074	9,787	6,702	7,098	6,516
Total Revenue Requirements	$ 66,298	$ 76,539	$ 79,823	$ 82,861	$ 87,120

Available Revenues

Fiscal Year	2018	2019	2020	2021	2022
Revenue at current rates	$ 55,611	$ 59,604	$ 65,262	$ 69,846	$ 74,639
Current year increase	4,006	5,670	4,597	4,805	5,104
Other Charges for Service	620	632	645	657	671
Interest income	801	1,660	1,992	1,495	2,057
Miscellaneous income	9,898	10,269	10,390	10,517	10,647
Total Available Revenues	$ 70,936	$ 77,835	$ 82,886	$ 87,322	$ 93,117
Use of/(Contributions to) Reserves	$ (4,638)	$ (1,296)	$ (3,062)	$ (4,460)	$ (5,998)

RESERVE REQUIREMENTS

All Monetary Values in Thousands of Dollars	Fiscal Year End 2018	2019	2020	2021	2022
Working Capital					
Operating Expenses (exc Deprec & Wtr Cons.)	$ 40,768	$ 44,251	$ 46,575	$ 48,673	$ 50,651
Per day (365 Days)	$ 112	$ 121	$ 128	$ 133	$ 139
60 Days of Operating Expenses	$ 6,702	$ 7,274	$ 7,656	$ 8,001	$ 8,326
90 Days of Operating Expenses	$ 10,052	$ 10,911	$ 11,484	$ 12,002	$ 12,489
Rate Stabilization					
Operating Revenues (exc Wtr Cons.)	$ 68,169	$ 73,934	$ 78,633	$ 83,541	$ 88,749
7%	$ 4,772	$ 5,175	$ 5,504	$ 5,848	$ 6,212
15%	$ 10,225	$ 11,090	$ 11,795	$ 12,531	$ 13,312
Capital- Emergency					
Depreciable Assets	$ 676,734	$ 709,231	$ 742,275	$ 781,385	$ 823,000
1%	$ 6,767	$ 7,092	$ 7,423	$ 7,814	$ 8,230
2%	$ 13,535	$ 14,185	$ 14,846	$ 15,628	$ 16,460
Capital- System Improvments					
Annual CIP for Following Year	$ 32,031	$ 32,508	$ 38,459	$ 40,901	$ 45,630
Less Designated Reserve Funding (Recycled Wtr/Property)	$ -	$ -	$ -	$ -	$ -
Revised Annual CIP for Following Year	$ 32,031	$ 32,508	$ 38,459	$ 40,901	$ 45,630
6 Months of Annual CIP	$ 16,015	$ 16,254	$ 19,229	$ 20,451	$ 22,815
9 Months of Annual CIP	$ 24,023	$ 24,381	$ 28,844	$ 30,676	**$ 34,222**
Debt Service (Max Annual D/S in upcoming FY)					
Principal	$ 5,635	$ 7,667	$ 7,954	$ 8,269	$ 10,955
Semi-Annual Interest	$ 7,232	$ 8,635	$ 8,413	$ 10,461	$ 12,509
/2	$ 3,616	$ 4,318	$ 4,206	$ 5,231	$ 6,254
Monthly Interest	$ 1,684	$ 1,614	$ 1,533	$ 1,451	$ 1,366
/12	$ 140	$ 134	$ 128	$ 121	$ 114
Total **(Includes New Proposed Debt)**	$ 9,391	$ 12,119	$ 12,288	$ 13,620	$ 17,323
Minimum Reserve Requirement	**$ 43,647**	**$ 47,915**	**$ 52,101**	**$ 55,734**	**$ 62,907**
Maximum Reserve Requirement	**$ 67,226**	**$ 72,686**	**$ 79,257**	**$ 84,457**	**$ 93,807**

APPENDIX B — FUNCTIONAL ALLOCATION

Functional Allocation

Appendix B, *Functional Allocation,* presents the complete allocation of each of the expenses and offsetting revenues associated with Riverside Public Utilities' operation and maintenance of the water system. The dollar value of each expense and each revenue is associated with a certain process of the system. This process is, in turn, associated with the water system's ability to provide Customer, Capacity, Supply 1, Supply 2, Supply 3, Supply 4, and Base. The dollar value of any expense or revenue is allocated to each of these cost components in the same proportion that it's related process is allocated. The aggregate distribution amongst the cost components of all of the syste m's expenses and revenues combined is calculated at the top of Appendix B *Functional Allocation.*

ALLOCATION INDEX	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others	Total
Customer Only	100%	0%	0%	0%	0%	0%	0%	0%	100%
Capacity Only	0%	100%	0%	0%	0%	0%	0%	0%	100%
Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
Supply 4 Only	0%	0%	0%	0%	0%	100%	0%	0%	100%
Customer/Capacity	50%	50%	0%	0%	0%	0%	0%	0%	100%
Customer/Capacity/Base	34%	33%	33%	0%	0%	0%	0%	0%	100%
As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
Existing Debt		72.167%	6.322%	5.549%	11.988%	4.055%			
Charges From Other Funds	16.186%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	84%	100%
Supply and Distribution			29%	21%	39%	11%		0%	100%
Supply Only			23%	20%	43%	15%		0%	100%
Engineering Staff Alloc		51%	7%	6%	13%	4%	20%	0%	100%
CIP Allocation		61%			19%	6%	13%	0%	

RATE REVENUE REQUIREMENT	Applied to Interruptible	Five Year Total	Allocation	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others	Total
Operating Expenses (Less Charges From Other Funds)	100%	$ 167,697,294	As O&M	0%	8%	14%	10%	19%	6%	43%	0%	100%
Existing Debt Service	72%	$ 64,911,700	Existing Debt	0%	72%	6%	6%	12%	4%	8%	0%	100%
New Debt Service	74%	$ 18,629,290	CIP Allocation	0%	61%	0%	0%	19%	6%	13%	0%	100%
General Fund Transfer	100%	$ 38,663,000	As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
Charges From Other Funds	100%	$ 54,168,776	Charges From Other Funds	16%	0%	0%	0%	0%	0%	0%	84%	100%
Charges To Other Funds	100%	$ (31,675,400)	Charges to Othr Funds	0%	14%	2%	2%	4%	1%	77%	0%	100%
Recharge Basins, Booster Stations, Wells	100%	$ 660,000	Supply 4 Only	0%	0%	0%	0%	0%	100%	0%	0%	100%
Inflatable Dam, Pipelines, Reservoirs	100%	$ 345,000	Supply 4 Only	0%	0%	0%	0%	0%	100%	0%	0%	100%
Treatment Plant O&M	100%	$ -	Supply 4 Only	0%	0%	0%	0%	0%	100%	0%	0%	100%
Technology Projects	100%	$ 6,730,800	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
Recycled Water O&M	100%	$ 715,000	Supply 4 Only	0%	0%	0%	0%	0%	100%	0%	0%	100%
Rate Funded Capital	74%	$ 35,176,852	CIP Allocation	0%	61%	0%	0%	19%	6%	13%	0%	100%
Transitional Rates Losses	100%	$ 2,122,007	As Variable			16%	12%	30%	10%	32%	0%	100%
Less Offsetting Revenues												
Cashflow	100%	$ 20,055,390	As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
Interest Income	100%	$ (8,005,000)	As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
Miscellaneous Income	100%	$ (20,218,475)	As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
WMWD - Water Conveyance	100%	$ (14,823,072)	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
UCR - Water Conveyance	100%	$ (1,250,000)	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
Wholesale Sales- WMWD	100%	$ (15,429,979)	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
Outside City Surcharge	100%	$ (7,978,892)	As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
WA-5 Fire Service Charges	100%	$ (3,164,745)	As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
			As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
			As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
			As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
Total Rate Revenues to be Collected		$ 307,329,536		$ 8,767,723	$ 88,744,369	$ 19,437,896	$ 15,071,721	$ 40,261,092	$ 14,550,646	$ 55,743,768	$ 64,752,321	$ 307,329,536
Reallocation of "As All Others"				$ 2,340,411	$ 23,688,968	$ 5,188,653	$ 4,023,168	$ 10,747,090	$ 3,884,075	$ 14,879,956	$ (64,752,321)	
Total Allocation		$ 307,329,536		$ 11,108,134	$ 112,433,337	$ 24,626,549	$ 19,094,889	$ 51,008,182	$ 18,434,721	$ 70,623,725	$ -	
Percentage Allocation		100.0%		3.6%	36.6%	8.0%	6.2%	16.6%	6.0%	23.0%	0.0%	

REVENUE REQUIREMENT ADJUSTMENT FOR INTERRUPTABLE RATES	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others
Total Rate Revenues to be Collected	$ 8,767,723	$ 67,282,563	$ 18,285,792	$ 14,068,246	$ 35,485,710	$ 12,924,497	$ 53,927,412	$ 64,752,321
Reallocation of "As All Others"	$ 2,693,820	$ 20,672,062	$ 5,621,250	$ 4,322,675	$ 10,902,728	$ 3,970,559	$ 16,568,808	$ (64,752,321)
Total Allocation	$ 11,461,543	$ 87,954,625	$ 23,907,042	$ 18,390,921	$ 46,388,438	$ 16,895,056	$ 70,496,220	$ -
Percentage Allocation	4.2%	31.9%	8.7%	6.7%	16.8%	6.1%	25.6%	0.0%
Calculated Adjustment For Interruptable Rates	3.2%	-21.8%	-2.9%	-3.7%	-9.1%	-8.3%	-0.2%	
Adjustment Override	0%	0%					0%	
Applied Adjustment to Interruptible Rates	3.2%	-21.8%	-2.9%	-3.7%	-9.1%	-8.3%	-0.2%	

Operating Expenditures	Applicability to Interruptable	Five Year Total	Allocation	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others	Total
[1] WATER PRODUCTION AND OPERATIONS												
Object GL Key Description												
411100 6200000 Salaries - Regular	100%	$ 14,279,319	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411105 6200000 Salaries - Non-Productive	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411110 6200000 Salaries-Temp & Part Time	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411130 6200000 Compensatory Time	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411210 6200000 Vacation	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411220 6200000 Holidays & Special Days Off	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411225 6200000 Rest Time Pay - IBEW	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411240 6200000 Sick Leave	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411245 6200000 Family Illness Sick Leave	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411250 6200000 Industrial Accident	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411260 6200000 Bereavement Leave	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411280 6200000 Jury Duty	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411292 6200000 Administrative Leave	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411310 6200000 Night Shift Premium	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411320 6200000 Temporary Foreman Pay	100%	$ 5,204	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411410 6200000 Vacation Payoffs	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411420 6200000 Sick Leave Payoff	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411430 6200000 Compensatory Time Payoff	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411510 6200000 Accrued Payroll	100%	$ 82,276	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411521 6200000 Accrued Sick Leave Yr End Only	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411522 6200000 Accrued Vacation Year-End Only	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
411530 6200000 Accrued Comp Time Earned	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412210 6200000 Workers Compensation Ins	100%	$ 361,106	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412220 6200000 Health Insurance	100%	$ 2,113,307	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412221 6200000 Retiree Health Insurance	100%	$ 74,939	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412222 6200000 Dental Insurance	100%	$ 96,275	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412230 6200000 Life Insurance	100%	$ 48,616	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412240 6200000 Unemployment Insurance	100%	$ 7,970	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412250 6200000 Disability Insurance	100%	$ 38,177	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412310 6200000 PERS Retirement	100%	$ 5,148,843	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412313 6200000 OPEB Annual Req Cont Expense	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412320 6200000 Medicare OASDI	100%	$ 201,823	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
412400 6200000 Deferred Compensation	100%	$ 78,061	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
413110 6200000 Overtime At Straight Rate	100%	$ 52,040	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
413120 6200000 Overtime At 1.5 Rate	100%	$ 3,122	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
413130 6200000 Overtime At Double Time Rate	100%	$ 1,027,278	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
413230 6200000 Holiday O/T-Std/Subj To Retir	100%	$ 10,408	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
413250 6200000 Dbl Time Subj To Retirement	100%	$ 104,081	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
413260 6200000 O/T Meal Allowance-IBEW	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	100%		Supply and Distribution									
	100%		Supply and Distribution									
421000 6200000 Professional Services	100%	$ 7,670,756	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
421001 6200000 Prof Services/Internal	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
421100 6200000 Outside Legal Services	100%	$ 769,678	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422100 6200000 Telephone	100%	$ 117,976	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422120 6200000 Telephone - Cellular	100%	$ 106,162	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422200 6200000 Electric	100%	$ 28,560,220	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422300 6200000 Gas	100%	$ 31,728	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422500 6200000 Water	100%	$ 59,326	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422600 6200000 Other Utilities	100%	$ 475,916	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422922 6200000 Imported Water	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422923 6200000 IW Capacity/StandBy Charges	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
422924 6200000 Production Costs	100%	$ 1,771,463	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
423400 6200000 Motor Pool Equipment Rental	100%	$ 1,545,314	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
424130 6200000 Maint/Repair of Bldgs & Improv	100%	$ 3,023,547	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
424220 6200000 All Other Equip Maint/Repair	100%	$ 15,612	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
424230 6200000 Central Garage Charges	100%	$ 66,014	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
424240 6200000 Central Communications Chg	100%	$ 26,020	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425100 6200000 Advertising Expense	100%	$ 5,204	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425200 6200000 Periodicals & Dues	100%	$ 182,141	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425300 6200000 Photo & Recording Supplies	100%	$ 2,602	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425400 6200000 General Office Expense	100%	$ 130,101	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425500 6200000 Postage	100%	$ 26,020	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425600 6200000 Central Printing Charges	100%	$ 2,602	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425610 6200000 Outside Printing Expense	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425700 6200000 Software Purchase/Licensing	100%	$ 78,061	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
425800 6200000 Computer Equip Purc Undr $5000	100%	$ 104,081	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%

				Applicability to Interruptible	Five Year Total	Allocation	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others	Total
	OPERATING EXPENDITURES														
	426100	6200000	Janitorial Supplies	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	426200	6200000	Clothing/Linen/Safety Supplies	100%	$ 62,865	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	426300	6200000	Motor Fuels & Lubricants	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	426600	6200000	Chemical Supplies	100%	$ 3,329,545	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	426700	6200000	Maintenance Tools/Supplies	100%	$ 78,061	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	426710	6200000	Work Boot Reimbursement	100%	$ 31,224	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	426800	6200000	Special Department Supplies	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	427100	6200000	Travel & Meeting Expense	100%	$ 78,061	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	427200	6200000	Training	100%	$ 104,081	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	428400	6200000	Liability Insurance	100%	$ 209,436	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	428420	6200000	Insurance Charges - Direct	100%	$ 762,959	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	447100	6200000	Taxes And Assessments	100%	$ 9,220,914	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
	449100	6200000	Equipment Rental Charges	100%	$ -	Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
				100%											
				100%											
No	462200	6200000	Machine and Equipment	100%		Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
No	462300	6200000	Office Furniture & Equipment	100%		Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
No	462308	6200000	Off Furn & Eq/Computer Acquisn	100%		Supply and Distribution	0%	0%	29%	21%	39%	11%	0%	0%	100%
				100%											
				100%											
	[11] **WATER FIELD OPERATIONS**			100%											
	Object	GL Key	Description	100%											
	411100	6205000	Salaries - Regular	100%	$ 34,833,097	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411110	6205000	Salaries-Temp & Part Time	100%	$ 692,762	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411130	6205000	Compensatory Time	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411210	6205000	Vacation	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411220	6205000	Holidays & Special Days Off	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411225	6205000	Resl Time Pay - IBEW	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411230	6205000	Military Leave	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411240	6205000	Sick Leave	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411245	6205000	Family Illness Sick Leave	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411250	6205000	Industrial Accident	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411260	6205000	Bereavement Leave	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411280	6205000	Jury Duty	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411282	6205000	Administrative Leave	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411310	6205000	Night Shift Premium	100%	$ 25,073	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411320	6205000	Temporary Foreman Pay	100%	$ 102,141	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411410	6205000	Vacation Payoffs	100%	$ 122,566	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411420	6205000	Sick Leave Payoff	100%	$ 521,362	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411430	6205000	Compensatory Time Payoff	100%	$ 8,691	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411510	6205000	Accrued Payroll	100%	$ 269,884	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411521	6205000	Accrued Sick Leave Yr End Only	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411522	6205000	Accrued Vacation Year-End Only	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	411530	6205000	Accrued Comp. Time Earned	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412210	6205000	Workers Compensation Ins	100%	$ 1,183,060	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412220	6205000	Health Insurance	100%	$ 5,969,872	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412221	6205000	Retiree Health Insurance	100%	$ 259,101	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412222	6205000	Dental Insurance	100%	$ 289,001	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412230	6205000	Life Insurance	100%	$ 138,297	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412240	6205000	Unemployment Insurance	100%	$ 10,026	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412250	6205000	Disability Insurance	100%	$ 116,029	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412310	6205000	PERS Retirement	100%	$ 13,182,816	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412313	6205000	OPEB Annual Req Cont Expense	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412320	6205000	Medicare OASDI	100%	$ 409,315	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412330	6205000	City Retirement Plan	100%	$ 25,979	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	412400	6205000	Deferred Compensation	100%	$ 218,570	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	413110	6205000	Overtime At Straight Rate	100%	$ 383,350	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	413120	6205000	Overtime At 1.5 Rate	100%	$ 18,214	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	413130	6205000	Overtime At Double Time Rate	100%	$ 4,016,954	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	413210	6205000	Holiday O/T-Straight/Non-Sched	100%	$ 36,428	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	413250	6205000	Dbl Time Subj To Retirement	100%	$ 32,265	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	413260	6205000	O/T Meal Allowance-IBEW	100%	$ 2,602	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
				100%											
				100%											
	421000	6205000	Professional Services	100%	$ 1,040,808	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	421001	6205000	Prof Services/Internal	100%	$ 2,158,376	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	422100	6205000	Telephone	100%	$ 3,903	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	422120	6205000	Telephone - Cellular	100%	$ 114,489	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	422700	6205000	Refuse/Disposal Fees	100%	$ 130,101	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	423200	6205000	Land and Building Rental	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	423400	6205000	Motor Pool Equipment Rental	100%	$ 6,290,441	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%

	Object	GL Key	Description	Applicability to Interruptable	Five Year Total	Allocation	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others	Total
	424130	6205000	Maint/Repair of Bldgs & Improv	100%	$ 4,787,717	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	424220	6205000	All Other Equip Maint/Repair	100%	$ 52,040	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	424230	6205000	Central Garage Charges	100%	$ 450,347	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	424240	6205000	Central Communications Chg	100%	$ 10,408	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	424310	6205000	Software Maintenance/Support	100%	$ 10,920	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	425200	6205000	Periodicals & Dues	100%	$ 39,030	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	425400	6205000	General Office Expense	100%	$ 130,101	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	425500	6205000	Postage	100%	$ 598	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	425600	6205000	Central Printing Charges	100%	$ 5,204	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	425610	6205000	Outside Printing Expense	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	425700	6205000	Software Purchase/Licensing	100%	$ 15,612	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	425800	6205000	Computer Equip Purc Undr $5000	100%	$ 52,040	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	426100	6205000	Janitorial Supplies	100%	$ 10,408	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	426200	6205000	Clothing/Linen/Safety Supplies	100%	$ 312,242	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	426300	6205000	Motor Fuels & Lubricants	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	426600	6205000	Chemical Supplies	100%	$ 2,602	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	426700	6205000	Maintenance Tools/Supplies	100%	$ 520,404	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	426710	6205000	Work Boot Reimbursement	100%	$ 114,489	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	426800	6205000	Special Department Supplies	100%	$ 364,283	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	427100	6205000	Travel & Meeting Expense	100%	$ 52,040	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	427200	6205000	Training	100%	$ 104,081	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	428400	6205000	Liability Insurance	100%	$ 742,585	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
	449100	6205000	Equipment Rental Charges	100%	$ -	Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
				100%											
				100%											
No	462100	6205000	Automotive Equipment	100%		Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
No	462200	6205000	Machine and Equipment	100%		Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
No	462308	6205000	Off Furn & Eq/Computer Acqustn	100%		Base Only	0%	0%	0%	0%	0%	0%	100%	0%	100%
				100%											
[1]	WATER ENGINEERING			100%											
	Object	GL Key	Description	100%											
	411100	6210000	Salaries - Regular	100%	$ 20,661,757	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411110	6210000	Salaries-Temp & Part Time	100%	$ 273,951	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411130	6210000	Compensatory Time	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411210	6210000	Vacation	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411220	6210000	Holidays & Special Days Off	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411225	6210000	Rest Time Pay - IBEW	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411240	6210000	Sick Leave	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411245	6210000	Family Illness Sick Leave	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411250	6210000	Industrial Accident	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411260	6210000	Bereavement Leave	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411266	6210000	Jury Duty	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411292	6210000	Administrative Leave	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411310	6210000	Night Shift Premium	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411410	6210000	Vacation Payoffs	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411510	6210000	Accrued Payroll	100%	$ 116,120	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411521	6210000	Accrued Sick Leave Yr End Only	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411522	6210000	Accrued Vacation Year-End Only	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	411530	6210000	Accrued Comp Time Earned	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412210	6210000	Workers Compensation Ins	100%	$ 697,164	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412220	6210000	Health Insurance	100%	$ 2,321,382	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412222	6210000	Dental Insurance	100%	$ 101,906	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412230	6210000	Life Insurance	100%	$ 71,675	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412240	6210000	Unemployment Insurance	100%	$ 11,678	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412250	6210000	Disability Insurance	100%	$ 17,340	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412310	6210000	PERS Retirement	100%	$ 7,266,436	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412311	6210000	PERS - NPA Amortization	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412313	6210000	OPEB Annual Req Cont Expense	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412320	6210000	Medicare OASDI	100%	$ 303,572	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412330	6210000	City Retirement Plan	100%	$ 6,495	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	412400	6210000	Deferred Compensation	100%	$ 140,509	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	413110	6210000	Overtime At Straight Rate	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	413120	6210000	Overtime At 1.5 Rate	100%	$ 121,775	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
	413130	6210000	Overtime At Double Time Rate	100%	$ -	Engineering Staff Alloc	0%	51%	7%	6%	13%	4%	20%	0%	100%
				100%											
				100%											
	421000	6210000	Professional Services	100%	$ 2,149,260	Supply Only	0%	0%	22.7%	19.0%	42.8%	14.6%	0%	0%	100%
	421001	6210000	Prof Services/Internal	100%	$ -	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
	421100	6210000	Outside Legal Services	100%	$ 200,202	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
	422100	6210000	Telephone	100%	$ 19,214	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
	422120	6210000	Telephone - Cellular	100%	$ 70,310	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%

Operating Expenditures		Applicability to Interruptible	Five Year Total	Allocation	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others	Total
423400	6210000 Motor Pool Equipment Rental	100%	$ 344,965	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
424130	6210000 Maint/Repair of Bldgs & Improv	100%	$ 20,816	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
424220	6210000 All Other Equip Maint/Repair	100%	$ 72,857	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
424230	6210000 Central Garage Charges	100%	$ -	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
424240	6210000 Central Communications Chg	100%	$ -	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425100	6210000 Advertising Expense	100%	$ 29,143	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425200	6210000 Periodicals & Dues	100%	$ 114,749	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425300	6210000 Photo & Recording Supplies	100%	$ 75,459	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425400	6210000 General Office Expense	100%	$ 182,141	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425500	6210000 Postage	100%	$ 6,245	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425600	6210000 Central Printing Charges	100%	$ 2,602	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425610	6210000 Outside Printing Expense	100%	$ -	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425700	6210000 Software Purchase/Licensing	100%	$ 166,789	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425800	6210000 Computer Equip Purc Undr $5000	100%	$ 33,826	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
425806	6210000 Computers-Software	100%	$ 1,376,859	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
426200	6210000 Clothing/Linen/Safety Supplies	100%	$ 10,408	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
426600	6210000 Chemical Supplies	100%	$ 5,204	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
426700	6210000 Maintenance Tools/Supplies	100%	$ 15,612	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
426710	6210000 Work Boot Reimbursement	100%	$ 10,928	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
426800	6210000 Special Department Supplies	100%	$ 28,622	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
427100	6210000 Travel & Meeting Expense	100%	$ 203,478	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
427200	6210000 Training	100%	$ 343,467	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
428400	6210000 Liability Insurance	100%	$ 437,571	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
443300	6210000 Uncollect Accounts-Bad Debts	100%	$ 1,092,848	Supply Only	0%	0%	23%	20%	43%	15%	0%	0%	100%
		100%											
		100%											
457004	6210000 Property Management	100%	$ 1,248,970	As All Others	0%	0%	0%	0%	0%	0%	0%	100%	100%
		100%		Supply Only									
Operating Expenditures Sub Total			$ 204,311,550		$ -	$ 16,376,954	$ 27,524,364	$ 20,450,569	$ 39,261,817	$ 11,698,468	$ 87,730,408	$ 1,248,970	$ 204,311,550
Reallocation of "As All Others"					$ -	$ 100,729	$ 169,293	$ 125,785	$ 241,609	$ 71,953	$ 539,600	$ (1,248,970)	
Total Allocation			$ 204,311,550		$ -	$ 16,477,683	$ 27,693,657	$ 20,576,354	$ 39,503,426	$ 11,770,421	$ 88,270,008	$ -	
Percentage Allocation			100.0%		0.0%	8.1%	13.6%	10.1%	19.3%	5.8%	43.2%	0.0%	

Cost Allocation Factors for Interruptible Rates	Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base	As All Others
Total Rate Revenues to be Collected	$ -	$ 16,376,954	$ 27,524,364	$ 20,450,569	$ 39,261,817	$ 11,698,468	$ 87,730,408	$ 1,248,970
Reallocation of "As All Others"	$ -	$ 100,729	$ 169,293	$ 125,785	$ 241,609	$ 71,953	$ 539,600	$ (1,248,970)
Total Allocation	$ -	$ 16,477,683	$ 27,693,657	$ 20,576,354	$ 39,503,426	$ 11,770,421	$ 88,270,008	$ -
Percentage Allocation	0.0%	8.1%	13.6%	10.1%	19.3%	5.8%	43.2%	0.0%
Calculated Adjustment For Interuptable Rates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Adjustment Override								
Applied Adjustment For Interruptable Rates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Allocation for Charges to Other Funds	For Services from Field Operations Division and by Engineering Staff	Total Allocated		Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base
Field Operations		$ 81,398,696	Calculated Allocation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Eng Staff		$ 32,111,768	Calculated Allocation	0.00%	51.00%	6.65%	5.84%	12.53%	4.27%	19.72%
Cost Weighted Average Allocation For Charges to Other Funds				0.0%	14.4%	1.9%	1.7%	3.5%	1.2%	77.3%

APPENDIX C — MULTI-YEAR AND CUSTOMER ALLOCATION

Multi-Year and Customer Allocation

Appendix C, *Multi-Year* and Customer *Allocation*, takes the aggregate distribution of Riverside Public Utilities' expenses and revenues amongst the cost components and forecasts the total dollar-value of each cost component over the next five fiscal years (2017/18 – 2021/22). Additionally, within this appendix each of the cost components is allocated amongst the various customer categories in direct proportion with that category's share of whichever unit (number of accounts, number of MEUs, level of consumption) is associated with each cost component.

Multi-Year Functional Cost Allocation

		Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base
Proposed CoS Results								
% Allocation	100%	3.6%	36.6%	8.0%	6.2%	16.6%	6.0%	23.0%
Starting Alloaction	100%	2.5%	25.5%	9.6%	7.5%	20.0%	7.2%	27.7%
		Years to implement adjustment to Cost of Service based Allocation			4			
FY 2017/18	100%	2.5%	25.5%	9.6%	7.5%	20.0%	7.2%	27.7%
FY 2018/19	100%	2.8%	28.3%	9.2%	7.2%	19.1%	6.9%	26.5%
FY 2019/20	100%	3.1%	31.0%	8.8%	6.8%	18.3%	6.6%	25.3%
FY 2020/21	100%	3.3%	33.8%	8.4%	6.5%	17.4%	6.3%	24.2%
FY 2021/22	100%	3.6%	36.6%	8.0%	6.2%	16.6%	6.0%	23.0%
	All Customers Allocation	**Amount Allocable to Constituent**						
FY 2017/18	63,124,885	1,589,231	16,085,737	6,090,029	4,722,075	12,614,081	4,558,819	17,464,912
FY 2018/19	67,325,380	1,879,590	19,024,667	6,220,165	4,822,980	12,883,628	4,656,235	17,838,115
FY 2019/20	71,845,588	2,202,787	22,295,974	6,344,204	4,919,157	13,140,546	4,749,087	18,193,833
FY 2020/21	76,625,831	2,559,459	25,906,102	6,453,201	5,003,671	13,366,308	4,830,679	18,506,412
FY 2021/22	81,584,713	2,948,802	29,846,925	6,537,445	5,068,992	13,540,800	4,893,742	18,748,007

Allocation Adjustment for Interruptable Rates

Customer	Capacity	Supply 1	Supply 2	Supply 3	Supply 4	Base
0.0%	0.0%	-2.9%	-3.7%	-9.1%	-8.3%	

Customer Class Allocation

Customer Costs

Allocation Factor Factor Period	Accounts Five Year Average	Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Baseline Allocation		**0.107%**	**0.057%**	**7.192%**	**0.759%**	**89.018%**	**1.837%**	**1.030%**
Interruptable		No	No	No	No	No	No	No
Interruptable Adjustment		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Effective Allocation Adjustment		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Baseline Allocation With Adjustment		**0.107%**	**0.057%**	**7.192%**	**0.759%**	**89.018%**	**1.837%**	**1.030%**
Reallocation to Non-Interruptable		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
	Total Allocation	WA-2	WA-4	WA-6.1	WA-7	SFR	MFR	Landscape
Effective Allocation	**100.0%**	**0.107%**	**0.057%**	**7.192%**	**0.759%**	**89.018%**	**1.837%**	**1.030%**
FY 2017/18	1,589,231	1,707	901	114,294	12,069	1,414,697	29,195	16,366
FY 2018/19	1,879,590	2,019	1,066	135,176	14,275	1,673,168	34,530	19,356
FY 2019/20	2,202,787	2,367	1,249	158,420	16,729	1,960,871	40,467	22,684
FY 2020/21	2,559,459	2,750	1,452	184,071	19,438	2,278,372	47,019	26,357
FY 2021/22	2,948,802	3,168	1,672	212,071	22,395	2,624,957	54,172	30,367

Capacity Costs

Allocation Factor Factor Period	MEUs Five Year Average	Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Baseline Allocation		**0.709%**	**0.079%**	**24.107%**	**1.716%**	**68.727%**	**1.535%**	**3.128%**
Interruptable		No	No	No	No	No	No	No
Interruptable Adjustment		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Effective Allocation Adjustment		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Baseline Allocation With Adjustment		**0.709%**	**0.079%**	**24.107%**	**1.716%**	**68.727%**	**1.535%**	**3.128%**
Reallocation to Non-Interruptable		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
	Total Allocation	WA-2	WA-4	WA-6.1	WA-7	SFR	MFR	Landscape
Effective Allocation	**100.0%**	**0.709%**	**0.079%**	**24.107%**	**1.716%**	**68.727%**	**1.535%**	**3.128%**
FY 2017/18	16,085,737	113,989	12,634	3,877,784	275,992	11,055,264	246,859	503,214
FY 2018/19	19,024,667	134,816	14,943	4,586,271	326,417	13,075,106	291,961	595,153
FY 2019/20	22,295,974	157,997	17,512	5,374,884	382,544	15,323,381	342,164	697,490
FY 2020/21	25,906,102	183,580	20,348	6,245,177	444,485	17,804,518	397,567	810,426
FY 2021/22	29,846,925	211,506	23,443	7,195,190	512,100	20,512,932	458,045	933,708

Supply 1 Costs

Allocation Factor	Supply 1	Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Baseline Allocation		**0.028%**	**0.074%**	**21.157%**	**1.671%**	**71.226%**	**2.752%**	**3.092%**
Interruptable		No	No	No	Yes	No	No	No
Interruptable Adjustment		0.000%	0.000%	0.000%	-2.881%	0.000%	0.000%	0.000%
Effective Allocation Adjustment		0.000%	0.000%	0.000%	-0.048%	0.000%	0.000%	0.000%
Baseline Allocation With Adjustment		**0.028%**	**0.074%**	**21.157%**	**1.623%**	**71.226%**	**2.752%**	**3.092%**
Reallocation to Non-Interruptable		0.000%	0.000%	0.010%	0.000%	0.035%	0.001%	0.002%
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
Goal Allocation	**100.0%**	**0.028%**	**0.074%**	**21.167%**	**1.623%**	**71.260%**	**2.754%**	**3.094%**
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
FY 2017/18	6,090,029	1,726	4,489	1,289,088	98,842	4,339,782	167,694	188,406
FY 2018/19	6,220,165	1,763	4,585	1,316,635	100,954	4,432,517	171,278	192,432
FY 2019/20	6,344,204	1,798	4,677	1,342,890	102,968	4,520,908	174,693	196,270
FY 2020/21	6,453,201	1,829	4,757	1,365,962	104,737	4,598,580	177,695	199,642
FY 2021/22	6,537,445	1,853	4,819	1,383,794	106,104	4,658,613	180,014	202,248

Supply 2 Costs

Allocation Factor	Supply 2	Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Baseline Allocation		**0.065%**	**0.081%**	**48.786%**	**3.854%**	**39.174%**	**0.910%**	**7.130%**
Interruptable		No	No	No	Yes	No	No	No
Interruptable Adjustment		0.000%	0.000%	0.000%	-3.681%	0.000%	0.000%	0.000%
Effective Allocation Adjustment		0.000%	0.000%	0.000%	-0.142%	0.000%	0.000%	0.000%
Baseline Allocation With Adjustment		**0.065%**	**0.081%**	**48.786%**	**3.712%**	**39.174%**	**0.910%**	**7.130%**
Reallocation to Non-Interruptable		0.000%	0.000%	0.072%	0.000%	0.058%	0.001%	0.011%
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
Goal Allocation	**100.0%**	**0.065%**	**0.081%**	**48.858%**	**3.712%**	**39.232%**	**0.911%**	**7.141%**
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
FY 2017/18	$ 4,722,075	3,090	3,813	2,307,130	175,271	1,852,554	43,019	337,198
FY 2018/19	$ 4,822,980	3,156	3,894	2,356,431	179,016	1,892,141	43,938	344,403
FY 2019/20	$ 4,919,157	3,219	3,972	2,403,421	182,586	1,929,873	44,815	351,271
FY 2020/21	$ 5,003,671	3,274	4,040	2,444,713	185,723	1,963,029	45,584	357,306
FY 2021/22	$ 5,068,992	3,317	4,093	2,476,628	188,148	1,988,656	46,180	361,971

Supply 3 Costs

Allocation Factor	Supply 3	Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Baseline Allocation		**0.538%**	**0.171%**	**29.737%**	**5.706%**	**54.146%**	**1.042%**	**8.660%**
Interruptable		No	No	No	Yes	No	No	No
Interruptable Adjustment		0.000%	0.000%	0.000%	-9.057%	0.000%	0.000%	0.000%
Effective Allocation Adjustment		0.000%	0.000%	0.000%	-0.517%	0.000%	0.000%	0.000%
Baseline Allocation With Adjustment		**0.538%**	**0.171%**	**29.737%**	**5.189%**	**54.146%**	**1.042%**	**8.660%**
Reallocation to Non-Interruptable		0.003%	0.001%	0.163%	0.000%	0.297%	0.006%	0.047%
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
Goal Allocation	**100.0%**	**0.541%**	**0.172%**	**29.900%**	**5.189%**	**54.443%**	**1.047%**	**8.708%**
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
FY 2017/18	$ 12,614,081	68,204	21,652	3,771,664	654,584	6,867,464	132,111	1,098,403
FY 2018/19	$ 12,883,628	69,661	22,115	3,852,260	668,571	7,014,213	134,934	1,121,874
FY 2019/20	$ 13,140,546	71,050	22,556	3,929,079	681,904	7,154,087	137,625	1,144,246
FY 2020/21	$ 13,366,308	72,271	22,943	3,996,583	693,619	7,276,998	139,989	1,163,905
FY 2021/22	$ 13,540,800	73,215	23,243	4,048,757	702,674	7,371,996	141,817	1,179,099

Supply 4 Costs

Allocation Factor	Supply 4	Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	5FR	MFR	Landscape
Baseline Allocation		**0.570%**	**0.181%**	**31.537%**	**0.000%**	**57.423%**	**1.105%**	**9.184%**
Interruptable		No	No	No	Yes	No	No	No
Interruptable Adjustment		0.000%	0.000%	0.000%	-8.350%	0.000%	0.000%	0.000%
Effective Allocation Adjustment		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Baseline Allocation With Adjustment		**0.570%**	**0.181%**	**31.537%**	**0.000%**	**57.423%**	**1.105%**	**9.184%**
Reallocation to Non-Interruptable		0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
Goal Allocation	**100.0%**	**0.570%**	**0.181%**	**31.537%**	**0.000%**	**57.423%**	**1.105%**	**9.184%**
	Total Allocation	**WA-2**	**WA-4**	**WA-6.1**	**WA-7**	**SFR**	**MFR**	**Landscape**
FY 2017/18	$ 4,558,819	25,998	8,253	1,437,714	-	2,617,796	50,359	418,698
FY 2018/19	$ 4,656,235	26,554	8,430	1,468,436	-	2,673,735	51,435	427,645
FY 2019/20	$ 4,749,087	27,084	8,598	1,497,719	-	2,727,053	52,461	436,173
FY 2020/21	$ 4,830,679	27,549	8,746	1,523,450	-	2,773,905	53,362	443,667
FY 2021/22	$ 4,893,742	27,909	8,860	1,543,338	-	2,810,118	54,059	449,459

Base Costs

Allocation Factor	Estimated Total Usage	Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Baseline Allocation		**0.204%**	**0.117%**	**29.804%**	**3.645%**	**58.698%**	**1.750%**	**5.782%**
FY 2017/18	17,464,912	35,713	20,430	5,205,326	636,546	10,251,539	305,556	1,009,803
FY 2018/19	17,838,115	36,476	20,866	5,316,557	650,148	10,470,602	312,086	1,031,381
FY 2019/20	18,193,833	37,203	21,283	5,422,576	663,113	10,679,400	318,309	1,051,948
FY 2020/21	18,506,412	37,842	21,648	5,515,739	674,505	10,862,878	323,778	1,070,021
FY 2021/22	18,748,007	38,336	21,931	5,587,745	683,311	11,004,689	328,004	1,083,990

Summary	Costs							
		Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Overall Customer All	100.0%	0.4%	0.1%	28.5%	2.9%	60.8%	1.5%	5.7%
FY 2017/18	$ 63,124,885	$ 250,428	$ 72,173	$ 18,003,000	$ 1,853,304	$ 38,399,097	$ 974,794	$ 3,572,087
FY 2018/19	$ 67,325,380	$ 274,445	$ 75,899	$ 19,031,765	$ 1,939,381	$ 41,231,483	$ 1,040,162	$ 3,732,245
FY 2019/20	$ 71,845,588	$ 300,718	$ 79,846	$ 20,128,990	$ 2,029,844	$ 44,295,573	$ 1,110,534	$ 3,900,082
FY 2020/21	$ 76,625,831	$ 329,095	$ 83,934	$ 21,275,695	$ 2,122,507	$ 47,558,280	$ 1,184,995	$ 4,071,324
FY 2021/22	$ 81,584,713	$ 359,303	$ 88,061	$ 22,447,524	$ 2,214,731	$ 50,971,961	$ 1,262,291	$ 4,240,841

Summary	Costs							
		Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Overall Customer All	100.0%	0.3%	0.1%	30.8%	3.4%	57.0%	1.5%	6.7%
FY 2017/18	$ 45,449,917	$ 134,731	$ 58,638	$ 14,010,922	$ 1,565,243	$ 25,929,136	$ 698,740	$ 3,052,508
FY 2018/19	$ 46,421,124	$ 137,610	$ 59,891	$ 14,310,318	$ 1,598,690	$ 26,483,208	$ 713,671	$ 3,117,736
FY 2019/20	$ 47,346,827	$ 140,354	$ 61,085	$ 14,595,686	$ 1,630,570	$ 27,011,321	$ 727,902	$ 3,179,908
FY 2020/21	$ 48,160,270	$ 142,766	$ 62,134	$ 14,846,447	$ 1,658,584	$ 27,475,390	$ 740,408	$ 3,234,541
FY 2021/22	$ 48,788,986	$ 144,629	$ 62,946	$ 15,040,263	$ 1,680,236	$ 27,834,072	$ 750,074	$ 3,276,766

Summary	Costs							
		Temp Service WA-2	Riv. Water Co. Irr. WA-4	Comm & Ind WA-6.1 and WA-6.2	City Irrigation WA-7 and WA-10	SFR	MFR	Landscape
Overall Customer All	100.0%	0.7%	0.1%	22.6%	1.6%	70.6%	1.6%	2.9%
FY 2017/18	$ 17,674,968	$ 115,697	$ 13,536	$ 3,992,078	$ 288,061	$ 12,469,961	$ 276,055	$ 519,580
FY 2018/19	$ 20,904,257	$ 136,835	$ 16,009	$ 4,721,447	$ 340,691	$ 14,748,274	$ 326,491	$ 614,509
FY 2019/20	$ 24,498,761	$ 160,364	$ 18,761	$ 5,533,304	$ 399,273	$ 17,284,252	$ 382,631	$ 720,174
FY 2020/21	$ 28,465,561	$ 186,330	$ 21,799	$ 6,429,248	$ 463,923	$ 20,082,891	$ 444,586	$ 836,784
FY 2021/22	$ 32,795,727	$ 214,674	$ 25,115	$ 7,407,262	$ 534,495	$ 23,137,889	$ 512,217	$ 964,075

		$0.3 M WA-2	$0.08 M WA-4	$20.18 M WA-6	$2.03 M WA-7	$44.49 M SFR	$1.11 M MFR	$3.9 M Landscape
Percent Fixed	34.5%	54%	24%	28%	20%	39%	35%	19%
Percent Variable	65.5%	46%	76%	72%	80%	61%	65%	81%
Total	100.0%	100%	100%	100%	100%	100%	100%	100%

APPENDIX D — OUTSIDE CITY SUCHARGE CALCULATION

Outside City Costs

Appendix D, *Outside City Costs,* presents a summary of all costs associated with providing service to customers with accounts outside of the City's standard service area boundaries. The costs summarized within the appendix include pipeline capital costs, other facility capital costs, water distribution costs, and energy costs.

Outside City Surcharge

Appendix D, *Outside City Surcharge,* takes the additional costs calculated in Appendix *Outside City Costs* and calculates the overall percent increase in rates to be charged to customers residing outside of the City's standard service area boundaries.

Results - Capital Cost

ORIGINAL SUMMARY FROM RPU - File: "RPU Wheeling Cost - Outside City Customers Summarized for Carollo.xls"

TABLE 1 - Wheeling Costs

Active Interconnections	Praed 1400 Zone	University City 1000 Zone	Homegardens 925 Zone	Highgrove Zones	University City 1050 Zone	Van Buren 1200 Zone	Victoria 1100 Zone	Total
Number of Services	333	115	1,601	949	73	238	740	4,049
Estimated Flows to Customers (gpm)[1]	394	110	1020	444	10	83	538	2596
Pipeline Associated Capital Costs[2]	**$8,719,460**	**$2,228,267**	**$23,944,833**	**$15,365,326**	**$1,957,947**	**$5,116,324**	**$12,690,105**	**$70,022,362**
Inside City Transmission	$1,202,540	$296,316	$3,144,430	$502,160	$25,996	$168,021	$660,870	$6,000,333
Outside City Distribution	$7,516,920	$1,931,951	$20,800,502	$14,863,166	$1,931,951	$4,948,303	$12,029,235	$64,022,029
Facility Associated Capital Costs[2]	**$3,929,844**	**$1,148,100**	**$9,687**	**$2,017,353**	**$240,735**	**$493,289**	**$150,745**	**$7,989,752**
Inside City Pump/PRV & Resevoir Capital Cost	$2,346,078	$998,100	$9,687	$1,567,353	$90,735	$493,289	$150,745	$5,655,986
Outside City Pump/PRV Capital Cost	$1,583,766	$150,000	$0	$450,000	$150,000	$0	$0	$2,333,766
Total Capital Cost	**$12,649,305**	**$3,376,368**	**$23,954,620**	**$17,382,678**	**$2,198,682**	**$5,609,613**	**$12,840,850**	**$78,012,114**

Total Capital Cost for Outside City Customers **$78,012,114**

Notes:

1. Delivered flows to Customers obtained from 2013 Draft IWMP and Hydraulic Water Model
2. Capital cost of water facilities is charged to Customer based on proportion of Customer flow rates. Unit costs obtained from 2013 IWMP construction costs with 50% Markup for Engineering, Contract Administration, & Contingency.

O&M Costs (from RPU's FY 14-15 Financial Statement)

Operations	$25,793,000
Maintenance	$4,745,000
Production (AF)	$65,259
Production (CCF)	$28,426,748
O&M/AF	$467.95
O&M/CCF	$1.07

	Total	Applicable to Surcharge	Notes:	Applicable Capital Costs	Annual Cost Calculation	
Number of Services	4,049					
Estimated Flows to Customers (gpm)[1]	2596					
					Amortization	Annualized Cost
Pipeline Associated Capital Costs[2]	$70,022,362					
Inside City Transmission	$6,000,333	0%	Included in Base Rates	$0	(Years)	(2015 Dollars)
Outside City Distribution	$64,022,029	100%	All for Outside City	$64,022,029		
			Total Pipeline Costs	$64,022,029	50.00	$1,280,441
Facility Associated Capital Costs[2]	$7,989,752					
Inside City Pump/PRV & Resevoir Capita	$5,655,986	0%	Included in Base Rates	$0		
Outside City Pump/PRV Capital Cost	$2,333,766	100%	All for Outside City	$2,333,766		
			Total Facilities Costs	$2,333,766	30.00	$77,792
Total Capital Cost	$78,012,114			Total Annualized Capital Costs		$1,358,233

	Capital	Annual
FY 2015/16		$1,358,233
FY 2016/17	2.85%	$1,396,942
FY 2017/18	2.85%	$1,436,755
FY 2018/19	2.85%	$1,477,703
FY 2019/20	2.85%	$1,519,817
FY 2020/21	2.85%	$1,563,132
FY 2021/22	2.85%	$1,607,681

Operational Costs	Praed 1400 Zone	University City 1600	Homegardens 925 Zone	Highgrove Zones	University City 1650	Van Buren 1200 Zone	Victoria 1100 Zone	Total
Usage (GPM) - 2013	394	110	1,020	444	10	83	536	2,596
Energy Reqired (KWhr)	408,286	164,889	-	226,504	15,600	44,399	148,896	1,008,553

RPU Total Water Sales	AFY	Adjustment	Cost
2013 Total Sales	27,977		
FY 2015/16	21,901	-22%	$0.070
FY 2016/17	25,253	-10%	$0.071
FY 2017/18	26,878	-4%	$0.073
FY 2018/19	27,103	-3%	$0.074
FY 2019/20	27,342	-2%	$0.076
FY 2020/21	27,588	-1%	$0.077
FY 2021/22	27,838	0%	$0.079

Adjusted Energy Required	Praed 1400 Zone	University City 1600	Homegardens 925 Zone	Highgrove Zones	University City 1650	Van Buren 1200 Zone	Victoria 1100 Zone	Total
FY 2017/18	392,241	158,389	-	217,602	14,987	42,654	143,044	968,917
FY 2018/19	395,536	159,720	-	219,430	15,113	43,012	144,246	977,057
FY 2019/20	399,025	161,129	-	221,366	15,246	43,392	145,518	985,676
FY 2020/21	402,604	162,574	-	223,351	15,383	43,781	146,823	994,515
FY 2021/22	406,264	164,052	-	225,381	15,523	44,179	148,158	1,003,556

Energy Cost ($)	Praed 1400 Zone	University City 1600	Homegardens 925 Zone	Highgrove Zones	University City 1650	Van Buren 1200 Zone	Victoria 1100 Zone	Total
FY 2017/18	$28,566	$11,535	$0	$15,848	$1,091	$3,106	$10,418	**$70,564**
FY 2018/19	$29,382	$11,865	$0	$16,300	$1,123	$3,195	$10,715	**$72,580**
FY 2019/20	$30,234	$12,209	$0	$16,773	$1,155	$3,288	$11,026	**$74,685**
FY 2020/21	$31,115	$12,565	$0	$17,262	$1,189	$3,384	$11,347	**$76,862**
FY 2021/22	$32,026	$12,932	$0	$17,767	$1,224	$3,483	$11,679	**$79,112**

Projected Outside City Costs Summary

	Capital Costs	Energy Costs	Total Outside City Costs
FY 2017/18	$1,436,755	$70,564	**$1,507,320**
FY 2018/19	$1,477,703	$72,580	**$1,550,283**
FY 2019/20	$1,519,817	$74,685	**$1,594,502**
FY 2020/21	$1,563,132	$76,862	**$1,639,994**
FY 2021/22	$1,607,681	$79,112	**$1,686,793**

Projected Outside City Costs Summary	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Capital Costs	$1,436,755	$1,477,703	$1,519,817	$1,563,132	$1,607,681
Energy Costs	$70,564	$72,580	$74,685	$76,862	$79,112
Total Outside City Costs	**$1,507,320**	**$1,550,283**	**$1,594,502**	**$1,639,994**	**$1,686,793**

Surcharge Calculation — Detailed Calculations Below	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Variable Revenue Without Surcharge	$ 2,326,372	$ 2,374,117	$ 2,418,892	$ 2,466,991	$ 2,497,696
Annual Fixed Revenue Without Surcharge	$ 907,603	$ 1,071,354	$ 1,252,899	$ 1,452,755	$ 1,670,330
Total Revenue Without Surcharge	**$ 3,233,975**	**$ 3,445,471**	**$ 3,671,791**	**$ 3,919,746**	**$ 4,168,026**
Surcharge Costs to Collect	**$1,507,320**	**$1,550,283**	**$1,594,502**	**$1,639,994**	**$1,686,793**
Required Percentage Surcharge	**47%**	**45%**	**43%**	**42%**	**40%**

Five Year Combined Surchage Calculation		
Total Revenue Without Surcharge	FY 2017/18 through FY 2021/22	$ 18,439,009
Surchage Costs to Collect	FY 2017/18 through FY 2021/22	$7,978,892
Required Percentage Surcharge		**43%**

Outside City Usage And Revenues

Outside City Percent of Consumption

Month	FY 2015/16
Landscape	**6.8%**
MFR	**1.6%**
SFR	**6.6%**
WA-4	**1.7%**
WA-6.1 and WA-6.2	**2.7%**

Source: RPU with Tiering Phase 2.xlsx

Projected Usage - Usage From Rate Design X Outside City Percent of Consumption

Landscape		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	48,590	48,600	48,740	48,872	48,987
Winter	Tier 2	-	-	-	-	-
Winter	Tier 3	-	-	-	-	-
Winter	Tier 4	-	-	-	-	-
Summer	Tier 1	55,624	55,635	55,795	55,946	56,078
Summer	Tier 2	-	-	-	-	-
Summer	Tier 3	-	-	-	-	-
Summer	Tier 4	-	-	-	-	-

MFR		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	2,272	2,195	2,130	2,066	2,001
Winter	Tier 2	1,629	1,574	1,528	1,482	1,435
Winter	Tier 3	-	-	-	-	-
Winter	Tier 4	-	-	-	-	-
Summer	Tier 1	1,694	1,637	1,589	1,541	1,492
Summer	Tier 2	1,800	1,739	1,688	1,637	1,585
Summer	Tier 3	-	-	-	-	-
Summer	Tier 4	-	-	-	-	-

SFR		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	228,337	220,722	214,215	207,777	201,317
Winter	Tier 2	219,168	211,859	205,614	199,434	193,233
Winter	Tier 3	62,603	60,515	58,731	56,966	55,195
Winter	Tier 4	-	-	-	-	-
Summer	Tier 1	172,100	166,361	161,457	156,604	151,735
Summer	Tier 2	249,257	240,944	233,841	226,813	219,761
Summer	Tier 3	107,088	103,517	100,465	97,446	94,416
Summer	Tier 4	-	-	-	-	-

WA-4		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	57	56	54	53	51
Winter	Tier 2	76	75	73	71	69
Winter	Tier 3	102	100	97	95	93
Winter	Tier 4	-	-	-	-	-
Summer	Tier 1	47	46	44	43	42
Summer	Tier 2	92	91	88	86	84
Summer	Tier 3	133	131	127	124	121
Summer	Tier 4	-	-	-	-	-

WA-6.1 and WA-6.2		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	109,984	110,006	110,323	110,621	110,882
Winter	Tier 2					
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	103,036	103,057	103,354	103,633	103,878
Summer	Tier 2					
Summer	Tier 3					
Summer	Tier 4					

Proposed Rates

Landscape		Proposed Rates				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	$1.75	$1.78	$1.81	$1.84	$1.86
Winter	Tier 2					
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	$2.24	$2.28	$2.32	$2.36	$2.38
Summer	Tier 2					
Summer	Tier 3					
Summer	Tier 4					

MFR		Proposed Rates				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	$1.20	$1.27	$1.33	$1.39	$1.46
Winter	Tier 2	$1.72	$1.82	$1.91	$2.01	$2.10
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	$1.20	$1.27	$1.33	$1.39	$1.46
Summer	Tier 2	$1.95	$2.07	$2.17	$2.28	$2.38
Summer	Tier 3					
Summer	Tier 4					

SFR		Proposed Rates				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	$1.20	$1.27	$1.33	$1.40	$1.46
Winter	Tier 2	$1.51	$1.59	$1.67	$1.76	$1.84
Winter	Tier 3	$2.77	$2.93	$3.08	$3.23	$3.38
Winter	Tier 4					
Summer	Tier 1	$1.20	$1.27	$1.33	$1.40	$1.46
Summer	Tier 2	$1.51	$1.59	$1.67	$1.76	$1.84
Summer	Tier 3	$3.38	$3.58	$3.76	$3.94	$4.12
Summer	Tier 4					

WA-4		Proposed Rates				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	$1.26	$1.30	$1.37	$1.43	$1.48
Winter	Tier 2	$1.51	$1.57	$1.65	$1.72	$1.78
Winter	Tier 3	$2.35	$2.43	$2.56	$2.67	$2.77
Winter	Tier 4					
Summer	Tier 1	$1.26	$1.30	$1.37	$1.43	$1.48
Summer	Tier 2	$1.51	$1.57	$1.65	$1.72	$1.78
Summer	Tier 3	$3.02	$3.13	$3.30	$3.44	$3.56
Summer	Tier 4					

WA-6.1 and WA-6.2		Proposed Rates				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Winter	Tier 1	$1.66	$1.69	$1.72	$1.75	$1.77
Winter	Tier 2					
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	$1.93	$1.97	$2.00	$2.03	$2.05
Summer	Tier 2					
Summer	Tier 3					
Summer	Tier 4					

Variable Revenue Under Proposed Rates - Without Surcharge	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Landscape	$ 209,630	$ 213,356	$ 217,665	$ 221,957	$ 224,583
MFR	11,070	11,330	11,526	11,722	11,888
SFR	1,723,213	1,759,453	1,792,173	1,828,262	1,850,916
WA-4	1,024	1,046	1,065	1,085	1,098
WA-6.1 and WA-6.2	381,434	388,932	396,463	403,963	409,212
Total Variable Revenue Without Surcharge	**$ 2,326,372**	**$ 2,374,117**	**$ 2,418,892**	**$ 2,466,991**	**$ 2,497,696**

Fixed Revenue Under Proposed Rates - Without Surcharge					
	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Outside City Accounts					
Meter Size	**Projected Outside City Accounts**				
5/8"	391	394	396	399	401
3/4"	2,747	2,764	2,781	2,799	2,817
1"	631	636	641	645	650
1.5"	76	78	79	81	82
2"	23	24	24	25	25
3"	1	1	1	1	1
4"	2	2	2	2	2
6"	1	1	1	1	1
8"	1	1	1	1	1
10"	-	-	-	-	-
Total	**3,875**	**3,901**	**3,927**	**3,955**	**3,983**
Proposed Rates					
Meter Size					
5/8"	$16.40	$19.21	$22.29	$25.64	$29.24
3/4"	$16.40	$19.21	$22.29	$25.64	$29.24
1"	$26.04	$30.50	$35.38	$40.69	$46.40
1.5"	$49.92	$58.47	$67.82	$77.99	$88.93
2"	$78.70	$92.16	$106.91	$122.93	$140.16
3"	$145.89	$170.85	$198.17	$227.87	$259.80
4"	$241.86	$283.23	$328.52	$377.75	$430.67
6"	$529.61	$620.20	$719.36	$827.16	$943.03
8"	$865.28	$1,013.27	$1,175.29	$1,351.40	$1,540.69
10"	$1,344.83	$1,574.84	$1,826.63	$2,100.35	$2,394.54
Total Annual Fixed Revenue Without Surcharge	**$ 907,603**	**$ 1,071,354**	**$ 1,252,899**	**$ 1,452,755**	**$ 1,670,330**

Surcharge Calculation

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Variable Revenue Without Surcharge	$ 2,326,372	$ 2,374,117	$ 2,418,892	$ 2,466,991	$ 2,497,696
Annual Fixed Revenue Without Surcharge	$ 907,603	$ 1,071,354	$ 1,252,899	$ 1,452,755	$ 1,670,330
Total Revenue Without Surcharge	**$ 3,233,975**	**$ 3,445,471**	**$ 3,671,791**	**$ 3,919,746**	**$ 4,168,026**
Surcharge Costs to Collect	**$1,507,320**	**$1,550,283**	**$1,594,502**	**$1,639,994**	**$1,686,793**
Required Percentage Surcharge	**47%**	**45%**	**43%**	**42%**	**40%**

Five Year Combined Surchage Calculation

Total Revenue Without Surcharge	FY 2017/18 through FY 2021/22	$ 18,439,009
Surchage Costs to Collect	FY 2017/18 through FY 2021/22	$7,978,892
Required Percentage Surcharge		**43%**

Allocation By Customer Class

	Five Year Sum	
Variable Revenue Without Surcharge		
Landscape	$ 1,087,191	
MFR	$ 57,537	
SFR	$ 8,954,017	
WA-4	$ 5,319	
Commercial and Industrial	$ 1,980,004	
Fixed Revenue Without Surcharge		
Landscape	$ 235,259	
MFR	$ 33,219	
SFR	$ 5,495,276	
WA-4	$ 4,296	
Commercial and Industrial	$ 586,891	
Total Without Surcharge		
Landscape	$ 1,322,450	7.2%
MFR	$ 90,756	0.5%
SFR	$ 14,449,293	78.4%
WA-4	$ 9,615	0.1%
Commercial and Industrial	$ 2,566,895	13.9%
Total	**$ 18,439,009**	**100.0%**

APPENDIX E — COST OF WATER ALLOCATION

Cost of Water

Appendix E, *Cost of Water Allocation,* summarizes all of the costs associated with supplying any of the four sources of water. Included in the summary are purchase costs, distribution costs, and other costs. The costs associated with each of the four sources are then summarized. In conjunction with the total quantity of water, CCF, to be provided by each source, the unique unit cost of providing water from each source is determined.

	Supply 1	Supply 1	Supply 1	Supply 2	Supply 3	Supply 4	Base
	Gage	Rialto/ Colton	Gage + Rialto/Colton	Riverside South/North	Waterman	Flume	Distribution
Production							RPU Retail
FY 2013/14	34,095		34,095	25,279	26,022	7,165	65,854
FY 2014/15	32,580	444	33,024	22,730	23,680	4,130	59,265
2-Year Sum	**66,674**	**444**	**67,118**	**48,009**	**49,702**	**11,294**	**125,119**
Costs							
FY 2013/14	$2,088,698		$2,088,698	$2,345,121	$3,326,882	$1,381,365	$5,088,701
FY 2014/15	$2,218,232	$14,553	$2,232,786	$2,270,867	$3,347,092	$1,255,660	$4,374,944
2-Year Sum	**$4,306,930**	**$14,553**	**$4,321,483**	**$4,615,987**	**$6,673,974**	**$2,637,026**	**$9,463,645**
		Total Allocation	**16%**	**17%**	**24%**	**10%**	**34%**
		Supply Only	**24%**	**25%**	**37%**	**14%**	
Unit Cost							
FY 2013/14			$61.26	$92.77	$127.85	$192.80	$77.27
FY 2014/15			$67.61	$99.91	$141.35	$304.06	$73.82
2-Year Average			**$64.39**	**$96.15**	**$134.28**	**$233.48**	**$75.64**
Potable Production							
FY 2013/14			27,514	17,019	26,022	6,041	76,596
FY 2014/15			27,495	15,319	23,680	3,642	70,136
2-Year Sum			**55,009**	**32,338**	**49,702**	**9,683**	
Water Loss Above Linden-Evans							
FY 2013/14			(597)	(369)	(565)	(131)	(1,662)
FY 2014/15			(634)	(353)	(546)	(84)	(1,617)
2-Year Sum			**(1,231)**	**(722)**	**(1,111)**	**(215)**	

	Supply 1	Supply 2	Supply 3	Supply 4	Base
Potable Adjustments					
Potable Wheeled to WMWD					
FY 2013/14	(1,702)	(1,053)	(1,610)	(374)	(4,739)
FY 2014/15	(1,912)	(1,065)	(1,646)	(253)	(4,876)
2-Year Sum	**(3,614)**	**(2,118)**	**(3,256)**	**(627)**	**(9,615)**
Wholesale to WMWD					
FY 2013/14	-	-	-	-	-
FY 2014/15	-	-	-	-	-
2-Year Sum	**-**	**-**	**-**	**-**	
Sales to Home Gardens					
FY 2013/14	(166)	(103)	(157)	(37)	(463)
FY 2014/15	(158)	(88)	(136)	(21)	(402)
2-Year Sum	**(324)**	**(191)**	**(293)**	**(57)**	
Delivered to UCR					
FY 2013/14	(328)	(203)	(311)	(72)	(914)
FY 2014/15	(352)	(196)	(303)	(47)	(897)
2-Year Sum	**(680)**	**(399)**	**(613)**	**(119)**	
Water Loss Below Linden-Evans					
FY 2013/14	(1,393)	(862)	(1,318)	(306)	(3,879)
FY 2014/15	(1,558)	(868)	(1,342)	(206)	(3,975)
2-Year Sum	**(2,952)**	**(1,730)**	**(2,660)**	**(512)**	
Available For Potable Use (Estimated)					
FY 2013/14	23,327	14,429	22,062	5,122	64,939
FY 2014/15	22,882	12,749	19,707	3,031	58,369
2-Year Sum	**46,209**	**27,178**	**41,769**	**8,153**	

	Supply 1	Supply 2	Supply 3	Supply 4
Potable Supply Costs				
FY 2013/14	$1,429,031	$1,338,580	$2,820,574	$987,453
FY 2014/15	$1,547,088	$1,273,684	$2,785,568	$921,593
2-Year Sum	**$2,976,119**	**$2,612,264**	**$5,606,142**	**$1,909,047**
Distribution Costs				
FY 2013/14	$1,802,506	$1,114,954	$1,704,762	$395,760
FY 2014/15	$1,689,144	$941,116	$1,454,771	$223,745
2-Year Sum	**$3,491,650**	**$2,056,071**	**$3,159,533**	**$619,505**
Calculated Potable Costs				
FY 2013/14	$3,231,538	$2,453,535	$4,525,336	$1,383,213
FY 2014/15	$3,236,232	$2,214,800	$4,240,339	$1,145,338
2-Year Sum	**$6,467,769**	**$4,668,335**	**$8,765,675**	**$2,528,551**
Percentage Allocations				
Supply With Distribution	**29%**	**21%**	**39%**	**11%**
Supply Only	**23%**	**20%**	**43%**	**15%**
Overall Unit Rate	$139.97	$171.77	$209.86	$310.15
Average Available AF	15,403	9,059	13,923	2,718
Average Available CCF	**6,709,503**	**3,946,209**	**6,064,833**	**1,183,755**

APPENDIX F — SUPPLY ALLOCATION

Supply Allocation

Appendix F, *Supply Allocation,* presents an estimate of the percent of each water supply that is used by each customer class. This distribution of the water supplies amongst the customer class also incorporates an allocation between each customer class's tiers. The cheapest of the water sources is allocated first to the lower tiers, while each progressively more expensive source is allocated as needed to meet the demands associated with each tier. The distribution of each water source's capacity is later used to calculate the value of water demanded by each tier within each customer class.

Class Allocation		Step 1		Supply 1	Supply 2	Supply 3	Supply 4	Total	
Total Available for RPU Retial	CCF			10,600,472	6,234,691	9,581,946	1,870,238	28,287,348	
Dedicated Supply		Five Year Avg Accounts or DUs	Indoor Usage Monthly CCF						
SFR	Indoor (Tier 1)	59,650	9	5,749,408				5,749,408	
MFR	Indoor (Tier 1)	2,975	7	249,932				249,932	
WA-4	Indoor	38	9	4,104				4,104	
Total Dedicated				6,003,445	0	0	0	6,003,445	
Annualized 3-Month Minimum		**Step 2**		**Supply 1**	**Supply 2**	**Supply 3**	**Supply 4**	**Total**	
Remaining Available Before Allocation				4,597,028	6,234,691	9,581,946	1,870,238	22,283,903	
Amount to be Allocated				4,597,028	6,234,691	1,970,809	0		
Allocated	Annualized 3 Month Min	Less Dedicated Allocation	Remaining						Subtotal Allocated
WA-2: Temproary Service	8,364	0	8,364	3,003	4,073	1,288	0	8,364	8,364
WA-4: Riverside Water Company	14,426	-4,104	10,322	3,706	5,027	1,589	0	10,322	14,426
WA-6: Commercial and Industria	6,245,894	0	6,245,894	2,242,725	3,041,682	961,487	0	6,245,894	6,245,894
WA-7: City Irrigation	493,359	0	493,359	177,151	240,260	75,947	0	493,359	493,359
SFR	10,764,668	-5,749,408	5,015,260	1,800,839	2,442,377	772,044	0	5,015,260	10,764,668
MFR	366,394	-249,932	116,462	41,818	56,716	17,928	0	116,462	366,394
Landscape	912,867	0	912,867	327,785	444,556	140,526	0	912,867	912,867
Total	18,805,972		12,802,528	4,597,028	6,234,691	1,970,809	0	12,802,528	18,805,972
			Remaining to Allocate	0	0	7,611,137	1,870,238	9,481,375	
Annualized Winter		**Step 3**		**Supply 1**	**Supply 2**	**Supply 3**	**Supply 4**	**Total**	
Remaining Available Before Allocation				0	0	7,611,137	1,870,238	9,481,375	
Amount to be Allocated				0	0	2,985,580	0		
Allocated	Annualized Winter Usage	Less Previously Allocated	Remaining						Subtotal Allocated
WA-2: Temproary Service	48,889	-8,364	40,525	0	0	40,525	0	0	48,889
WA-4: Riverside Water Company	22,059	-14,426	7,632	0	0	7,632	0	0	22,059
WA-6: Commercial and Industria	6,978,503	-6,245,894	732,609	0	0	732,609	0	0	6,978,503
WA-7: City Irrigation	721,992	-493,359	228,633	0	0	228,633	0	0	721,992
SFR	12,400,070	-10,764,668	1,635,402	0	0	1,635,402	0	0	12,400,070
MFR	397,493	-366,394	31,099	0	0	31,099	0	0	397,493
Landscape	1,222,547	-912,867	309,680	0	0	309,680	0	0	1,222,547
Total	21,791,553		2,985,580	0	0	2,985,580	0	0	21,791,553
			Remaining to Allocate	0	0	4,625,557	1,870,238	6,495,795	

Remaining Usage	Step 4			Supply 1	Supply 2	Supply 3	Supply 4	Total		
Remaining Available Before Allocation				0	0	4,625,557	1,870,238	6,495,795		
Amount to be Allocated				0	0	3,834,763	0			
Allocated	Total Usage	Less Previously Allocated	Remaining						Total Allocated	Total Need (5 Year Average)
WA-2: Temproary Service	54,094	-48,889	5,204	0	0	5,204	0	5,204	54,094	53,498
WA-4: Riverside Water Company	27,763	-22,059	5,705	0	0	5,705	0	5,705	27,763	28,358
WA-6: Commercial and Industria	7,884,440	-6,978,503	905,938	0	0	905,938	0	905,938	7,884,440	7,797,654
WA-7: City Irrigation	964,168	-721,992	242,176	0	0	242,176	0	242,176	964,168	953,555
SFR	14,726,777	-12,400,070	2,326,707	0	0	2,326,707	0	2,326,707	14,726,777	14,911,366
MFR	439,538	-397,493	42,045	0	0	42,045	0	42,045	439,538	444,957
Landscape	1,529,536	-1,222,547	306,988	0	0	306,988	0	306,988	1,529,536	1,512,699
Total	25,626,316		3,834,763	0	0	3,834,763	0	3,834,763	25,626,316	25,702,087
			Remaining to Allocate	0	0	790,794	1,870,238	2,661,032		

Allocated Total By Supply	Step 5	Supply 1	Supply 2	Supply 3	Supply 4	Total	
WA-2: Temproary Service		3,003	4,073	47,017	0	54,094	0.21%
WA-4: Riverside Water Company Irrigators		7,810	5,027	14,926	0	27,763	0.11%
WA-6: Commercial and Industrial		2,242,725	3,041,682	2,600,033	0	7,884,440	30.77%
WA-7: City Irrigation		177,151	240,260	546,756	0	964,168	3.76%
SFR		7,550,247	2,442,377	4,734,153	0	14,726,777	57.47%
MFR		291,750	56,716	91,072	0	439,538	1.72%
Landscape		327,785	444,556	757,195	0	1,529,536	5.97%
Total		10,600,472	6,234,691	8,791,152	0	25,626,316	

			Include Resiliency Component				
Total With Reallocation of Remaining Supply 3 and 4	Supply 1	Supply 2	Supply 3	Supply 4	Total		
WA-2: Temproary Service	3,003	4,073	51,527	10,666	69,269		
WA-4: Riverside Water Company Irrigators	7,810	5,027	16,358	3,386	32,581		
WA-6: Commercial and Industrial	2,242,725	3,041,682	2,849,426	589,817	8,723,649		
WA-7: City Irrigation	177,151	240,260	546,756	0	964,168	No Resiliency Component, Interruptit	
SFR	7,550,247	2,442,377	5,188,248	1,073,941	16,254,813		
MFR	291,750	56,716	99,808	20,660	468,933		
Landscape	327,785	444,556	829,824	171,769	1,773,934	Total Supply	Check
Total	10,600,472	6,234,691	9,581,946	1,870,238	28,287,348	28,287,348	TRUE

			Includes Resiliency Component		
Percent By Supply	Supply 1	Supply 2	Supply 3	Supply 4	Total
WA-2: Temproary Service	0.03%	0.07%	0.54%	0.57%	0.24%
WA-4: Riverside Water Company Irrigators	0.07%	0.08%	0.17%	0.18%	0.12%
WA-6: Commercial and Industrial	21.16%	48.79%	29.74%	31.54%	30.84%
WA-7: City Irrigation	1.67%	3.85%	5.71%	0.00%	3.41%
SFR	71.23%	39.17%	54.15%	57.42%	57.46%
MFR	2.75%	0.91%	1.04%	1.10%	1.66%
Landscape	3.09%	7.13%	8.66%	9.18%	6.27%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

APPENDIX G — CUSTOMER DATA AND PROJECTIONS

Customer Data and Projections

Appendix G, *Customer Data and Projections,* consolidates the billing data provided by Riverside Public Utilities as performed within the financial model. The billing data is sorted by a number of variables including the month of consumption, the consumption per customer class, and the consumption per meter size. A number of existing customer classes have been re-categorized within the financial model as shown. This consolidated billing data forms the basis of the financial analysis.

Water Demand Factors	Year	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Usage Projection	Based on Overall change in usage in proforma - includes rebound and elasticity adjustments					
Residential		6.33%	-3.00%	-2.52%	-2.61%	-2.70%
Commercial		4.76%	0.41%	0.72%	0.70%	0.68%
Industrial		6.26%	-1.68%	-1.39%	-1.42%	-1.46%
Other		-1.33%	-1.06%	-2.89%	-1.87%	-1.90%
SFR With WA-3.1 and WA-9.1		6.14%	-2.95%	-2.53%	-2.59%	-2.68%
mmercial With WA-3.2 and WA-9.2		4.51%	0.36%	0.57%	0.60%	0.58%

	FY 2013/14 Use		FY 2013/14 Use
WA-3.1	248,086	**WA-3.2**	20,737
WA 9.1	88,004	**WA 9.2**	103,832
SFR	13,118,634	**Commercial**	2,962,370

Account Growth	Based on Proforma					
Residential		0.49%	0.60%	0.61%	0.63%	0.64%
Commercial		1.87%	2.13%	2.14%	2.14%	2.14%
Industrial		0.46%	0.45%	0.45%	0.45%	0.45%
Other		0.00%	0.00%	0.00%	0.00%	0.00%
No Growth		0%	0%	0%	0%	0%

Temporary Service (WA-2)	Meter Ratio					
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
5/8"	**1.0**	2	2	2	2	2
3/4"	**1.0**	0	0	0	0	0
1"	**1.7**	0	0	0	0	0
1.5"	**3.3**	2	2	2	2	2
2"	**5.3**	6	6	6	6	6
3"	**10.0**	58	59	60	61	62
4"	**16.7**	2	2	2	2	2
6"	**36.7**	0	0	0	0	0
8"	**60.0**	0	0	0	0	0
10"	**93.3**	0	0	0	0	0
Total Accounts		**70**	**71**	**72**	**73**	**74**
Total EDUs		**654**	**664**	**674**	**684**	**694**

Riverside Water Co. Irrigators (WA-4)	Meter Ratio					
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
5/8"	**1.0**	4	4	4	4	4
3/4"	**1.0**	14	14	14	14	14
1"	**1.7**	12	12	12	12	12
1.5"	**3.3**	3	3	3	3	3
2"	**5.3**	5	5	5	5	5
3"	**10.0**	0	0	0	0	0
4"	**16.7**	0	0	0	0	0
6"	**36.7**	0	0	0	0	0
8"	**60.0**	0	0	0	0	0
10"	**93.3**	0	0	0	0	0
Total Accounts		**38**	**38**	**38**	**38**	**38**
Total EDUs		**75**	**75**	**75**	**75**	**75**

Commercial and Industrial	Meter Ratio					
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
5/8"	**1.0**	285	291	297	303	309
3/4"	**1.0**	1,091	1,114	1,138	1,162	1,187
1"	**1.7**	1,124	1,148	1,172	1,197	1,223
1.5"	**3.3**	690	705	720	735	751
2"	**5.3**	1,020	1,042	1,064	1,087	1,110
3"	**10.0**	153	156	159	162	165
4"	**16.7**	107	109	111	113	115
6"	**36.7**	70	71	73	75	77
8"	**60.0**	71	73	75	77	79
10"	**93.3**	9	9	9	9	9
Total Accounts		**4,620**	**4,718**	**4,818**	**4,920**	**5,025**
Total EDUs		**21,968**	**22,424**	**22,918**	**23,419**	**23,926**

City Irrigation (WA-7)	Meter Ratio					
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
5/8"	**1.0**	3	3	3	3	3
3/4"	**1.0**	118	121	124	127	130
1"	**1.7**	149	152	155	158	161
1.5"	**3.3**	84	86	88	90	92
2"	**5.3**	111	113	115	117	119
3"	**10.0**	15	15	15	15	15
4"	**16.7**	7	7	7	7	7
6"	**36.7**	2	2	2	2	2
8"	**60.0**	0	0	0	0	0
10"	**93.3**	0	0	0	0	0
Total Accounts		**489**	**499**	**509**	**519**	**529**
Total EDUs		**1,581**	**1,607**	**1,632**	**1,657**	**1,683**

SFR	Meter Ratio	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
5/8"	**1.0**	9,632	9,689	9,748	9,808	9,870
3/4"	**1.0**	41,871	42,119	42,374	42,637	42,908
1"	**1.7**	7,135	7,177	7,220	7,265	7,311
1.5"	**3.3**	208	209	210	211	212
2"	**5.3**	85	86	87	88	89
3"	**10.0**	0	0	0	0	0
4"	**16.7**	0	0	0	0	0
6"	**36.7**	0	0	0	0	0
8"	**60.0**	0	0	0	0	0
10"	**93.3**	0	0	0	0	0
Total Accounts		**58,931**	**59,280**	**59,639**	**60,009**	**60,390**
Total EDUs		**64,564**	**64,948**	**65,342**	**65,749**	**66,168**
		0.48%	**0.59%**	**0.61%**	**0.62%**	

MFR	Meter Ratio	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
5/8"	**1.0**	227	228	229	230	231
3/4"	**1.0**	682	686	690	694	698
1"	**1.7**	300	302	304	306	308
1.5"	**3.3**	5	5	5	5	5
2"	**5.3**	3	3	3	3	3
3"	**10.0**	0	0	0	0	0
4"	**16.7**	0	0	0	0	0
6"	**36.7**	0	0	0	0	0
8"	**60.0**	0	0	0	0	0
10"	**93.3**	0	0	0	0	0
Total Accounts		**1,217**	**1,224**	**1,231**	**1,238**	**1,245**
Total EDUs		**1,443**	**1,451**	**1,459**	**1,468**	**1,476**

Landscape	Meter Ratio	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
5/8"	**1.0**	4	4	4	4	4
3/4"	**1.0**	97	99	101	103	105
1"	**1.7**	116	118	121	124	127
1.5"	**3.3**	186	190	194	198	202
2"	**5.3**	218	223	228	233	238
3"	**10.0**	21	21	21	21	21
4"	**16.7**	15	15	15	15	15
6"	**36.7**	2	2	2	2	2
8"	**60.0**	3	3	3	3	3
10"	**93.3**	1	1	1	1	1
Total Accounts		**663**	**676**	**690**	**704**	**718**
Total EDUs		**2,883**	**2,928**	**2,975**	**3,022**	**3,069**

Raw Accounts Projection	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Temporary Service (WA-2)	70	71	73	74	75
Riverside Water Co. Irrigators (WA-4)	38	38	38	38	38
Commercial and Industrial	4,620	4,719	4,819	4,921	5,025
City Irrigation (WA-7)	489	499	510	520	530
SFR	58,939	59,285	59,644	60,014	60,396
MFR	1,218	1,224	1,232	1,239	1,246
Landscape	664	677	690	705	719
Projected Accounts	**66,038**	**66,514**	**67,005**	**67,510**	**68,029**
Proforma Accounts	66,039	66,517	67,008	67,513	68,032
Less: Other Usage	-1	-1	-1	-1	-1
Less: WA-8	-8	-8	-8	-8	-8
Adjust to:	66,030	66,508	66,999	67,504	68,023
Adjustment	**-0.0001**	**-0.0001**	**-0.0001**	**-0.0001**	**-0.0001**

Matched to Proforma	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Temporary Service (WA-2)	70	71	72	73	74
Riverside Water Co. Irrigators (WA-4)	38	38	38	38	38
Commercial and Industrial	4,620	4,718	4,818	4,920	5,025
City Irrigation (WA-7)	489	499	509	519	529
SFR	58,931	59,280	59,639	60,009	60,390
MFR	1,217	1,224	1,231	1,238	1,245
Landscape	663	676	690	704	718
Projected Accounts	**66,028**	**66,506**	**66,997**	**67,501**	**68,019**

Proforma Accounts	66,039	66,517	67,008	67,513	68,032
Less: Other Usage	-1	-1	-1	-1	-1
Less: WA-8	-8	-8	-8	-8	-8
	66,030	66,508	66,999	67,504	68,023
Difference due to Rounding	**-2**	**-2**	**-2**	**-3**	**-4**

MEUs Projection	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Temporary Service (WA-2)	654	664	674	684	694
Riverside Water Co. Irrigators (WA-4)	75	75	75	75	75
Commercial and Industrial	21,968	22,424	22,918	23,419	23,926
City Irrigation (WA-7)	1,581	1,607	1,632	1,657	1,683
SFR	64,564	64,948	65,342	65,749	66,168
MFR	1,443	1,451	1,459	1,468	1,476
Landscape	2,883	2,928	2,975	3,022	3,069
Projected EDUs (Fire excluded)	**93,167**	**94,096**	**95,076**	**96,074**	**97,090**

Raw Usage Projection	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Temporary Service (WA-2)	53,817	54,131	54,306	54,453	54,589
Riverside Water Co. Irrigators (WA-4)	28,998	28,739	27,800	27,164	26,533
Commercial and Industrial	7,844,044	7,889,928	7,915,448	7,936,835	7,956,624
City Irrigation (WA-7)	959,228	964,839	967,959	970,575	972,995
SFR	15,652,168	15,215,653	14,772,289	14,328,261	13,884,619
MFR	467,368	454,107	440,916	427,581	414,257
Landscape	1,521,699	1,530,600	1,535,551	1,539,700	1,543,539
Projected Consumption, CCF	**26,527,320**	**26,137,996**	**25,714,268**	**25,284,569**	**24,853,156**
WA-8	54,643	54,063	52,503	51,523	50,543
Other Usage	74,335	73,546	71,424	70,091	68,758
Total Projected	**26,656,299**	**26,265,605**	**25,838,196**	**25,406,182**	**24,972,456**
Proforma Projection	26,701,476	26,162,350	25,727,554	25,297,467	24,862,300
	0.0017	-0.0039	-0.0043	-0.0043	-0.0044

Usage Projection Matched to PROFORMA	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Temporary Service (WA-2)	53,908	53,919	54,074	54,220	54,348
Riverside Water Co. Irrigators (WA-4)	29,047	28,626	27,681	27,048	26,416
Commercial and Industrial	7,857,338	7,858,911	7,881,553	7,902,873	7,921,527
City Irrigation (WA-7)	960,853	961,046	963,815	966,422	968,703
SFR	15,678,695	15,155,838	14,709,033	14,266,949	13,823,372
MFR	468,160	452,321	439,028	425,752	412,430
Landscape	1,524,278	1,524,583	1,528,975	1,533,111	1,536,730
Projected Consumption, CCF	**26,572,279**	**26,035,243**	**25,604,158**	**25,176,374**	**24,743,526**
WA-8	54,735	53,850	52,278	51,302	50,320
Other Usage	74,461	73,257	71,118	69,791	68,454
Total Projected	**26,701,476**	**26,162,350**	**25,727,554**	**25,297,467**	**24,862,300**
Proforma Projection	26,701,476	26,162,350	25,727,554	25,297,467	24,862,300
Difference From Proforma	-	-	-	-	-

Summer Usage	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Temporary Service (WA-2)	25,487	25,492	25,566	25,635	25,695
Riverside Water Co. Irrigators (WA-4)	15,584	15,358	14,851	14,512	14,173
Commercial and Industrial	3,800,538	3,801,299	3,812,251	3,822,563	3,831,586
City Irrigation (WA-7)	541,139	541,248	542,807	544,275	545,560
SFR	7,977,766	7,711,721	7,484,374	7,259,429	7,033,725
MFR	221,190	213,707	207,426	201,154	194,860
Landscape	813,577	813,740	816,084	818,292	820,223
Projected Consumption, CCF	**13,395,281**	**13,122,565**	**12,903,359**	**12,685,859**	**12,465,821**

Winter Usage	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Temporary Service (WA-2)	28,421	28,426	28,508	28,585	28,653
Riverside Water Co. Irrigators (WA-4)	13,462	13,267	12,829	12,536	12,243
Commercial and Industrial	4,056,800	4,057,612	4,069,302	4,080,310	4,089,941
City Irrigation (WA-7)	419,714	419,798	421,008	422,146	423,143
SFR	7,700,929	7,444,117	7,224,659	7,007,520	6,789,647
MFR	246,970	238,615	231,602	224,598	217,571
Landscape	710,701	710,843	712,891	714,820	716,507
Projected Consumption, CCF	**13,176,998**	**12,912,678**	**12,700,799**	**12,490,515**	**12,277,705**

Total	**26,572,279**	**26,035,243**	**25,604,158**	**25,176,374**	**24,743,526**
Check to Totals	**26,572,279**	**26,035,243**	**25,604,158**	**25,176,374**	**24,743,526**
Difference	-	-	-	-	-

Uniform Fixed Rates

Appendix H, *Uniform Fixed Rates* details the final calculation of the fixed monthly rates that are charged to all customers in relation to their meter size. Allocation of costs related to providing service to customers regardless of meter size or customer class are projected and included in the appendix. The same is true for costs related to providing system capacity sufficient to serve all customers. The number of accounts and the number of MEUs as projected by the financial model are included. Customer related expenses are evenly recovered over each account. Capacity related expenses are recovered over each MEU, thereby allocating more in costs to those customers with larger meters and thus requiring more system capacity. Appendix H *Uniform Fixed Rates* presents the resulting fixed charge per meter size over the course of the next five fiscal years (2017/18 - 2021/22).

SFR

Appendix H, *SFR* details the final calculation of the winter and summer rates to be charged to any customers designated as Single-Family Residences (SFR). Using the projections calculated within the financial model for the number of accounts, water usage, and budget forecasts, Appendix H, *SFR* presents the calculated rates for each of the next five fiscal years (2017/18 - 2021/22). The rate structure for customers designated as SFR includes three tiers. Based on the consumption inputs towards the bottom of the appendix, each year's consumption forecast is split between the tiers. Additionally, summer consumption and winter consumption are both forecasted. Based on the resulting seasonal and tiered projections of water consumption, the costs associated with serving SFR customers are allocated between the seasons and tiers. These costs are recovered over each CCF of consumption within each season and tier.

MFR

Appendix H, *MFR* details the final calculation of the winter and summer rates to be charged to any customers designated as Multi-Family Residences (MFR). Using the projections calculated within the financial model for the number of accounts, water usage, and budget forecasts, Appendix H, *MFR* presents the calculated rates for each of the next five fiscal years (2017/18 - 2021/22). The rate structure for customers designated as MFR includes two tiers. Based on the consumption inputs towards the bottom of the appendix, each year's consumption forecast is split between the tiers. Additionally, summer consumption and winter consumption are both forecasted. Based on the resulting seasonal and tiered projections of water consumption, the costs associated with serving MFR customers are allocated between the seasons and tiers. These costs are recovered over each CCF of consumption within each season and tier.

Commercial and Industrial

Appendix H, *Commercial and Industrial* details the final calculation of the winter and summer rates to be charged to any customers designated as Commercial and Industrial. Using the projections calculated within the financial model for the number of accounts, water usage, and budget forecasts, Appendix H, *Commercial and Industrial* presents the calculated rates for each of the next five fiscal years (2017/18 - 2021/22). The rate structure for customers designated as Commercial and Industrial does not include

any tier breaks. However, water consumption is allocated between the winter and summer. As a result, the costs associated with serving Commercial and Industrial customers are allocated over the projected seasonal consumption separately. Once split between the seasons all costs are charged to Commercial and Industrial customers at either the winter rate or the summer rate for each year within the projection.

Landscape

Appendix H, *Landscape* details the final calculation of the winter and summer rates to be charged to any customers designated as Landscape. Using the projections calculated within the financial model for the number of accounts, water usage, and budget forecasts, Appendix H, *Landscape* presents the calculated rates for each of the next five fiscal years (2017/18 - 2021/22). The rate structure for customers designated as Landscape does not include any tier breaks. However, water consumption is allocated between the winter and summer. As a result, the costs associated with serving Landscape customers are allocated over the projected seasonal consumption separately. Once split between the seasons all costs are charged to Landscape customers at either the winter rate or the summer rate for each year within the projection.

Temporary Service (WA-2)

Appendix H, Temporary Service (WA-2) details the final calculation of rates to be charged to any customers designated as Temporary Service (WA-2). These customers are charged based on a uniform, non-seasonally adjusted rate. Using the projections calculated within the financial model for the number of accounts, water usage, and budget forecasts, Appendix H, Temporary Service (WA-2) presents the calculated rates for each of the next five fiscal years (2017/18 - 2021/22).

Riverside Water Company Irrigators (WA-4)

Appendix H, Riverside Water Company Irrigators (WA-4) details the final calculation of the winter and summer rates to be charged to any customers designated as Riverside Water Company Irrigators (WA-4). Using the projections calculated within the financial model for the number of accounts, water usage, and budget forecasts, Appendix H, Riverside Water Company Irrigators (WA-4) presents the calculated rates for each of the next five fiscal years (2017/18 - 2021/22). The rate structure for customers in this class includes three tiers. Based on the consumption inputs towards the bottom of the appendix, each year's consumption forecast is split between the tiers. Additionally, summer consumption and winter consumption are both forecasted. Based on the resulting seasonal and tiered projections of water consumption, the costs associated with serving these customers are allocated between the seasons and tiers. These costs are recovered over each CCF of consumption within each season and tier.

Interruptible City Irrigation and Recycled Water (WA-7)

Appendix H, Interruptible City Irrigation and Recycled Water (WA-7) details the final calculation of the rates to be charged to any customers designated as Interruptible City Irrigation and Recycled Water (WA-7). Using the projections calculated within the financial model for the number of accounts, water usage, and budget forecasts, Appendix H, Interruptible City Irrigation and Recycled Water (WA-7) presents the calculated rates for each of the next five fiscal years (2017/18 - 2021/22). The rate

structure for customers designated as Interruptible City Irrigation and Recycled Water (WA-7) does not include any tier breaks. These customers are charges based on a uniform, non-seasonally adjusted rate.

Transitional Rates

Appendix H also includes calculations for transitional rates for Irrigation Metered Service (WA-3), Grove Preservation Service (WA-9), and cemeteries currently paying the WA-7 rate. Transitional rates for each class were calculated based on moving customers to the otherwise applicable tariff over the course of the rate plan, with all customers being placed into the appropriate class by FY 2021/22.

Irrigation Metered Service WA-3.1 Transition to SFR

Irrigation Metered Service with residence, WA-3.1, customers are currently charged a two-tiered non-seasonal volumetric rate with a tier break at 100 CCF per month, and a minimum monthly charge. Under the transitional rates, these customers will pay the proposed monthly fixed charge corresponding to their installed water meter size, and a two tiered volumetric rate that maintains the 100 CCF breakpoint. Starting in FY 2021/22, these customers will be assessed the SFR rates.

Grove Preservation WA-9.1 Transition to SFR

Grove Preservation with residence, WA-9.1, customers are currently charged a three-tiered non-seasonal volumetric rate with tier breaks at 15 and 60 CCF per month, and a reduced monthly fixed charge. Under the transitional rates, these customers will pay the proposed monthly fixed charge corresponding to their installed water meter size, and a three-tiered volumetric rate that maintains the current tier breaks. Starting in FY 2021/22, these customers will be assessed the SFR rates.

Irrigation Metered Service WA-3.2 Transition to Commercial and Industrial

Irrigation Metered Service without residence, WA-3.2, customers are currently charged a uniform non-seasonal volumetric rate and a minimum monthly charge. Under the transitional rates, these customers will pay the proposed monthly fixed charge corresponding to their installed water meter size, and a uniform volumetric rate. Starting in FY 2021/22, these customers will be assessed the Commercial and Industrial rates.

Grove Preservation WA-9.2 Transition to Commercial and Industrial

Grove Preservation without residence, WA-9.2, customers are currently charged a uniform non-seasonal volumetric rate and a reduced monthly fixed charge. Under the transitional rates, these customers will pay the proposed monthly fixed charge corresponding to their installed water meter size, and a uniform volumetric rate. Starting in FY 2021/22, these customers will be assessed the Commercial and Industrial rates.

WA-7 Cemeteries Transition to Commercial and Industrial or Landscape

WA-7 Cemetery customers are currently charged a uniform non-seasonal volumetric rate, and a minimum monthly charge. Under the transitional rates, these customers will pay the proposed monthly fixed charge corresponding to their installed water meter size and a uniform volumetric rate. Starting in

FY 2021/22, these customers will be assessed the Commercial and Industrial or Landscape rates depending on their connection characteristics. Specific transitional rates are calculated for each case.

Uniform Fixed Rates by Meter Size			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Number of Accounts			66,028	66,506	66,997	67,501	68,019
Number of MEUs			93,167	94,096	95,076	96,074	97,090
Customer Revenue to Recover			$ 1,589,231	$ 1,879,590	$ 2,202,787	$ 2,559,459	$ 2,948,802
Capacity Revenue to Recover			$ 16,085,737	$ 19,024,667	$ 22,295,974	$ 25,906,102	$ 29,846,925
Monthly Component Charge per Account			$ 2.01	$ 2.36	$ 2.74	$ 3.16	$ 3.61
Monthly Component Charge per MEU			14.39	16.85	19.54	22.47	25.62
Annual Per MEU Cost			189.71	222.16	257.68	296.29	337.79
Meter Size	**Meter Equivalents**		**Monthly Fixed Charges**				
5/8"	1.0	1.00	$ 13.99	16.39	19.20	22.28	25.63	29.23
3/4"	1.0	1.00	$ 13.99	16.39	19.20	22.28	25.63	29.23
1"	1.7	1.66	$ 23.29	26.03	30.49	35.38	40.69	46.39
1.5"	3.3	3.33	$ 46.60	49.92	58.46	67.82	77.99	88.92
2"	5.3	5.32	$ 74.49	78.69	92.16	106.90	122.93	140.16
3"	10.0	10.19	$ 142.52	145.88	170.84	198.18	227.87	259.79
4"	16.7	16.98	$ 237.57	241.85	283.22	328.51	377.75	430.66
6"	36.7	33.97	$ 475.19	529.61	620.19	719.36	827.16	943.02
8"	60.0	54.35	$ 760.29	865.28	1,013.27	1,175.28	1,351.40	1,540.69
10"	93.3	78.12	$ 1,092.85	1,344.82	1,574.83	1,826.63	2,100.34	2,394.53
12"	133.3	95.10	$ 1,330.40	1,920.34	2,248.77	2,608.32	2,999.17	3,419.25

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

SFR WA-1		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
		Allocated Base & Peak Water Costs				
Supply 1		$ 4,339,782	$ 4,432,517	$ 4,520,908	$ 4,598,580	$ 4,658,613
Supply 2		$ 1,852,554	$ 1,892,141	$ 1,929,873	$ 1,963,029	$ 1,988,656
Supply 3		$ 6,867,464	$ 7,014,213	$ 7,154,087	$ 7,276,998	$ 7,371,996
Supply 4		$ 2,617,796	$ 2,673,735	$ 2,727,053	$ 2,773,905	$ 2,810,118
Base		$ 10,251,539	$ 10,470,602	$ 10,679,400	$ 10,862,878	$ 11,004,689
Total Allocated Costs		$25,929,136	$26,483,208	$27,011,321	$27,475,390	$27,834,072
Projected Annual Consumption (CCF)		15,678,695	15,155,838	14,709,033	14,266,949	13,823,372
Base Unit Cost		$0.65	$0.69	$0.73	$0.76	$0.80
ESTIMATED Projected Summer Consumption	51%	7,977,766	7,711,721	7,484,374	7,259,429	7,033,725

Tier	Revenue Requirement per Tier				
Tier 1	$7,216,483	$7,370,691	$7,517,673	$7,646,830	$7,746,657
Tier 2	$10,633,750	$10,860,979	$11,077,563	$11,267,881	$11,414,979
Tier 3	$8,078,903	$8,251,539	$8,416,086	$8,560,679	$8,672,436
Tier 4	$0	$0	$0	$0	$0
Total	25,929,136	26,483,208	27,011,321	27,475,390	27,834,072

Tier	Tier Allocation	Projected Consumption per Block (%) FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	39%	39%	39%	39%	39%	39%
Tier 2	45%	45%	45%	45%	45%	45%
Tier 3	16%	16%	16%	16%	16%	16%
Tier 4		0%	0%	0%	0%	0%
Total		100%	100%	100%	100%	100%

Tier	Projected Annual Consumption per Block (CCF)				
Tier 1	6,045,269	5,843,670	5,671,394	5,500,939	5,329,908
Tier 2	7,071,660	6,835,832	6,634,307	6,434,911	6,234,842
Tier 3	2,561,766	2,476,336	2,403,332	2,331,099	2,258,622
Tier 4	-	-	-	-	-
Total	15,678,695	15,155,838	14,709,033	14,266,949	13,823,372

SEASONAL RATES

Tier	Winter Use per Tier	Projected Winter Consumption per Block (CCF)				
Tier 1	45%	3,447,126	3,332,170	3,233,935	3,136,738	3,039,213
Tier 2	43%	3,308,712	3,198,372	3,104,082	3,010,788	2,917,179
Tier 3	12%	945,091	913,574	886,641	859,993	833,255
Tier 4	0%	-	-	-	-	-
Total		7,700,929	7,444,117	7,224,659	7,007,520	6,789,647

Tier	Summer Use per Tier	Projected Summer Consumption per Block (CCF)				
Tier 1	33%	2,598,144	2,511,500	2,437,459	2,364,201	2,290,695
Tier 2	47%	3,762,948	3,637,460	3,530,225	3,424,123	3,317,663
Tier 3	20%	1,616,675	1,562,761	1,516,690	1,471,106	1,425,367
Tier 4	0%	-	-	-	-	-
Total		7,977,766	7,711,721	7,484,374	7,259,429	7,033,725

Tier	Annualized Summer/Annual Average				
Tier 1	1.031	1.031	1.031	1.031	1.031
Tier 2	1.277	1.277	1.277	1.277	1.277
Tier 3	1.515	1.515	1.515	1.515	1.515
Tier 4	-	-	-	-	-
Total	1.221	1.221	1.221	1.221	1.221

Source	Winter Costs				
Tier 1	$4,114,974	$4,202,906	$4,286,718	$4,360,366	$4,417,289
Tier 2	$4,975,355	$5,081,672	$5,183,008	$5,272,054	$5,340,879
Tier 3	$2,615,947	$2,671,846	$2,725,126	$2,771,946	$2,808,132
Tier 4	$0	$0	$0	$0	$0
Total	$11,706,275	$11,956,424	$12,194,852	$12,404,366	$12,566,300

Source	Seasonal Peak	Summer Costs				
Tier 1	1.0	$3,101,510	$3,167,785	$3,230,955	$3,286,464	$3,329,368
Tier 2	1.0	$5,658,395	$5,779,307	$5,894,555	$5,995,827	$6,074,100
Tier 3	1.0715	$5,462,956	$5,579,693	$5,690,960	$5,788,733	$5,864,303
Tier 4	1.0	$0	$0	$0	$0	$0
Total		$14,222,860	$14,526,785	$14,816,470	$15,071,024	$15,267,771

Rates Linked to Model

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
	Winter Rate ($ per CCF)				
Tier 1	$ 1.19	$ 1.26	$ 1.33	$ 1.39	$ 1.45
Tier 2	$ 1.50	$ 1.59	$ 1.67	$ 1.75	$ 1.83
Tier 3	$ 2.77	$ 2.92	$ 3.07	$ 3.22	$ 3.37
Tier 4	$ 2.77	$ 2.92	$ 3.07	$ 3.22	$ 3.37
	Summer Rate ($ per CCF)				
Tier 1	$ 1.19	$ 1.26	$ 1.33	$ 1.39	$ 1.45
Tier 2	$ 1.50	$ 1.59	$ 1.67	$ 1.75	$ 1.83
Tier 3	$ 3.38	$ 3.57	$ 3.75	$ 3.93	$ 4.11
Tier 4	$ 3.38	$ 3.57	$ 3.75	$ 3.93	$ 4.11

	Cons per Tier	5,678,236	6,642,310	2,406,231	-
	Total	Tier 1	Tier 2	Tier 3	Tier 4
Supply 1	7,550,247	5,678,236	1,872,011		
Supply 2	2,442,377		2,442,377		
Supply 3	5,188,248		2,327,923	2,860,326	
Supply 4	1,073,941		-	1,073,941	

	Tier 1	Tier 2
Supply 1	75%	25%
Supply 2	0%	100%
Supply 3	0%	45%
Supply 4	0%	0%

MFR WA-1

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Allocated Base & Peak Water Costs					
Supply 1	$ 167,694	$ 171,278	$ 174,693	$ 177,695	$ 180,014
Supply 2	$ 43,019	$ 43,938	$ 44,815	$ 45,584	$ 46,180
Supply 3	$ 132,111	$ 134,934	$ 137,625	$ 139,989	$ 141,817
Supply 4	$ 50,359	$ 51,435	$ 52,461	$ 53,362	$ 54,059
Base	$ 305,556	$ 312,086	$ 318,309	$ 323,778	$ 328,004
Total Allocated Costs	$ 698,740	$ 713,671	$ 727,902	$ 740,408	$ 750,074
Projected Annual Consumption (CCF)	468,160	452,321	439,028	425,752	412,430
Base Unit Cost	$0.65	$0.69	$0.73	$0.76	$0.80
ESTIMATED Projected Summer Consumption (47%)	221,190	213,707	207,426	201,154	194,860

Tier	Revenue Requirement per Tier				
Tier 1	$299,364	$305,761	$311,858	$317,216	$321,357
Tier 2	$399,376	$407,910	$416,044	$423,192	$428,717
Tier 3	$0	$0	$0	$0	$0
Tier 4	$0	$0	$0	$0	$0
Total	698,740	713,671	727,902	740,408	750,074

	Tier	Tier Allocation	Projected Consumption per Block (%) FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
0	Tier 1	54%	54%	54%	54%	54%	54%
1	Tier 2	46%	46%	46%	46%	46%	46%
2	Tier 3	0%	0%	0%	0%	0%	0%
3	Tier 4		0%	0%	0%	0%	0%
	Total		100%	100%	100%	100%	100%

Tier	Projected Annual Consumption per Block (CCF)				
Tier 1	251,077	242,583	235,453	228,333	221,189
Tier 2	217,083	209,739	203,575	197,419	191,242
Tier 3	-	-	-	-	-
Tier 4	-	-	-	-	-
Total	468,160	452,321	439,028	425,752	412,430

SEASONAL RATES

Tier	Winter Use per Tier	Projected Winter Consumption per Block (CCF)				
Tier 1	58%	143,821	138,955	134,871	130,793	126,700
Tier 2	42%	103,149	99,659	96,730	93,805	90,870
Tier 3	0%	-	-	-	-	-
Tier 4	0%	-	-	-	-	-
Total		246,970	238,615	231,602	224,598	217,571

Tier	Summer Use Per Tier	Projected Summer Consumption per Block (CCF)				
Tier 1	48%	107,256	103,627	100,582	97,540	94,488
Tier 2	52%	113,934	110,080	106,844	103,613	100,371
Tier 3	0%	-	-	-	-	-
Tier 4	0%	-	-	-	-	-
Total		221,190	213,707	207,426	201,154	194,860

Tier	Annualized Summer/Annual Average				
Tier 1	1.025	1.025	1.025	1.025	1.025
Tier 2	1.260	1.260	1.260	1.260	1.260
Tier 3	-	-	-	-	-
Tier 4	-	-	-	-	-
Total	1.134	1.134	1.134	1.134	1.134

Source	Winter Costs				
Tier 1	$171,481	$175,145	$178,638	$181,707	$184,079
Tier 2	$177,295	$181,084	$184,695	$187,868	$190,320
Tier 3	$0	$0	$0	$0	$0
Tier 4	$0	$0	$0	$0	$0
Total	$348,776	$356,229	$363,332	$369,575	$374,399

Source	Seasonal Peak	Summer Costs				
Tier 1	1.0	$127,883	$130,616	$133,221	$135,510	$137,279
Tier 2	1.060	$222,081	$226,826	$231,349	$235,324	$238,396
Tier 3	1.0	$0	$0	$0	$0	$0
Tier 4	1.0	$0	$0	$0	$0	$0
Total		$349,964	$357,442	$364,570	$370,834	$375,675

Tier	Winter Rate ($per CCF)				
Tier 1	$ 1.19	$ 1.26	$ 1.32	$ 1.39	$ 1.45
Tier 2	$ 1.72	$ 1.82	$ 1.91	$ 2.00	$ 2.09
Tier 3	$ -	$ -	$ -	$ -	$ -
Tier 4	$ -	$ -	$ -	$ -	$ -

Tier	Summer Rate				
Tier 1	$ 1.19	$ 1.26	$ 1.32	$ 1.39	$ 1.45
Tier 2	$ 1.95	$ 2.06	$ 2.17	$ 2.27	$ 2.38
Tier 3	$ -	$ -	$ -	$ -	$ -
Tier 4	$ -	$ -	$ -	$ -	$ -

Rates Linked to Model

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier	Winter Rate ($ per CCF)				
Tier 1	$1.19	$1.26	$1.32	$1.39	$1.45
Tier 2	$1.72	$1.82	$1.91	$2.00	$2.09
Tier 3	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4	$0.00	$0.00	$0.00	$0.00	$0.00
Tier	Full Summer Rate = Winter Rate + Max usage surcharge ($ per C				
Tier 1	$1.19	$1.26	$1.32	$1.39	$1.45
Tier 2	$1.95	$2.06	$2.17	$2.27	$2.38
Tier 3	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4	$0.00	$0.00	$0.00	$0.00	$0.00

	Cons per Tier Total	235,727 Tier 1	203,811 Tier 2	Tier 3	Tier 4
Supply 1	291,750	235,727	56,024		
Supply 2	56,716		56,716		
Supply 3	99,808		99,808		
Supply 4	20,660		20,660		

	Tier 1	Tier 2
Supply 1	81%	19%
Supply 2	0%	100%
Supply 3	0%	100%
Supply 4	0%	100%

Commercial and Industrial (Formerly WA-6.1 and WA-6.2)	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Allocated Base & Peak Water Costs	
Supply 1	$ 1,289,088	$ 1,316,635	$ 1,342,890	$ 1,365,962	$ 1,383,794
Supply 2	$ 2,307,130	$ 2,356,431	$ 2,403,421	$ 2,444,713	$ 2,476,628
Supply 3	$ 3,771,664	$ 3,852,260	$ 3,929,079	$ 3,996,583	$ 4,048,757
Supply 4	$ 1,437,714	$ 1,468,436	$ 1,497,719	$ 1,523,450	$ 1,543,338
Base	$ 5,205,326	$ 5,316,557	$ 5,422,576	$ 5,515,739	$ 5,587,745
Total Allocated Costs	$ 14,010,922	$ 14,310,318	$ 14,595,686	$ 14,846,447	$ 15,040,263
ined Usage					
Projected Annual Consumption (CCF)					
Commercial and Industrial	7,857,338	7,858,911	7,881,553	7,902,873	7,921,527
Total	7,857,338	7,858,911	7,881,553	7,902,873	7,921,527
ESTIMATED Projected Summer Consumption					
Commercial and Industrial 48%	3,800,538	3,801,299	3,812,251	3,822,563	3,831,586
Total	3,800,538	3,801,299	3,812,251	3,822,563	3,831,586

Projected Consumption per Block (%)

	Tier	Tier Allocation	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
0	Tier 1	100%	100%	100%	100%	100%	100%
1	Tier 2		0%	0%	0%	0%	0%
2	Tier 3		0%	0%	0%	0%	0%
3	Tier 4		0%	0%	0%	0%	0%
	Total		100%	100%	100%	100%	100%

Tier	Projected Annual Consumption per Block (CCF)				
Tier 1	7,857,338	7,858,911	7,881,553	7,902,873	7,921,527
Tier 2					
Tier 3					
Tier 4					
Total	7,857,338	7,858,911	7,881,553	7,902,873	7,921,527

SEASONAL RATES

Tier	Winter Use per Tier	Projected Winter Consumption per Block (CCF)				
Tier 1	100%	4,056,800	4,057,612	4,069,302	4,080,310	4,089,941
Tier 2						
Tier 3						
Tier 4						
Total		4,056,800	4,057,612	4,069,302	4,080,310	4,089,941

Tier	Summer Use Per Tier	Projected Summer Consumption per Block (CCF)				
Tier 1	100%	3,800,538	3,801,299	3,812,251	3,822,563	3,831,586
Tier 2						
Tier 3						
Tier 4						
Total		3,800,538	3,801,299	3,812,251	3,822,563	3,831,586

Tier	Summer Months 5	Annualized Summer/Annual Average				
Tier 1		1.161	1.161	1.161	1.161	1.161
Tier 2		-	-	-	-	-
Tier 3		-	-	-	-	-
Tier 4		-	-	-	-	-
Total		1.161	1.161	1.161	1.161	1.161

		Winter Costs				
Tier 1		$6,712,112	$6,855,541	$6,992,251	$7,112,381	$7,205,231
Tier 2						
Tier 3						
Tier 4						
Total		$6,712,112	$6,855,541	$6,992,251	$7,112,381	$7,205,231

	Seasonal Factor	Summer Costs				
Tier 1	1.077	$7,298,810	$7,454,776	$7,603,435	$7,734,066	$7,835,032
Tier 2						
Tier 3						
Tier 4						
Total		$7,298,810	$7,454,776	$7,603,435	$7,734,066	$7,835,032

Rates Linked to Model

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Winter Rate	
Tier 1	$1.65	$1.69	$1.72	$1.74	$1.76
Tier 2	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 3	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4	$0.00	$0.00	$0.00	$0.00	$0.00

Tier				Summer Rate	
Tier 1	$1.92	$1.96	$1.99	$2.02	$2.04
Tier 2	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 3	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4	$0.00	$0.00	$0.00	$0.00	$0.00

Landscape

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Allocated Base & Peak Water Costs	
Supply 1	$ 188,406	$ 192,432	$ 196,270	$ 199,642	$ 202,248
Supply 2	$ 337,198	$ 344,403	$ 351,271	$ 357,306	$ 361,971
Supply 3	$ 1,098,403	$ 1,121,874	$ 1,144,246	$ 1,163,905	$ 1,179,099
Supply 4	$ 418,698	$ 427,645	$ 436,173	$ 443,667	$ 449,459
Base	$ 1,009,803	$ 1,031,381	$ 1,051,948	$ 1,070,021	$ 1,083,990
Total Allocated Costs	**$ 3,052,508**	**$ 3,117,736**	**$ 3,179,908**	**$ 3,234,541**	**$ 3,276,766**
Projected Annual Consumption (CCF)	1,524,278	1,524,583	1,528,975	1,533,111	1,536,730
ESTIMATED Projected Summer Consumption (53%)	813,577	813,740	816,084	818,292	820,223

	Tier	Tier Allocation	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
						Projected Consumption per Block (%)	
0	Tier 1	100%	100%	100%	100%	100%	100%
1	Tier 2		0%	0%	0%	0%	0%
2	Tier 3		0%	0%	0%	0%	0%
3	Tier 4		0%	0%	0%	0%	0%
	Total		100%	100%	100%	100%	100%

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Projected Annual Consumption per Block (CCF	
Tier 1	1,524,278	1,524,583	1,528,975	1,533,111	1,536,730
Tier 2					
Tier 3					
Tier 4					
Total	1,524,278	1,524,583	1,528,975	1,533,111	1,536,730

SEASONAL RATES

Tier	Winter Use per Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
					Projected Winter Consumption per Block (CCF	
Tier 1	100%	710,701	710,843	712,891	714,820	716,507
Tier 2	0%					
Tier 3	0%					
Tier 4	0%					
Total		710,701	710,843	712,891	714,820	716,507

Tier	Summer Use per Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
					Projected Summer Consumption per Block (CCF	
Tier 1	100%	813,577	813,740	816,084	818,292	820,223
Tier 2						
Tier 3						
Tier 4						
Total		813,577	813,740	816,084	818,292	820,223

Tier	Summer Month 5	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
					Annualized Summer/Annual Average	
Tier 1		1.281	1.281	1.281	1.281	1.281
Tier 2		-	-	-	-	-
Tier 3		-	-	-	-	-
Tier 4		-	-	-	-	-
Total		1.281	1.281	1.281	1.281	1.281

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Winter Costs	
Tier 1	$1,237,509	$1,263,953	$1,289,158	$1,311,306	$1,328,425
Tier 2					
Tier 3					
Tier 4					
Total	$1,237,509	$1,263,953	$1,289,158	$1,311,306	$1,328,425

Tier	Seasonal Factor	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
					Summer Costs	
Tier 1	1.1140	$1,814,999	$1,853,783	$1,890,750	$1,923,234	$1,948,341
Tier 2						
Tier 3						
Tier 4						
Total		$1,814,999	$1,853,783	$1,890,750	$1,923,234	$1,948,341

Rates Linked to Model

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Winter Rate ($per CCF)	
Tier 1	$ 1.74	$ 1.78	$ 1.81	$ 1.83	$ 1.85
Tier 2	$ -	$ -	$ -	$ -	$ -
Tier 3	$ -	$ -	$ -	$ -	$ -
Tier 4	$ -	$ -	$ -	$ -	$ -

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Summer Rate	
Tier 1	$ 2.23	$ 2.28	$ 2.32	$ 2.35	$ 2.38
Tier 2	$ -	$ -	$ -	$ -	$ -
Tier 3	$ -	$ -	$ -	$ -	$ -
Tier 4	$ -	$ -	$ -	$ -	$ -

WA-2 Temporary Service

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
	Allocated Base & Peak Water Costs				
Supply 1	$ 1,726	$ 1,763	$ 1,798	$ 1,829	$ 1,853
Supply 2	$ 3,090	$ 3,156	$ 3,219	$ 3,274	$ 3,317
Supply 3	$ 68,204	$ 69,661	$ 71,050	$ 72,271	$ 73,215
Supply 4	$ 25,998	$ 26,554	$ 27,084	$ 27,549	$ 27,909
Base	$ 35,713	$ 36,476	$ 37,203	$ 37,842	$ 38,336
Total Allocated Costs	**$ 134,731**	**$ 137,610**	**$ 140,354**	**$ 142,766**	**$ 144,629**
Projected Annual Consumption (CCF)	53,908	53,919	54,074	54,220	54,348
ESTIMATED Projected Summer Consumption (47%)	25,487	25,492	25,566	25,635	25,695

Projected Consumption per Block (%)

	Tier	Tier Allocation	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
0	Tier 1	100%	100%	100%	100%	100%	100%
1	Tier 2		0%	0%	0%	0%	0%
2	Tier 3		0%	0%	0%	0%	0%
3	Tier 4		0%	0%	0%	0%	0%
	Total		100%	100%	100%	100%	100%

Tier	Tier Break Allotment (CCF)	Projected Annual Consumption per Block (CCF)				
Tier 1		53,908	53,919	54,074	54,220	54,348
Tier 2						
Tier 3						
Tier 4						
Total		53,908	53,919	54,074	54,220	54,348

Tier	Non- Seasonal Rate ($per CCF)				
Tier 1	$ 2.50	$ 2.55	$ 2.60	$ 2.63	$ 2.66
Tier 2					
Tier 3					
Tier 4					

Rates Linked to Model

Tier	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
	Annual Rates				
Tier 1	$2.50	$2.55	$2.60	$2.63	$2.66
Tier 2	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 3	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4	$0.00	$0.00	$0.00	$0.00	$0.00

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

WA-4 Riverside Water Company Irrigators

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Allocated Base & Peak Water Costs					
Supply 1	$ 4,489	$ 4,585	$ 4,677	$ 4,757	$ 4,819
Supply 2	$ 3,813	$ 3,894	$ 3,972	$ 4,040	$ 4,093
Supply 3	$ 21,652	$ 22,115	$ 22,556	$ 22,943	$ 23,243
Supply 4	$ 8,253	$ 8,430	$ 8,598	$ 8,746	$ 8,860
Base	$ 20,430	$ 20,866	$ 21,283	$ 21,648	$ 21,931
Total Allocated Costs	$ 58,638	$ 59,891	$ 61,085	$ 62,134	$ 62,946
Projected Annual Consumption (CCF)	29,047	28,626	27,681	27,048	26,416
Base Unit Cost	$0.70	$0.73	$0.77	$0.80	$0.83
ESTIMATED Projected Summer Consumption (54%)	15,584	15,358	14,851	14,512	14,173

Tier	Revenue Requirement per Tier				
Tier 1	$7,415	$7,574	$7,725	$7,857	$7,960
Tier 2	$14,563	$14,874	$15,171	$15,431	$15,633
Tier 3	$36,659	$37,443	$38,189	$38,846	$39,353
Tier 4	$0	$0	$0	$0	$0
Total	$58,638	$59,891	$61,085	$62,134	$62,946

Tier	Tier Allocation	Projected Consumption per Block (%) FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	20%	20%	20%	20%	20%	20%
Tier 2	33%	33%	33%	33%	33%	33%
Tier 3	46%	46%	46%	46%	46%	46%
Tier 4		0%	0%	0%	0%	0%
Total		100%	100%	100%	100%	100%

Tier	Projected Annual Consumption per Block (CCF)				
Tier 1	5,919	5,833	5,641	5,512	5,383
Tier 2	9,660	9,520	9,206	8,995	8,785
Tier 3	13,468	13,272	12,834	12,541	12,248
Tier 4	-	-	-	-	-
Total	29,047	28,626	27,681	27,048	26,416

SEASONAL RATES

Tier	Winter Use per Tier	Projected Winter Consumption per Block (CCF) FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	24%	3,246	3,199	3,093	3,022	2,952
Tier 2	32%	4,371	4,308	4,166	4,070	3,975
Tier 3	43%	5,845	5,760	5,570	5,443	5,316
Tier 4	0%	-	-	-	-	-
Total		13,462	13,267	12,829	12,536	12,243

Tier	Summer Use per Tier	Projected Summer Consumption per Block (CCF) FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	17%	2,673	2,635	2,548	2,489	2,431
Tier 2	34%	5,289	5,212	5,040	4,925	4,810
Tier 3	49%	7,622	7,512	7,264	7,098	6,932
Tier 4	0%	-	-	-	-	-
Total		15,584	15,358	14,851	14,512	14,173

Tier	Annualized Summer/Annual Average FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	1.084	1.084	1.084	1.084	1.084
Tier 2	1.314	1.314	1.314	1.314	1.314
Tier 3	1.358	1.358	1.358	1.358	1.358
Tier 4	-	-	-	-	-
Total	1.288	1.288	1.288	1.288	1.288

	Winter Costs FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$4,066	$4,153	$4,236	$4,309	$4,365
Tier 2	$6,590	$6,731	$6,865	$6,983	$7,074
Tier 3	$13,681	$13,973	$14,252	$14,497	$14,686
Tier 4	$0	$0	$0	$0	$0
Total	$24,337	$24,857	$25,353	$25,788	$26,125

	Seasonal Peak	Summer Costs FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	1.0	$3,349	$3,421	$3,489	$3,549	$3,595
Tier 2	1.0	$7,973	$8,143	$8,306	$8,448	$8,559
Tier 3	1.1075	$22,979	$23,470	$23,938	$24,349	$24,667
Tier 4	1.0	$0	$0	$0	$0	$0
Total		$34,301	$35,034	$35,732	$36,346	$36,821

Tier	Winter Rate ($per CCF) FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$ 1.25	$ 1.30	$ 1.37	$ 1.43	$ 1.48
Tier 2	$ 1.51	$ 1.56	$ 1.65	$ 1.72	$ 1.78
Tier 3	$ 2.34	$ 2.43	$ 2.56	$ 2.66	$ 2.76
Tier 4	$ 2.34	$ 2.43	$ 2.56	$ 2.66	$ 2.76

Tier	Summer Rate FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$ 1.25	$ 1.30	$ 1.37	$ 1.43	$ 1.48
Tier 2	$ 1.51	$ 1.56	$ 1.65	$ 1.72	$ 1.78
Tier 3	$ 3.01	$ 3.12	$ 3.30	$ 3.43	$ 3.56
Tier 4	$ 3.01	$ 3.12	$ 3.30	$ 3.43	$ 3.56

Rates Linked to Model

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

Tier	Winter Rates FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.25	$1.30	$1.37	$1.43	$1.48
Tier 2	$1.51	$1.56	$1.65	$1.72	$1.78
Tier 3	$2.34	$2.43	$2.56	$2.66	$2.76
Tier 4	$2.34	$2.43	$2.56	$2.66	$2.76

Tier	Summer Rates FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	$1.25	$1.30	$1.37	$1.43	$1.48
Tier 2	$1.51	$1.56	$1.65	$1.72	$1.78
Tier 3	$3.01	$3.12	$3.30	$3.43	$3.56
Tier 4	$3.01	$3.12	$3.30	$3.43	$3.56

	Cons per Tier Total	5,658 Tier 1	9,233 Tier 2	12,872 Tier 3	- Tier 4				
Supply 1	7,810	5,658	2,153			7,810	Supply 1	72%	28%
Supply 2	5,027	-	5,027			5,027	Supply 2	0%	100%
Supply 3	16,358		2,054	14,304		16,358	Supply 3	0%	13%
Supply 4	3,386			3,386		3,386	Supply 4	0%	0%

WA-7 Interruptible City Irrigation and Recycled Water	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				Allocated Base & Peak Water Costs	
Supply 1	$ 98,842	$ 100,954	$ 102,968	$ 104,737	$ 106,104
Supply 2	$ 175,271	$ 179,016	$ 182,586	$ 185,723	$ 188,148
Supply 3	$ 654,584	$ 668,571	$ 681,904	$ 693,619	$ 702,674
Supply 4	$ -	$ -	$ -	$ -	$ -
Base	$ 636,546	$ 650,148	$ 663,113	$ 674,505	$ 683,311
Total Allocated Costs	**$ 1,565,243**	**$ 1,598,690**	**$ 1,630,570**	**$ 1,658,584**	**$ 1,680,236**
Projected Annual Consumption (CCF)	960,853	961,046	963,815	966,422	968,703
ESTIMATED Projected Summer Consumption	56%	536,223	536,331	537,876	539,331	540,604

				Projected Consumption per Block (%)				
	Tier	Tier Allocation		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
0	Tier 1	100%		100%	100%	100%	100%	100%
1	Tier 2			0%	0%	0%	0%	0%
2	Tier 3			0%	0%	0%	0%	0%
3	Tier 4			0%	0%	0%	0%	0%
	Total			100%	100%	100%	100%	100%

Tier	Tier Break	Allotment (CCF)							Projected Annual Consumption per Block (CC
Tier 1					960,853	961,046	963,815	966,422	968,703
Tier 2									
Tier 3									
Tier 4									
Total					960,853	961,046	963,815	966,422	968,703

Rates Linked to Model		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier					Winter Rate ($per CCF)	
Tier 1		1.63	1.66	1.69	1.72	1.73
Tier 2		-	-	-	-	-
Tier 3		-	-	-	-	-
Tier 4		-	-	-	-	-

NOTE: RATES ARE NOT ROUNDED, THE LAST DIGIT MAY VARY FROM THE PROPOSED RATES PRESENTED WITHIN THE REPORT BODY AND APPENDIX

WA-3.1 - Irrigation Metered Svc. Transition to SFR

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Growth (Other)		-1.06%	-2.89%	-1.87%	-1.90%
Smoothed Growth		-1.931%	-1.931%	-1.931%	-1.931%
Projected Annual Consumption (CCF)	254,394	249,481	244,663	239,939	235,305

Tier Breaks			FY 2017/18 Usage	Percent	Summer With Conservation	Winter With Conservation	Summer Percent	Winter Percent	Total Percent
Tier 1	0	100.00	13,168	5%	5,421	7,747	2%	3%	
Tier 2	101	999999999	35,925	14%	15,210	20,715	6%	8%	14%
Tier 3	100000000	999999999	71,992	28%	33,961	38,031	13%	15%	28%
Tier 4	1000000000	+	133,309	52%	84,687	48,622	33%	19%	52%
			254,394	100%	139,279	115,115	55%	45%	100%

	Summer Jul-17	Summer Aug-17	Summer Sep-17	Summer Oct-17	Winter Nov-17	Winter Dec-17	Winter Jan-18	Winter Feb-18	Winter Mar-18	Winter Apr-18	Winter May-18	Summer Jun-18	Total	Percent
Tier 1	1,035	1,071	1,068	1,127	1,114	1,128	1,026	1,112	1,122	1,130	1,115	1,120	13,168	5%
Tier 2	2,912	3,026	3,000	3,141	3,081	3,080	2,461	2,774	3,101	3,113	3,105	3,131	35,925	14%
Tier 3	6,506	6,818	6,810	6,738	6,320	5,960	3,368	4,495	5,431	5,985	6,472	7,089	71,992	28%
Tier 4	15,868	20,185	16,570	14,348	9,779	8,062	2,392	4,989	5,779	9,228	8,293	17,716	133,309	52%
Total	26,321	31,100	27,448	25,354	20,294	18,230	9,247	13,370	15,433	19,556	18,985	29,056	254,394	100%

Transitional Rates Calculation

	Current Rates	FY 2017/18 Usage	Rev With Curent Rates
Tier 1	$0.81	121,085	$98,079
Tier 2	$1.26	133,309	$167,969
Minimum Charges			$37,883
TOTAL		254,394	$303,931

Effective Volumetric Rate $1.19 per HCF

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Effective SFR Volumetric Rate					
Usage Per SFR Tier	254,394	249,481	244,663	239,939	235,305
Winter Tier 1	7,747	7,597	7,451	7,307	7,166
Winter Tier 2	20,715	20,315	19,923	19,538	19,161
Winter Tier 3	38,031	37,297	36,576	35,870	35,177
Winter Tier 4	48,622	47,683	46,762	45,859	44,974
Summer Tier 1	5,421	5,316	5,214	5,113	5,014
Summer Tier 2	15,210	14,916	14,628	14,346	14,069
Summer Tier 3	33,961	33,305	32,662	32,031	31,413
Summer Tier 4	84,687	83,052	81,448	79,875	78,332
Proposed Rates					
Winter Tier 1	$1.20	$1.27	$1.33	$1.40	$1.46
Winter Tier 2	$1.51	$1.59	$1.67	$1.76	$1.84
Winter Tier 3	$2.77	$2.93	$3.08	$3.23	$3.38
Winter Tier 4	$2.77	$2.93	$3.08	$3.23	$3.38
Summer Tier 1	$1.20	$1.27	$1.33	$1.40	$1.46
Summer Tier 2	$1.51	$1.59	$1.67	$1.76	$1.84
Summer Tier 3	$3.38	$3.58	$3.76	$3.94	$4.12
Summer Tier 4	$3.38	$3.58	$3.76	$3.94	$4.12
Volumetric SFR Costs	$711,107	$737,965	$760,279	$781,918	$801,984
Fixed SFR Costs	$47,188	$55,268	$64,112	$73,731	$84,075
Total SFR Costs	$758,295	$793,234	$824,391	$855,649	$886,059
Transitional Usage	254,394	249,481	244,663	239,939	235,305
Effective Volumetric Rate	$2.98	$3.18	$3.37	$3.57	$3.77
Five Year Total Transition to SFR	215%				
Annualized Increase in Effective Volumetric Rate	26%				

Projected Fixed Revenues			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Meter Size	Accounts	Proposed Rates					
5/8"	0		$16.40	$19.21	$22.29	$25.64	$29.24
3/4"	16		$16.40	$19.21	$22.29	$25.64	$29.24
1"	88		$26.04	$30.50	$35.38	$40.69	$46.40
1.5"	15		$49.92	$58.47	$67.82	$77.99	$88.93
2"	8		$78.70	$92.16	$106.91	$122.93	$140.16
Projected Fixed Revenue			$47,188	$55,268	$64,112	$73,731	$84,075

	Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Transitional Effective Volumetric Rate	$1.19	$1.51	$1.90	$2.39	$3.01	$3.79
Total Former WA-3.1 Usage		254,394	249,481	244,663	239,939	235,305
Transitional Revenue Generated		$382,953	$473,203	$584,722	$722,522	$892,797
Less: Fixed Revenue		($47,188)	($55,268)	($64,112)	($73,731)	($84,075)
Amount to Be Collected Through Transitional Volumetric Rate		$335,765	$417,935	$520,610	$648,791	$808,721
Revenue By Tier Allocation (Based on Current Rates)						
Tier 1		32%	32%	32%	32%	32%
Tier 2		55%	55%	55%	55%	55%
Tier 3		12%	12%	12%	12%	12%
Total		100%	100%	100%	100%	100%
Revenue To Collect in Each Tier						
Tier 1		$108,352	$134,868	$168,001	$209,365	$260,975
Tier 2		$227,414	$283,067	$352,609	$439,425	$547,746
Total		$335,765	$417,935	$520,610	$648,791	$808,721
Consumption Per Tier						
Tier 1		121,085	118,747	116,454	114,205	111,999
Tier 2		133,309	130,735	128,210	125,734	123,306
Total		254,394	249,481	244,663	239,939	235,305

Transitional Rates Per Tier		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	0 to 100 CCF	$0.81	$0.89	$1.14	$1.44	$1.83	SFR
Tier 2	Over 100 CCF	$1.26	$1.71	$2.17	$2.75	$3.49	SFR
Tier 3			N/A	N/A	N/A	N/A	SFR

Transitional Rates Per Tier - Rounded		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	0 to 100 CCF	$0.81	$0.90	$1.14	$1.45	$1.84	SFR
Tier 2	Over 100 CCF	$1.26	$1.71	$2.17	$2.76	$3.50	SFR
Tier 3			N/A	N/A	N/A	N/A	SFR

WA-9.1 - Grove Preservation — Transition to SFR

		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Growth (Other)	Includes Proforma Elasticity		-1.06%	-2.89%	-1.87%	-1.90%
Smoothed Growth			-1.931%	-1.931%	-1.931%	-1.931%
Projected Annual Consumption (CCF)		96,647	94,781	92,950	91,155	89,395

Tier Breaks			FY 2017/18 Usage	Percent	Summer With Conservation	Winter With Conservation	Summer Percent	Winter Percent	Total Percent
Tier 1	0	15.00	4,923	5%	2,025	2,898	2%	3%	
Tier 2	16	60	3,241	3%	1,347	1,894	1%	2%	3%
Tier 3	100000000	999999999	21,333	22%	9,535	11,798	10%	12%	22%
Tier 4	1000000000	+	67,150	69%	39,164	27,986	41%	29%	69%
			96,647	100%	52,071	44,576	54%	46%	95%

Usage Under Proposed SFR Tiers	Summer Jul-17	Summer Aug-17	Summer Sep-17	Summer Oct-17	Winter Nov-17	Winter Dec-17	Winter Jan-18	Winter Feb-18	Winter Mar-18	Winter Apr-18	Winter May-18	Summer Jun-18	Total	Percent
Tier 1	360	405	405	423	423	423	365	418	414	423	432	432	4,923	5%
Tier 2	1,032	1,153	1,151	1,183	1,186	1,176	876	1,104	1,063	1,127	1,200	1,229	13,480	14%
Tier 3	7,756	11,803	8,587	7,317	6,687	6,429	2,696	3,683	3,633	5,487	5,331	8,835	78,244	81%
Total	9,148	13,361	10,143	8,923	8,296	8,028	3,937	5,205	5,110	7,037	6,963	10,496	96,647	100%

Usage Under Current Tiers	Summer Jul-17	Summer Aug-17	Summer Sep-17	Summer Oct-17	Winter Nov-17	Winter Dec-17	Winter Jan-18	Winter Feb-18	Winter Mar-18	Winter Apr-18	Winter May-18	Summer Jun-18	Total	Percent
Tier 1	360	405	405	423	423	423	365	418	414	423	432	432	4,923	5%
Tier 2	240	270	270	279	279	280	228	270	268	281	288	288	3,241	3%
Tier 3	1,767	1,951	1,938	1,906	1,885	1,819	1,306	1,596	1,539	1,735	1,918	1,973	21,333	22%
Tier 4	6,781	10,735	7,530	6,315	5,709	5,506	2,038	2,921	2,889	4,598	4,325	7,803	67,150	69%
Total	9,148	13,361	10,143	8,923	8,296	8,028	3,937	5,205	5,110	7,037	6,963	10,496	96,647	100%

	Summer	Winter	Total	Summer %	Winter %	Total %
Tier 1	2,025	2,898	4,923	4%	7%	5%
Tier 2	1,347	1,894	3,241	3%	4%	3%
Tier 3	9,535	11,798	21,333	18%	26%	22%
Tier 4	39,164	27,986	67,150	75%	63%	69%
Total	52,071	44,576	96,647	100%	100%	100%

	Minimum Month	Max Month	Average	Summer Average	Winter Average
Tier 1	360	432	410	405	414
Tier 2	228	288	270	269	271
Tier 3	1,306	1,973	1,778	1,907	1,685
Tier 4	2,038	10,735	5,596	7,833	3,998
Total	3,937	13,361	8,054	10,414	6,368

	Max Month/Min Month	Max Month/Winter Average	Max Month/Average Month
0 to 15	1.22	1.05	1.06
16 to 60	1.51	1.17	1.11
60 +	5.27	2.69	1.92
	3.39	2.10	1.66

WA-9.1 - Grove Preservation — Transition to SFR

Transitional Rates Calculation

	Current Rates	FY 2017/18 Usage	Rev With Curent Rates
Tier 1	$0.91	8,164	$7,429
Tier 2	$1.58	21,333	$33,706
Tier 3	$1.07	67,150	$71,851
Variable Charges		96,647	$112,986
Fixed Charges			$7,858
Total			$120,844

Effective Volumetric Rate $1.25 per HCF

Meter Size	Exising Charge	Accounts
5/8 and 3/4 inc	$7.35	10
1-inch	$12.21	34
1 1/2 inch	$24.45	2
2 inch	$39.09	3
3-inch	$73.29	
4-inch	$122.15	
6-inch	$244.33	
8-inch	$390.91	

		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Transitional Usage		96,647	94,781	92,950	91,155	89,395
Usage per SFR Tier						
Winter Tier 1	3%	2,898	2,842	2,787	2,733	2,681
Winter Tier 2	8%	7,732	7,583	7,436	7,293	7,152
Winter Tier 3	35%	33,946	33,290	32,648	32,017	31,399
Winter Tier 4		-	-	-	-	-
Summer Tier 1	2%	2,025	1,986	1,948	1,910	1,873
Summer Tier 2	6%	5,748	5,637	5,528	5,421	5,317
Summer Tier 3	46%	44,298	43,443	42,604	41,781	40,974
Summer Tier 4		-	-	-	-	-
Proposed Rates						
Winter Tier 1		$1.20	$1.27	$1.33	$1.40	$1.46
Winter Tier 2		$1.51	$1.59	$1.67	$1.76	$1.84
Winter Tier 3		$2.77	$2.93	$3.08	$3.23	$3.38
Winter Tier 4		$2.77	$2.93	$3.08	$3.23	$3.38
Summer Tier 1		$1.20	$1.27	$1.33	$1.40	$1.46
Summer Tier 2		$1.51	$1.59	$1.67	$1.76	$1.84
Summer Tier 3		$3.38	$3.58	$3.76	$3.94	$4.12
Summer Tier 4		$3.38	$3.58	$3.76	$3.94	$4.12
Effective SFR Volumetric Rate						
Volumetric SFR Costs		$270,020	$280,216	$288,692	$296,909	$304,531
Fixed SFR Costs		$16,624	$19,470	$22,586	$25,976	$29,620
Total SFR Costs		**$286,644**	**$299,686**	**$311,278**	**$322,885**	**$334,151**
Total SFR Usage		**96,647**	**94,781**	**92,950**	**91,155**	**89,395**
Effective Volumetric Rate		**$2.97**	**$3.16**	**$3.35**	**$3.54**	**$3.74**
Five Year Total Transition to SFR		199%				
Annualized Increase in Effective Volumetric Rate		24%				

			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Projected Fixed Revenues							
Meter Size	Accounts	Proposed Rates					
5/8 and 3/4 inc	10		$16.40	$19.21	$22.29	$25.64	$29.24
1-inch	34		$26.04	$30.50	$35.38	$40.69	$46.40
1 1/2 inch	2		$49.92	$58.47	$67.82	$77.99	$88.93
2 inch	3		$78.70	$92.16	$106.91	$122.93	$140.16
3-inch	0		$145.89	$170.85	$198.17	$227.87	$259.80
Projected Fixed Revenue			**$16,624**	**$19,470**	**$22,586**	**$25,976**	**$29,620**

	Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Transitional Effective Volumetric Rate	$1.25	$1.55	$1.92	$2.38	$2.96	$3.67
Total Former WA-9.1 Usage		96,647	94,781	92,950	91,155	89,395
Transitional Revenue Generated		$149,846	$182,221	$221,590	$269,466	$327,685
Less: Fixed Revenue		($16,624)	($19,470)	($22,586)	($25,976)	($29,620)
Amount to Be Collected Through Transitional Volumetric Rate		**$133,222**	**$162,751**	**$199,004**	**$243,490**	**$298,065**
System Wide Base Unit Cost		$0.60	$0.65	$0.69	$0.73	$0.76
Base Costs		$58,294	$61,972	$64,216	$66,183	$68,065
Peak Costs		$74,928	$100,778	$134,788	$177,308	$229,999

Consumption Per Tier	IRWA Month/Average Month	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	1.06	8,164	8,006	7,852	7,700	7,551
Tier 2	1.11	21,333	20,921	20,517	20,121	19,732
Tier 3	1.92	67,150	65,853	64,582	63,334	62,111
Total		96,647	94,781	92,950	91,155	89,395

Transitional Rates Per Tier		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	0 to 15 CCF	$0.91	$1.10	$1.33	$1.61	$1.96	SFR
Tier 2	16 to 60 CCF	$1.58	$1.12	$1.36	$1.66	$2.02	SFR
Tier 3	Over 60 CCF	$1.07	$1.50	$1.88	$2.36	$2.96	SFR

Transitional Rates Per Tier - Rounded		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Tier 1	0 to 15 CCF	$0.91	$1.10	$1.33	$1.62	$1.97	SFR
Tier 2	16 to 60 CCF	$1.58	$1.12	$1.37	$1.66	$2.03	SFR
Tier 3	Over 60 CCF	$1.07	$1.50	$1.88	$2.36	$2.97	SFR

WA-3.2 - Irrigation Metered Svc. Transition to Commercial

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Growth (Other)		-1.06%	-2.89%	-1.87%	-1.90%
Smoothed Growth		-1.931%	-1.931%	-1.931%	-1.931%
Projected Annual Consumption (CCF)	23,237	22,788	22,348	21,917	21,493

	FY 2017/18 Usage	Percent	Summer With Conservation	Winter With Conservation	Summer Percent
	23,237	100%	13,758	9,479	100%
	-	0%	-	-	0%
	-	0%	-	-	0%
	-	0%	-	-	0%
	23,237	100%	13,758	9,479	100%

	Summer Jul-17	Summer Aug-17	Summer Sep-17	Summer Oct-17	Winter Nov-17	Winter Dec-17	Winter Jan-18	Winter Feb-18	Winter Mar-18	Winter Apr-18	Winter May-18	Summer Jun-18	Total	Percent
Tier 1	3,115	3,341	2,435	2,150	1,577	1,446	700	839	1,199	1,565	2,153	2,717	23,237	100%
Tier 2													-	0%
Tier 3													-	0%
Tier 4													-	0%
Total	3,115	3,341	2,435	2,150	1,577	1,446	700	839	1,199	1,565	2,153	2,717	23,237	100%

Transitional Rates Calculation

	Current Rates	FY 2017/18 Usage	Rev With Curent Rates
Tier 1	$1.26	23,237	$29,279
Tier 2			$0
Minimum Charges			$3,153
Variable Charges		23,237	$32,432
Fixed Charges			$0
Total			$32,432
Effective Volumetric Rate			$1.40 per HCF

Meter Size	Exising Charge	Accounts
5/8 and 3/4 inc	$0.00	0
1-inch	$0.00	4
1 1/2 inch	$0.00	1
2 inch	$0.00	3
3-inch	$0.00	0
4-inch	$0.00	0
6-inch	$0.00	0
8-inch	$0.00	0

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Effective Commercial Volumetric Rate					
Usage	23,237	22,788	22,348	21,917	21,493
Winter	9,479	9,296	9,116	8,940	8,768
Summer	13,758	13,492	13,232	12,976	12,726
Proposed Commercial and Industrial Rates					
Winter	$1.66	$1.69	$1.72	$1.75	$1.77
Summer	$1.93	$1.97	$2.00	$2.03	$2.05
Volumetric Comm/Ind Costs	$42,288	$42,290	$42,144	$41,987	$41,606
Fixed Comm/Ind Costs	$4,682	$5,483	$6,361	$7,314	$8,340
Total Comm/Ind Costs	$46,970	$47,773	$48,505	$49,302	$49,947
Transitional Usage	23,237	22,788	22,348	21,917	21,493
Effective Volumetric Rate	$2.02	$2.10	$2.17	$2.25	$2.32
Five Year Total Transition to Comm/Ind	66%				
Annualized Increase in Effective Volumetric Rate	11.00%				

			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Projected Fixed Revenues							
Meter Size	Accounts	Proposed Rates					
5/8"	0		$16.40	$19.21	$22.29	$25.64	$29.24
3/4"	0		$16.40	$19.21	$22.29	$25.64	$29.24
1"	4		$26.04	$30.50	$35.38	$40.69	$46.40
1.5"	1		$49.92	$58.47	$67.82	$77.99	$88.93
2"	3		$78.70	$92.16	$106.91	$122.93	$140.16
Projected Fixed Revenue			$4,682	$5,483	$6,361	$7,314	$8,340

	Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Transitional Effective Volumetric Rate	$1.40	$1.55	$1.72	$1.91	$2.12	$2.35
Total Former WA-9.2 Usage		23,237	22,788	22,348	21,917	21,493
Transitional Revenue Generated		$36,000	$39,188	$42,658	$46,436	$50,549
Less: Fixed Revenue		($4,682)	($5,483)	($6,361)	($7,314)	($8,340)
Amount to Be Collected Through Transitional Volumetric Rate		$31,317	$33,704	$36,298	$39,122	$42,209
Consumption Per Tier						
Tier 1		23,237	22,788	22,348	21,917	21,493
Tier 2		0	0	0	0	0
Tier 3		0	0	0	0	0
Total		23,237	22,788	22,348	21,917	21,493

Transitional Rates		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Annual Transitional Rate	All Usage	$1.26	$1.35	$1.48	$1.62	$1.79	$1.96

Transitional Rates Per Tier - Rounded		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Annual Rate	All Usage	$1.26	$1.35	$1.48	$1.63	$1.79	Comm/Ind

WA-9.2 - Grove Preservation — Transition to Commercial

		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Growth (Other)	Includes Proforma Elasticity		-1.06%	-2.89%	-1.87%	-1.90%
Smoothed Growth			-1.931%	-1.931%	-1.931%	-1.931%
Projected Annual Consumption (CCF)		125,111	122,695	120,326	118,002	115,723

Tier Breaks			FY 2017/18 Usage	Percent	Summer With Conservation	Winter With Conservation	Summer Percent
Tier 1	0	15.00	125,111	100%	74,024	51,087	100%
Tier 2	16	60	-	0%	-	-	0%
Tier 3	100000000	999999999	-	0%	-	-	0%
Tier 4	1000000000	+	-	0%	-	-	0%

	Summer Jul-17	Summer Aug-17	Summer Sep-17	Summer Oct-17	Winter Nov-17	Winter Dec-17	Winter Jan-18	Winter Feb-18	Winter Mar-18	Winter Apr-18	Winter May-18	Summer Jun-18	Total	Percent
Tier 1	9,068	9,886	23,459	19,690	8,959	6,936	5,330	4,862	6,732	8,561	9,707	11,921	125,111	100%
Tier 2													-	0%
Tier 3													-	0%
Tier 4													-	0%
Total	9,068	9,886	23,459	19,690	8,959	6,936	5,330	4,862	6,732	8,561	9,707	11,921	125,111	100%

Transitional Rates Calculation

	Current Rates	FY 2017/18 Usage	Rev With Curent Rates
Tier 1	$1.07	122,695	$131,284
Tier 2			$0
Tier 3			$0
Variable Charges		122,695	$131,284
Fixed Charges			$4,545
Total			$135,828
Effective Volumetric Rate			$1.11 per HCF

Meter Size	Exising Charge	Accounts
5/8 and 3/4 inc	$7.35	2
1-inch	$12.21	5
1 1/2 inch	$24.45	1
2 inch	$39.09	4
3-inch	$73.29	0
4-inch	$122.15	1
6-inch	$244.33	
8-inch	$390.91	

Effective Commercial Volumetric Rate	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Usage	125,111	122,695	120,326	118,002	115,723
Winter	$1,087	50,100	49,133	48,184	47,254
Summer	74,024	72,594	71,193	69,818	68,469
Proposed Commercial and Industrial Rates					
Winter	$1.66	$1.69	$1.72	$1.75	$1.77
Summer	$1.93	$1.97	$2.00	$2.03	$2.05
Volumetric Comm/Ind Costs	$227,671	$227,681	$226,894	$226,052	$224,001
Fixed Comm/Ind Costs	$10,376	$12,152	$14,096	$16,209	$18,481
Total Comm and Ind Costs	$238,047	$239,832	$240,990	$242,261	$242,483
Total Comm/Ind Usage	125,111	122,695	120,326	118,002	115,723
Effective Volumetric Rate	$1.90	$1.95	$2.00	$2.05	$2.10
Five Year Total Transition to Comm/Ind	89%				
Annualized Increase in Effective Volumetric Rate	14%				

Projected Fixed Revenues			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Meter Size	Accounts	Proposed Rates					
5/8 and 3/4 inc	3		$16.40	$19.21	$22.29	$25.64	$29.24
1-inch	5		$26.04	$30.50	$35.38	$40.69	$46.40
1 1/2 inch	1		$49.92	$58.47	$67.82	$77.99	$88.93
2 inch	5		$78.70	$92.16	$106.91	$122.93	$140.16
3-inch	0		$145.89	$170.85	$198.17	$227.87	$259.80
4-inch	1		$241.86	$283.23	$328.52	$377.75	$430.67
Projected Fixed Revenue			$10,376	$12,152	$14,096	$16,209	$18,481

		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Transitional Effective Volumetric Rate		$1.11	$1.26	$1.44	$1.64	$1.87	$2.13
Total Former WA-9.2 Usage			125,111	122,695	120,326	118,002	115,723
Transitional Revenue Generated			$157,893	$176,522	$197,349	$220,633	$246,665
Less: Fixed Revenue			($10,376)	($12,152)	($14,096)	($16,209)	($18,481)
Amount to Be Collected Through Transitional Volumetric Rate			$147,517	$164,371	$183,253	$204,424	$228,183
Consumption Per Tier							
Tier 1			125,111	122,695	120,326	118,002	115,723
Tier 2			0	0	0	0	0
Tier 3			0	0	0	0	0
Total			125,111	122,695	120,326	118,002	115,723
Transitional Rates			**FY 2017/18**	**FY 2018/19**	**FY 2019/20**	**FY 2020/21**	**FY 2021/22**
Annual Transitional Rate	All Usage	$1.07	$1.18	$1.34	$1.52	$1.73	Comm/Ind
Transitional Rates Per Tier - Rounded		**Current**	**FY 2017/18**	**FY 2018/19**	**FY 2019/20**	**FY 2020/21**	**FY 2021/22**
Annual Rate	All Usage	$1.07	$1.18	$1.34	$1.53	$1.74	Comm/Ind

WA-7 - Cemeteries	Transition to Commercial/Industrial	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Growth (Other)	Includes Proforma Elasticity		-1.06%	-2.89%	-1.87%	-1.90%
Smoothed Growth			-1.931%	-1.931%	-1.931%	-1.931%
Projected Annual Consumption (CCF)		41,540	40,737	39,951	39,179	38,423

	Total With Rebound		Summer With Rebound	Winter With Rebound	Summer Percent
	41,540	100%	25,997	15,543	100%
	-	0%	-	-	0%
	-	0%	-	-	0%
	-	0%	-	-	0%
	41,540	100%	25,997	15,543	100%

	Summer Jul-15	Summer Aug-15	Summer Sep-15	Summer Oct-15	Winter Nov-15	Winter Dec-15	Winter Jan-16	Winter Feb-16	Winter Mar-16	Winter Apr-16	Winter May-16	Summer Jun-16	Total	Percent
Tier 1	4,341	3,548	3,971	2,779	2,818	2,527	1,250	114	442	1,555	2,807	4,618	30,770	100%
Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
Tier 4	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
Total	4,341	3,548	3,971	2,779	2,818	2,527	1,250	114	442	1,555	2,807	4,618	30,770	100%
FY 2017/18 With Rebound													Total	Percent
Tier 1	5,860	4,790	5,361	3,752	3,719	3,005	1,685	440	817	2,099	3,777	6,234	41,540	100%
Tier 2													-	0%
Tier 3													-	0%
Tier 4													-	0%
Total	5,860	4,790	5,361	3,752	3,719	3,005	1,685	440	817	2,099	3,777	6,234	41,540	100%

Transitional Rates

	Current Rates	FY 2017/18 Usage	Rev With Curent Rates
Tier 1	$1.14	41,540	$47,355
Tier 2			$0
Tier 3			$0
Variable Charges		41,540	$47,355
Fixed Charges			$92
Total			$47,447

Effective Volumetric Rate $1.14 per HCF

Meter Size	Exising Charge	Accounts
5/8 and 3/4 inch		
1-inch		
1 1/2 inch		
2 inch		2
3-inch		
4-inch		1
6-inch		
8-inch		

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Effective Commercial Volumetric Rate					
Usage	41,540	40,737	39,951	39,179	38,423
Winter	15,543	15,242	14,948	14,659	14,376
Summer	25,997	25,495	25,003	24,520	24,046
Proposed Commercial and Industrial Rates					
Winter	$1.66	$1.69	$1.72	$1.75	$1.77
Summer	$1.93	$1.97	$2.00	$2.03	$2.05
Volumetric Comm/Ind Costs	$75,975	$75,985	$75,716	$75,429	$74,741
Fixed Comm/Ind Costs	$4,791	$5,611	$6,508	$7,483	$8,532
Total Comm and Ind Costs	$80,766	$81,595	$82,224	$82,912	$83,273
Total Comm/Ind Usage	41,540	40,737	39,951	39,179	38,423
Effective Volumetric Rate	$1.94	$2.00	$2.06	$2.12	$2.17
Five Year Total Transition to Comm/Ind	90%				
Annualized Increase in Effective Volumetric Rate	14%				

		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Projected Fixed Revenues						
Meter Size	Accounts	Proposed Rates				
5/8 and 3/4 inc	0		$16.40	$19.21	$22.29	$25.64	$29.24
1-inch	0		$26.04	$30.50	$35.38	$40.69	$46.40
1 1/2 inch	0		$49.92	$58.47	$67.82	$77.99	$88.93
2 inch	2		$78.70	$92.16	$106.91	$122.93	$140.16
3-inch	0		$145.89	$170.85	$198.17	$227.87	$259.80
4-inch	1		$241.86	$283.23	$328.52	$377.75	$430.67
Projected Fixed Revenue			$4,791	$5,611	$6,508	$7,483	$8,532

	Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Transitional Effective Volumetric Rate	$1.14	$1.30	$1.48	$1.69	$1.93	$2.20
Total Former WA-7 Usage		41,540	40,737	39,951	39,179	38,423
Transitional Revenue Generated		$54,090	$60,472	$67,606	$75,583	$84,501
Less: Fixed Revenue		($4,791)	($5,611)	($6,508)	($7,483)	($8,532)
Amount to Be Collected Through Transitional Volumetric Rate		$49,299	$54,861	$61,098	$68,100	$75,969
Consumption Per Tier						
Tier 1		41,540	40,737	39,951	39,179	38,423
Tier 2		0	0	0	0	0
Tier 3		0	0	0	0	0
Total		41,540	40,737	39,951	39,179	38,423

Transitional Rates		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Annual Transitional Rate	All Usage	$1.14	$1.19	$1.35	$1.53	$1.74	Comm/Ind

Transitional Rates Per Tier - Rounded		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Annual Rate	All Usage	$1.14	$1.19	$1.35	$1.53	$1.74	Comm/Ind

WA-7 - Cemeteries — Transition to Landscape

		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22			
Growth (Other)	Includes Proforma Elastidty		-1.06%	-2.89%	-1.87%	-1.90%	-1.94%	-1.95%	-1.93%
Smoothed Growth			-1.931%	-1.931%	-1.931%	-1.931%			
Projected Annual Consumption (CCF)		45,310	44,435	43,577	42,735	41,910	41,910	41,910	41,910

	Total With Rebound	Percent	Summer With Conservation	Winter With Conservation	Summer Percent
	45,310	100%	30,344	14,966	100%
	-	0%	-	-	0%
	-	0%	-	-	0%
	-	0%	-	-	0%
	45,310	100%	30,344	14,966	100%

	Summer Jul-15	Summer Aug-15	Summer Sep-15	Summer Oct-15	Winter Nov-15	Winter Dec-15	Winter Jan-16	Winter Feb-16	Winter Mar-16	Winter Apr-16	Winter May-16	Summer Jun-16	Total	Percent
Tier 1	5,378	4,606	5,569	4,064	2,277	2,084	952	2	815	2,213	3,630	4,658	36,248	100%
Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
Tier 4	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
Total	5,378	4,606	5,569	4,064	2,277	2,084	952	2	815	2,213	3,630	4,658	36,248	100%
FY 2017/18 With Rebound													Total	Percent
Tier 1	6,723	5,758	6,961	5,080	2,936	2,386	1,221	299	1,107	2,557	4,461	5,823	45,310	100%
Tier 2													-	0%
Tier 3													-	0%
Tier 4													-	0%
Total	6,723	5,758	6,961	5,080	2,936	2,386	1,221	299	1,107	2,557	4,461	5,823	45,310	100%

Transitional Rates

	Current Rates	FY 2017/18 Usage	Rev With Curent Rates
Tier 1	$1.14	45,310	$51,653
Tier 2			$0
Tier 3			$0
Variable Charges		45,310	$51,653
Fixed Charges			$238
Total			$51,891
Effective Volumetric Rate			$1.15 per HCF

Meter Size	Exising Charge	Accounts
5/8 and 3/4 inch		
1-inch		
1 1/2 inch		
2 inch		3
3-inch		
4-inch		1
6-inch		
8-inch		

	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Effective Landscape Volumetric Rate					
Usage	45,310	44,435	43,577	42,735	41,910
Winter	14,966	14,677	14,394	14,116	13,843
Summer	30,344	29,758	29,183	28,620	28,067
Proposed Landscape Rates					
Winter	$1.75	$1.78	$1.81	$1.84	$1.86
Summer	$2.24	$2.28	$2.32	$2.36	$2.38
Volumetric Landscape Costs	$94,161	$93,973	$93,758	$93,515	$92,548
Fixed Landscape Costs	$5,736	$6,717	$7,791	$8,958	$10,214
Total Landscape Costs	$99,896	$100,690	$101,549	$102,474	$102,761
Total Landscape Usage	45,310	44,435	43,577	42,735	41,910
Effective Volumetric Rate	$2.20	$2.27	$2.33	$2.40	$2.45
Five Year Total Transition to Landscape	114%				
Annualized Increase in Effective Volumetric Rate	16%				

			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Projected Fixed Revenues							
Meter Size	Accounts	Proposed Rates					
5/8 and 3/4 inc	0		$16.40	$19.21	$22.29	$25.64	$29.24
1-inch	0		$26.04	$30.50	$35.38	$40.69	$46.40
1 1/2 inch	0		$49.92	$58.47	$67.82	$77.99	$88.93
2 inch	3		$78.70	$92.16	$106.91	$122.93	$140.16
3-inch	0		$145.89	$170.85	$198.17	$227.87	$259.80
4-inch	1		$241.86	$283.23	$328.52	$377.75	$430.67
Projected Fixed Revenue			$5,736	$6,717	$7,791	$8,958	$10,214

	Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Transitional Effective Volumetric Rate	$1.15	$1.33	$1.54	$1.79	$2.07	$2.41
Total Former WA-7 Usage		45,310	44,435	43,577	42,735	41,910
Transitional Revenue Generated		$60,194	$68,476	$77,899	$88,618	$100,811
Less: Fixed Revenue		($5,736)	($6,717)	($7,791)	($8,958)	($10,214)
Amount to Be Collected Through Transitional Volumetric Rate		$54,458	$61,760	$70,108	$79,659	$90,597
Consumption Per Tier						
Tier 1		45,310	44,435	43,577	42,735	41,910
Tier 2		0	0	0	0	0
Tier 3		0	0	0	0	0
Total		45,310	44,435	43,577	42,735	41,910

Transitional Rates		Current	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Annual Transitional Rate	All Usage	$1.14	$1.20	$1.39	$1.61	$1.86	Landscape
Transitional Rates Per Tier - Rounded		**Current**	**FY 2017/18**	**FY 2018/19**	**FY 2019/20**	**FY 2020/21**	**FY 2021/22**
Annual Rate	All Usage	$1.14	$1.21	$1.39	$1.61	$1.87	Landscape