



SWEETWATER AUTHORITY

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GOVERNING BOARD

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GENERAL MANAGER

JENNIFER H. SABINE
ASSISTANT GENERAL MANAGER

AGENDA

Special Meeting

**Governing Board of Sweetwater Authority
Monday, August 20, 2018 – 6:00 P.M.**

TELECONFERENCE LOCATION

***In addition, Director Castaneda will be teleconferencing
pursuant to Government Code section 54953 from the following location:***

15 Woodcart Drive, Dartmouth, MA 02747

The public may participate in the meeting from either of the above locations.

- **Call Meeting to Order and Roll Call**
- **Pledge of Allegiance to the Flag**
Director Calderon-Scott
- **Opportunity for Public Comment**
Opportunity for members of the public to address the Board (Government Code Section 54954.3)

ACTION CALENDAR AGENDA

The following items on the Action Agenda call for discussion and action by the Board. All items are placed on the Agenda so that the Board may discuss and take action on the item if the Board is so inclined, including items listed for information.

1. **Public Hearing**
Opportunity for members of the public to address the Board concerning the proposal to adopt water rates and charges.
2. **Consideration to Adopt Resolution 18-15 Adopting Water Rates and Charges**

REPORTS AND INFORMATIONAL ITEMS

The following Agenda items are placed on the Agenda to allow the persons designated to provide information to the Board and the Public. There is no action called for in these items. The Board may engage in discussion on any report upon which specific subject matter is identified on the Agenda, but may not take any action other than to place the matter on a future Agenda.

- **Directors' Comments**
Directors' comments are comments by Directors concerning Authority business that may be of interest to the Board. Directors' comments are placed on the Agenda to enable individual Board members to convey information to the Board and the Public. There is no discussion or action taken on comments made by Board members.

CLOSED SESSION

At any time during the regular session, the Governing Board may adjourn to closed session to consider litigation, personnel matters, or to discuss with legal counsel matters within the attorney-client privilege. Authority: Government Code Section 54954.5.

- **Adjournment**

This agenda was posted at least twenty-four (24) hours before the meeting, in a location freely accessible to the public. No action may be taken on any item not appearing on the posted agenda, except as provided by Section 54954.2 of the California Government Code. Any writings or documents provided to a majority of the members of the Sweetwater Authority Governing Board regarding any item on this agenda will be made available for public inspection at the Authority's Administration Office located at 505 Garrett Avenue, Chula Vista, CA, during normal business hours. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to the Board Secretary at (619) 409-6703 at least forty-eight (48) hours before the meeting, if possible.

PUBLIC COMMENT PROCEDURES

Members of the general public may address the Board regarding items not appearing on the posted agenda, which are within the subject matter jurisdiction of the Board. Speakers are asked to state name, address and topic, and to observe a time limit of three (3) minutes each. Public comment on a single topic is limited to twenty (20) minutes. Anyone desiring to address the Board regarding an item listed on the agenda is asked to fill out a speaker's slip and present it to the Board Chair or the Secretary. Request to Speak forms are available at the Speaker's podium.



BOARD ACTION

TO: Governing Board
FROM: Management
DATE: August 17, 2018
SUBJECT: Public Hearing for Proposed Water Rates and Charges

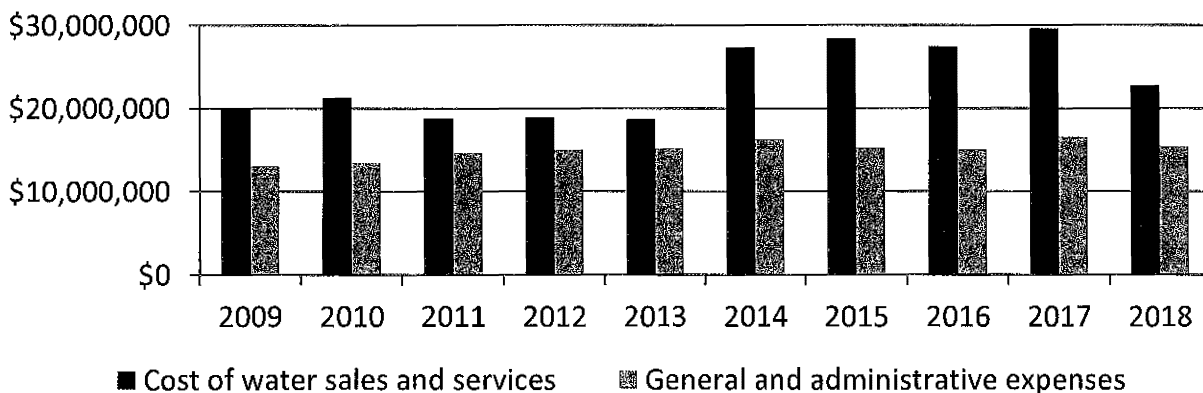
SUMMARY

The Authority is committed to providing the highest quality services at the lowest possible rates for its customers.

Cost Containment Measures

The Governing Board implemented several cost containment measures in recent years in response to the drought and escalating costs of purchased water. As a result, staffing levels have been reduced and are approximately 10 percent lower than a decade ago. Additionally, employees now contribute their full portion to retirement, saving ratepayers approximately \$1 million annually. Operations costs and costs within the Authority's control (shown as General and administrative expenses in the chart below) have remained steady with only a two percent increase, cumulatively, since 2013. In that same time, the cost to purchase water has increased 22 percent and costs to repair and replace aging pipes are up 42 percent. The Authority has used a combination of reduced staffing levels, use of contract labor, benefit cost sharing with employees, and utilizing reserves to cover the escalating costs of purchased water and pipeline maintenance.

Authority Expense Trend
Overhead Costs Remained Level While Purchased Water Costs Escalated



Strategic Plan

In order to meet the goals set forth in the Authority's Strategic Plan, each year it evaluates its infrastructure needs, programs, and operations and maintenance (O&M) costs for the ensuing fiscal year (FY). The FY 2018-19 Strategic Plan Detailed Work Plan was approved by the Governing Board (Board) on June 27, 2018, and includes:

- **Purchasing Water:** The Authority will spend one-fourth of next year's budget on purchasing water from its wholesale provider. This increase is due to:
 - 1) Lack of local surface water, and
 - 2) Significant increases in the cost of water, 17 percent since 2015, which was the last time the Authority raised rates.
- **Support for Development:** In order to provide the best customer service possible to those creating new business in the region, staffing levels will be increased to accommodate increasing developer demands and improve coordination with local land use planning agencies, including the City of Chula Vista, the City of National City, and the County of San Diego.
- **Pipeline Cleaning:** System-wide flushing is necessary to improve and protect water quality. The Authority deferred this maintenance due to the recent drought and associated cost pressures. System maintenance is now outside of best management practices set forth by the American Water Works Association Partnership for Safe Drinking Water.
- **Expanded Outreach and Educational Opportunities:** The Authority is interested in preparing a communication master plan focused on outreach. Additionally, the Board has expressed interest in pursuing partnerships with local entities in a manner that creates robust educational opportunities in the community.

Five –year Cost of Service and Water Rate Study

The Authority hired Raftelis Financial Consultants (Raftelis) to perform a Five-year Cost of Service and Water Rate Study (Study). The Study incorporates the cost to operate the water system, as outlined in the FY 2018-19 Budget, which was approved by the Board on June 13, 2018, and supports the FY 2018-19 Strategic Plan Detailed Work Plan, as approved by the Board on June 27, 2018. Based on the Study, the Authority has determined that rate increases are necessary to recover current and projected O&M costs, including increases in purchased wholesale water and fees imposed on the Authority by its wholesale water provider, and capital infrastructure improvements necessary to provide safe and reliable drinking water to its customers. In addition, the Study recommends modifications to the rate structure including breaking out wholesale costs associated with purchasing wholesale water from the Metropolitan Water District of Southern California (MWD) through the San Diego County Water Authority (SDCWA), and inclusion of additional wholesale pass-through charges. These changes to the rate structure and the proposed water rates are discussed in detail in the attached Study. If approved, the proposed water rates would be effective January 1, 2019.

Outreach Efforts

The Authority conducted extensive outreach activities for the Five-year Water Rate Study beginning in May. These activities included the following:

- Direct Mail – Proposition 218 notices, Community Open House postcards, bill envelope messages
- Print Media – La Prensa, The Star News, Filipino Press, Union-Tribune
- Radio Media – Radio Latina 104.5 FM
- Social Media – Facebook, Twitter, Nextdoor, Newsflash News Item
- Community Presentations – Kiwanis Clubs, Rotary Clubs, Civic Associations
- Community Meetings – Lumpia Club, SoCoPow
- Elected Official Briefings – County Supervisor Cox, Chula Vista City Council
- Business Groups – Chula Vista Chamber of Commerce, National City Chamber of Commerce, South County Economic Development Council
- Open House Events – May 22 and August 9
- Community Events – Third Avenue Village Lemon Festival, National City Auto Heritage Day, and Chula Vista HarborFest

Wholesale Water Costs

The Authority obtains water from local supplies, and indirectly purchases wholesale water from MWD through SDCWA. MWD imports water from two sources: the Colorado River via the Colorado River Aqueduct and Northern California via the California Aqueduct. The increase in costs to purchase wholesale water from MWD and SDCWA and the depletion of the Authority's local water supply are the major factors increasing the Authority's operating costs in the FY 2018-19 Budget and subsequent years.

Capital Improvements

In addition to the increases in the costs of purchased water, the Authority's capital improvements program identifies several high priority projects that will require funding from the Authority's water service fees and also contributes to the need for a rate increase. The major infrastructure projects included in the Authority's FY 2018-19 Capital Investment Budget impacting water rates are:

- Replacement of aging water distribution pipelines to ensure a safe and reliable water supply
- Replacement of water pipeline valves to maintain the effective operations of the water distribution system
- Water treatment plant, reservoir, and distribution system operational improvements
- Sweetwater Dam improvements
- Hydrogeological studies to maintain and expand the Authority's local groundwater supplies

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Subject: Public Hearing for Proposed Water Rates and Charges
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A breakdown of the costs to provide water service, including projected increases in the costs of purchased water and the Authority's capital infrastructure program are set forth in the FY 2018-19 Budget, which was approved by the Board on June 13, 2018.

Cost of Service Methodology

The attached Study is a comprehensive evaluation of the Authority's water service fees and sets forth the methodology Raftelis used in determining the costs of providing water service and allocating those costs among the Authority's customer classes. The methodology used by Raftelis adheres to industry practices established by the American Water Works Association ("AWWA") as set forth in its "Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1" (the "M1 Manual").

The methodology used in the Study to calculate the Authority's rates and apportion its costs of providing service is a combination of the Base-Extra Capacity and Commodity-Demand methods established in the M1 Manual. This approach recognizes that the cost to serve each user class not only depends on the amount of water demanded but also on the manner in which it is demanded (also known as peaking or capacity needs). Customer classes with higher peaking characteristics are more costly to serve on a per unit basis than those with low peaking factors. The Study followed five basic steps traditionally used in developing rates: (1) quantify the number of customers and consumption by user class (Section 2 of the Study); (2) determine the Authority's revenue requirements to meet operation and maintenance costs, and capital investment costs (Section 3 of the Study); (3) proportionally allocate the Authority's revenue requirements among the customer classes (Section 5 of the Study); (4) design a rate structure to collect the target revenue requirements of each customer class (Section 6 of the Study); and (5) assess the impacts of the rates to each customer class and customers within each class (Section 7 of the Study). As part of the Study, a financial model (also known as a rate model) was developed by Raftelis to allow the Authority to adjust its rates in future years to meet its future revenue requirements.

In developing the Study, the Authority identified specific goals such as: (1) continuing to promote water conservation through price signaling, and (2) lessening the impact on low consumption customers by maintaining a low fixed component of a customer's bill, referred to as the Readiness-to-Serve or "RTS" Charge. This resulted in a rate model consistent with the principles set forth in the M1 Manual and California Constitution article XIII D, section 6(b). The rate model included increasing blocks or tiers that have corresponding increasing rates for the following blocks of single-family residential water use:

- First tier rate: 1-10 units¹
- Second tier rate: 11-16 units
- Third tier rate: 17-27 units
- Fourth tier rate: 28 units or more

¹ A unit of water is equal to one-hundred cubic feet (HCF) or 748 gallons.

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This rate structure recognizes that those who use more water and place greater demands and burdens on the system create additional costs that the Authority would not otherwise incur, and therefore, pay a proportionally higher rate for water consumed within each tier to recover those incremental costs associated with their higher demand. In addition, the rate structure proposes to break out the cost of purchasing wholesale water from SDCWA at the Municipal and Industrial (M&I) rate. The amount of water the Authority must purchase from SDCWA each year will depend upon the availability of local supply, with higher amounts purchased from SDCWA during years in which local supply is low. The proceeds of this charge are used to cover the costs of purchasing SDCWA M&I water, and to reduce the impact on water rates in years in which local supplies are low.

The Authority's water service fees are explained in detail in the attached Proposition 218 Notice. Together, the components of the Authority's water service fees, discussed in the Proposition 218 Notice, are structured to recover the proportionate costs of providing water service to each customer class and to deter waste, encourage water use efficiency, and manage the Authority's water resources. In addition, the proposed rates include authorizations for adjustments to account for increasing costs (1) as a result of inflation, and (2) as a result of increased wholesale costs from SDCWA or MWD, for a period of five years.

The practice of setting water rates at increasing levels based on the volume used conforms to the requirements of Article X, section 2 of the State Constitution, "water shall not be wasted," and those of Article XIII D, section 6 of the California Constitution, the cost of providing service shall not exceed the cost of providing the service and shall be proportionally allocated among customer classes and on a parcel basis. Inclining block rates allocate the higher cost of providing additional units of water to those who use water in higher volumes. These higher costs include developing additional sources of supply to serve the higher demands of water users in the upper tiers; designing, operating, and maintaining the system to ensure there is sufficient capacity² to meet the peak demands of customers who use more water; and promoting water conservation required to meet limited supplies. Tiered rates also have the incidental effect of encouraging conservation by sending a price signal to water users that by using more water they will have to pay more.³

Conservation signals are more effective among single-family households where consumption, as a class, is more homogenous and water is utilized for nonessential uses (e.g., car washing), which users may be more willing to conserve with encouragement from tier pricing. On the other hand, use patterns in the other customer classes are not as homogenous as single-family users, nor as readily attributable to inefficient use of water. Accordingly, uniform

² System capacity is the system's ability to supply water to all delivery points at the time when demanded. The time of greatest demand is known as peak demand.

³ Referred to as price elasticity, consumers respond to this price signal by reducing their consumption to reduce their costs. See American Water Works Association, Principles of Water Rates, Fees, and Charges – Manual of Water Supply Practices M1, p. 215 (6th ed. 2012).

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consumption (variable/HCF) rates were selected for the other customer classes, as is common in the industry.

Compliance with Court Decisions

The proposed rates comply with court decisions that have addressed the cost of service and proportionality requirements of Article XIII D, section 6(b). In particular, the rates comply with the decision in *Capistrano Taxpayers Association v. City of San Juan Capistrano*, 235 Cal. App. 4th 1493 (2015) (“*Capistrano*”). In that case, the court acknowledged multiple times in its opinion that tiered rates are “consonant” with and “not incompatible” with Article XIII D, section 6(b), provided the rates reasonably reflect the cost of service attributable each parcel. (*Capistrano*, 235 Cal. App. 4th at 366, fn. 6 (2015) (“As we will say numerous times in this opinion, tiered water rates structures and Proposition 218 are thoroughly compatible ‘so long as’ ... those rates reasonably reflect the cost of service attributable to each parcel.”).) The Study has identified through its tiered rate structure what the incremental costs of providing water at a given level of usage are, and are designed to pass on the true marginal cost water to those consumers whose extra use of water forces the Authority to incur higher costs to supply that extra water. As the *Capistrano* court explained, Proposition 218’s proportionality requirement is satisfied where the “costs of given usage levels ... require [the agency] to tap more expensive supplies,” and the agency then “bill[s] users in those tiers accordingly.” 235 Cal. App. 4th at 1499, 1516 The Study includes these supply cost breakdowns that were missing in *Capistrano* and allocates the different water supply source costs to the respective tiers. Notably, the Authority’s supply costs for each water supply source are provided in Table 6-5 of the Study (p. 33), which are then reflected in a derivation of the supply costs by each single-family tier. (Study, Table 6-6, p. 34.) The supply costs of the Authority’s National City Wells are allocated to water use within Tier 1; supply costs of the Authority’s Reservoir Water are allocated to water use within Tier 2 and Tier 3; and supply costs of developing desalinated water to ensure water reliability are allocated to water use within Tier 4. The remaining price difference between tiers is determined by the peaking rate and cost of conservation programs allocated to higher water users resulting from demand placed on the system by such users. As summarized in the Study, the Tier 1 rate is set using the lowest cost water sources, has the lowest peaking unit rate, and no conservation costs. Tiers 2-4 assign progressively higher costs to those who place more demands on the system and generate the associated costs.

Board Adopted FY 2018-19 Budget

The proposed water rates would go into effect January 1, 2019, and are a direct result of the Board adopted FY 2018-19 Budget. The Authority’s budget includes five-year financial projections and a detailed operating expense and capital investment budget to determine the annual revenue requirement. The FY 2018-19 Budget was approved by the Board on June 13, 2018 and provides for a revenue requirement of \$57,279,200.

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Summary of Board Actions

The following is a summary of Board Action as it relates to the proposed water rates.

Date	Board Action
January 10, 2018	Evaluated multi-year budget and pass-through costs
February 14, 2018	Directed the General Manager to conduct a new Five-year Water Rate Study and authorize execution of agreement extension with Raftelis Financial Consultants for preparation of the new Five-year Water Rate Study
March 14, 2018	Received Five-year Water Rate Study Calendar of Events
March 28, 2018	Added scope for two additional rate models for a total of three
April 4, 2018	Introduction of Five-year Water Rate Study: <ul style="list-style-type: none"> • Water Rate 101 • Pricing objective exercise to evaluate fixed/variable allocations • Review process to establish base water rate with five years of pass-through and inflationary adjustments • FY 2018-19 Water Supply Assumptions • Community Open House events
April 11, 2018	Formalized direction on alternatives for pricing objective principles
May 2, 2018	Summary overview of draft Five-year Water Rate Study
May 9, 2018	<ul style="list-style-type: none"> • Selected pricing objective principle • Directed staff to finalize the Five-year Water Rate Study
May 22, 2018	Community Open House #1
May 23, 2018	<ul style="list-style-type: none"> • Directed staff to finalize FY 2018-19 Budget • Received update on outreach efforts
May – August 2018	Conducted outreach efforts: <ul style="list-style-type: none"> • Provided informational presentations on water rates to 18 groups after sending invitations to more than 34 stakeholder groups • Promoted Community Open House events via postcards, bill envelopes, Proposition 218 notice, community calendars, social media, paid advertisements, print media, and a radio public service announcement
June 13, 2018	Adopted FY 2018-19 Budget; accepted and filed the Five-year Water Rate Study; directed staff to Issue a Notice Pursuant to Proposition 218; and set a Public Hearing to Approve Changes to the Rates for Water Service Charges
August 9, 2018	Community Open House #2
August 20, 2018	Public Hearing to approve changes to Rates of Water Service Charges to be effective January 1, 2019

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FISCAL IMPACT

The proposed water rates will provide funding for a revenue requirement from rates of \$57,279,200 to fund the Authority's FY 2018-19 Operating and Capital Investment Budget. To keep up with rising costs due to inflation, the Authority is proposing to authorize the Governing Board to increase the rates for the Authority's Commodity Charge for a five-year period commencing January 1, 2020, and on each January 1 thereafter through and including January 1, 2024, in an amount equal to the twelve-month change in the Consumer Price Index for the San Diego Area as of June 30 of the preceding year. To keep up with wholesale increases by SDCWA in the cost of purchasing water, the Authority is also proposing to authorize the Governing Board to increase the SDCWA Wholesale Water Purchase Charge, commencing January 1, 2020, and at any time thereafter through and including December 31, 2024, to pass through any cost increases by SDCWA.

POLICY/STRATEGIC PLAN OBJECTIVE

Goal #3 – Financial Viability, Ensure the long-term financial viability of the agency.

Objective FV1: Develop an annual budget that determines yearly expenditures, incorporates a five-year projection to track fiscal stability, and guides rate-setting decision-making.

ALTERNATIVES

- 1) Adopt Resolution 18-15 Adopting Water Rates and Charges.
- 2) Direct staff to: A) Modify the FY 2018-19 Budget and associated Detailed Work Plan as necessary to cover purchased water expenses and B) Conduct a new water rate study.

RECOMMENDATION

Staff recommends that the Governing Board adopt Resolution 18-15 Adopting Water Rates and Charges.

- Attachments:
1. Memo - Outreach Efforts for Five-year Water Rate Study
 2. Resolution 18-15, Adopting Water Rates and Charges
 3. Proposition 218 Notice
 4. 2018 Water Rate Study



BOARD INFORMATION

TO: Governing Board
FROM: Management
DATE: August 17, 2018
SUBJECT: Outreach Efforts on Five-year Water Rate Study in Preparation for Public Hearing

SUMMARY

Authority staff has been working on an extensive outreach effort to publicize the Authority Rate Study and Prop 218 Hearing. Outreach memos have been provided to the Board since May 2018. This memo is a cumulative summary of the campaign.

April 2018: 275 reached

- Announced Community Open House at:
 - First Friday Breakfast-75
 - Mexican American Business Professionals Association (MABPA)-100
- Showed Vote of Support for City/Port Bayfront Development at Chula Vista City Council Meeting-100

May 2018:> 145,292 reached

- Poster for Community Open House display in lobby; flyers in lobby brochure racks -3,750/month
- News Flash created and sent to subscribers through Authority's website
- Social Media postings
 - Facebook event created and posted
 - Posted event to Twitter
 - Posted event on Nextdoor
- Social Media reach for Community Open House Promotion
 - Facebook event – 3,305
 - Twitter post – 1,16
 - Newsflash news item – 50
 - Nextdoor – 1,771
- Flyers for Community Open House distributed at:
 - First Friday Breakfast-75
 - SOCOPOW Luncheon-100
 - Chula Vista Community Collaborative
 - South County Association of Marketing Professionals (SCAMP) Meeting - 10

Memo to: Governing Board

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- Mexican American Business and Professionals Association (MABPA)
Meeting-75
- Community Open House event information and flyer added to City of Chula Vista website calendar and included in its CLEAN Newsletter-1,000
- Flyers provided to City of National City for Community Open House and printed copies available at all of its community facilities, and posted on its social media channels-1,000
- Sent email and flyer along presentation request to stakeholder groups identified by staff and Board-34 groups identified
- Direct mail postcards sent to all Authority Customers-33,000 account holders
- Community Open House advertisement printed in La Prensa-100,000
- Community Open House Event on May 20 (see attached summary report)
- Community Open House poster and flyers in lobby (for August Open House)– 3,750/month
- Posted August 9 Community Open House event on Authority's Twitter and Facebook accounts

June 2018: > 56,750 reached

- Community Open House poster and flyers in lobby (for August Open House) – 3,750/month
- Customer bills/envelope advertisement for Community Open House* (ran from June 1 through July 20-5,000 bills mailed)
 - *Error from mail processing facility; not all ads printed
- Community Open House flyers - distributed at outreach table at Mabuhay Festival, Saturday June 2-1,000
- Prop 218 mailed to Authority customers and property owners-(47,000 mailed)
- Press release on Prop 218 Hearing and budget approval sent to media list
- Open House banners posted at Administration Building and Reynolds Facility

July 2018: > 47,245 reached

- Article about Prop 218 Hearing, Community Open House and budget approval published in the San Diego Union-Tribune
- Invite letter for speaking engagements and an invitation to the Community Open House sent to 34 stakeholder groups identified by Governing Board and Staff
- Community Open House calendar item added to City of Chula Vista City electronic calendar
- Newsflash sent to Authority website subscribers
- Community Open House event posted on Nextdoor

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- Open House flyer included in Chula Vista Chamber of Commerce e-blast (800+recipients)
- Attended Lumpia Club meeting and announced Community Open House and distributed flyers (45 guests)
- Ad placed in La Prensa (published on July 27) circulation-40,000
- Hometown Magazine-posted on Facebook (Reach - 1,400)

August 2018 > 98,580 reached

- Ad placed in La Prensa (published on August 3) circulation-40,000
- Ad placed in The Star News (published on August 3) circulation-33,500
- Ad placed in Filipino Press (published on August 3) circulation-25,000
- Flyers for Community Open House distributed at South County Economic Development Council (80+ recipients)
- Community Open House event on August 9 (see attached summary report)

2018 Rate Presentations

Presentation Date	Group	Attendees
May 30, 2018	Chula Vista Chamber of Commerce Policy Committee	6
June 5, 2018	South County Economic Development Council	75
June 7, 2018	Pacific Southwest Realtors Association	12
June 13, 2018	Chula Vista Chamber of Commerce Board	15
June 15, 2018	Albondigas South County	17
June 19, 2018	National City Rotary Club	30
June 28, 2018	Bonita Optimists	25
June 29, 2018	Chula Vista Rotary Club	27
July 5, 2018	National City Chamber of Commerce Economic Development Committee	25
July 11, 2018	Third Avenue Village Association	17
July 12, 2018	El Toyon Neighborhood Council	15
July 18, 2018	Sweetwater and Bonita Kiwanis Clubs (Joint Meeting)	35
July 18, 2018	Las Palmas Neighborhood Council	8
August 1, 2018	Kimball Neighborhood Council	15
August 1, 2018	Supervisor Greg Cox (staff briefing)	2
August 1, 2018	Sweetwater Valley Civic Association	45

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Presentation Date	Group	Attendees
August 8, 2018	Chula Vista Chamber of Commerce Board	25
August 14, 2018	City of Chula Vista City Council	50

Total Presentations: > 444 reached

FISCAL IMPACT

Monies for these activities have been funded through the FY 2017-18 and FY 2018-19 Public Affairs Budgets.

POLICY/STRATEGIC PLAN OBJECTIVE

The Community Open Houses and outreach efforts were approved in the current rate study. The Governing Board approved a contract and scope of work for the Rate Study with Raftelis on February 14, 2018.

CONCLUSION

This is an information item.

Attachment: Open House Summary Report



August 9, 2018

Open House Summary Report

Community outreach goals

- To clearly communicate why Sweetwater Authority is conducting a rate study, while engaging customers and stakeholders in learning more about their water system.
- To provide a way for Sweetwater Authority Directors and staff to listen to customers and stakeholders in advance of acting on recommendations in the rate study.
- To build customer understanding by focusing on the services Sweetwater Authority provides to bring water to their taps every day; how Sweetwater Authority proactively maintains and improves the water system; and the major capital projects that drive additional revenue needs.



Summary of public consultation

- This was the second open house Sweetwater Authority hosted to explain the water system and rate study.
- The August 9 open house had 67 attendees (excluding Directors and employees)
- A total of 14 comment forms were returned, all of which were from customers.
- Attendees learned of the open house through a wide variety of communication channels including news media, community meetings, social media and water bills

Attendee distribution

Addresses for each household were mapped to Director divisions.

Each division was represented:

- Division 1- 3 households
- Division 2- 1 household
- Division 3- 1 household
- Division 4- 8 households
- Division 5- 8 households
- National City- 5 households
- Other guests (not SWA customers)- 6 households

Understanding of water pricing

Q. Which ONE of the following statements best describe how well you understand the way Sweetwater Authority determines the price you pay for water?

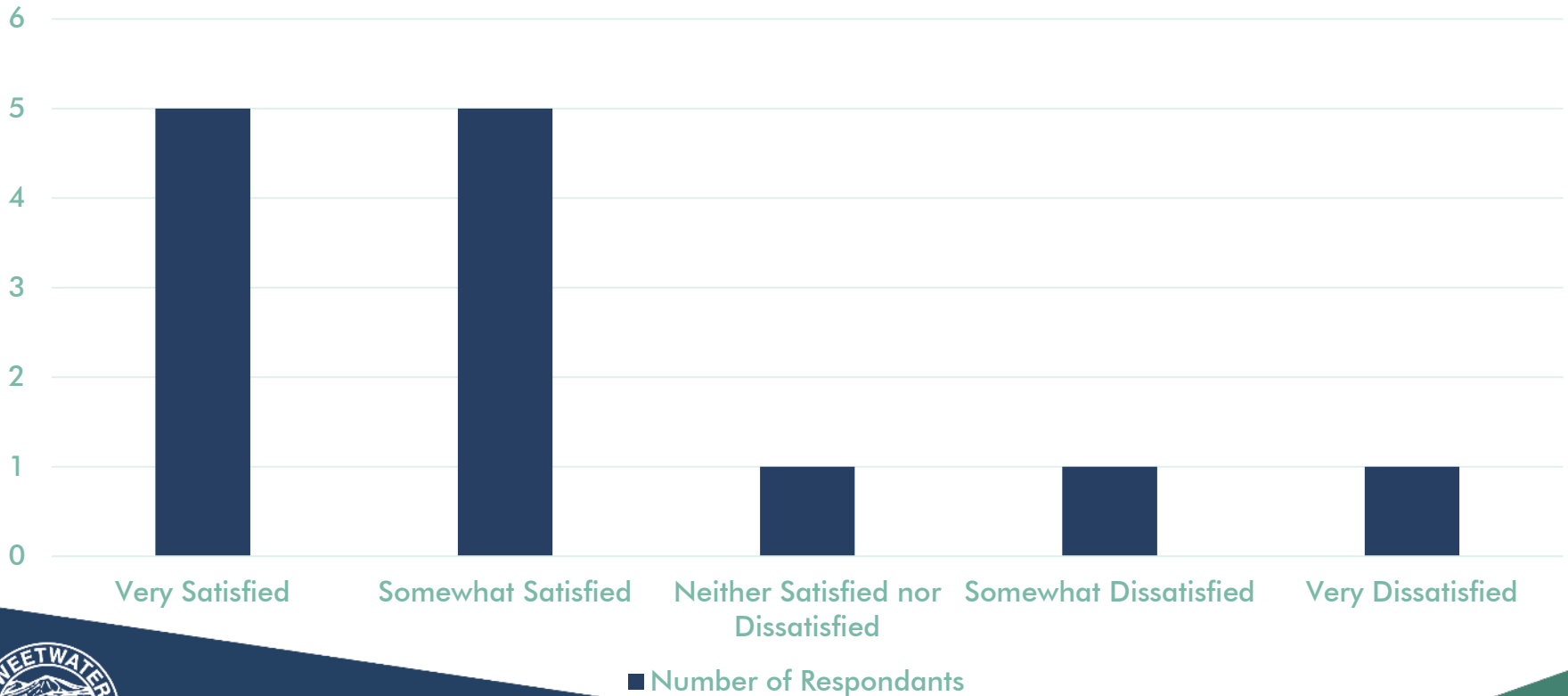
9 respondents said they had a strong understanding of how Sweetwater Authority determines the price they pay for water.

4 respondents said they had a limited understanding of how Sweetwater Authority determines the price they pay for water.

0 respondents said they had no understanding of how Sweetwater Authority determines the price they pay for water.

Satisfaction with value of service

Q. Thinking about what you get (the quality of water and water services) for what you pay (the total amount due), how satisfied are you with the **value** of Sweetwater Authority services for the price paid?



Rate increase preferences

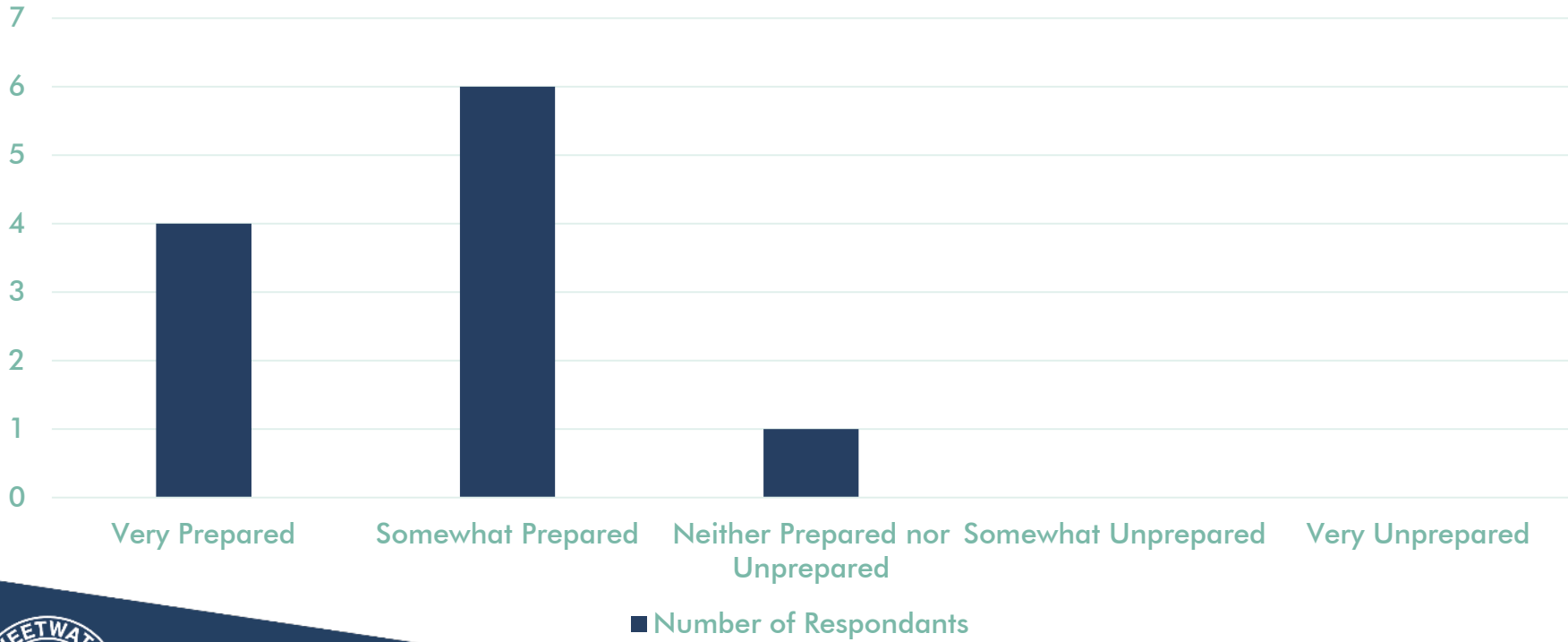
Q. National research shows that the cost of providing high-quality water and water service will increase in the future. Which ONE of the following statements best describes your preference for passing along any price increases?

5 respondents said they preferred smaller, more frequent increases in payments (such as on an annual basis)

5 respondents said they preferred larger, less frequent increases in payments (such as every few years)

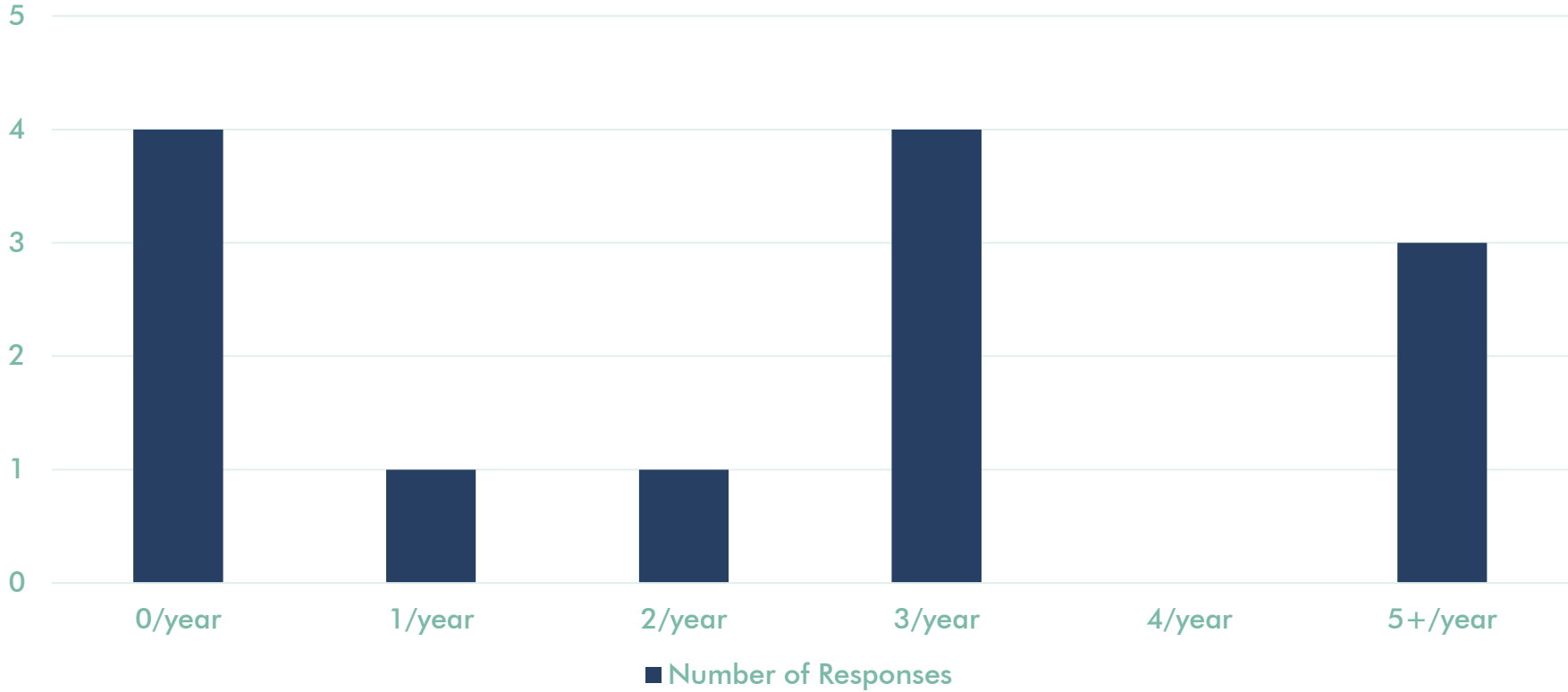
How prepared is Sweetwater Authority for the future?

Q. How prepared do you think Sweetwater Authority is to provide a secure water future for your community?



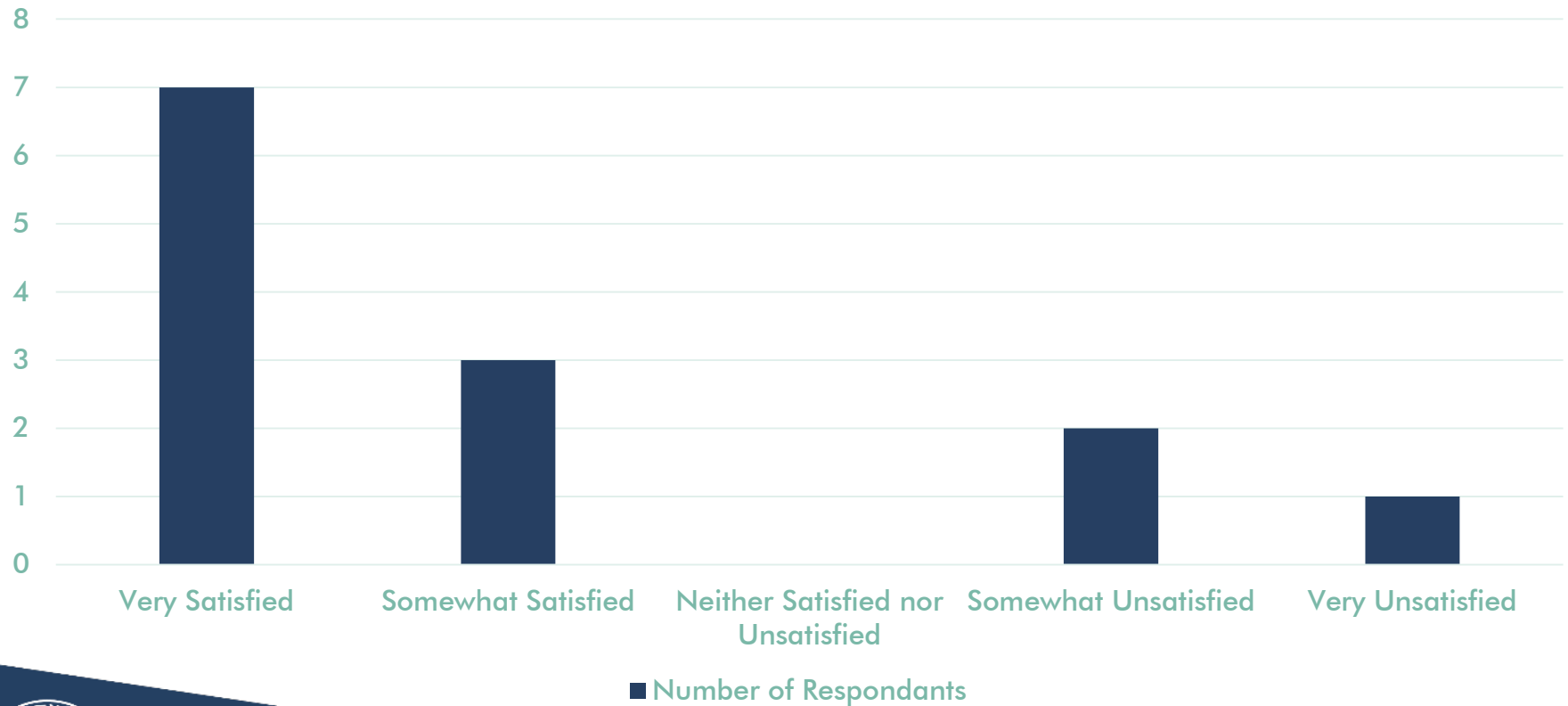
How often do you interact with Sweetwater Authority?

Number of Responses



Satisfaction with Sweetwater Authority

Q. Overall, how satisfied are you with Sweetwater Authority?



Themes

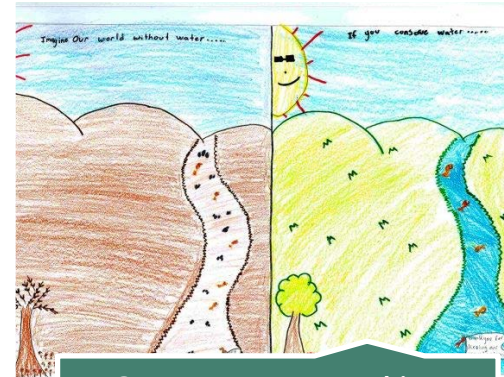
Comments fell into three main themes:



Some customers expressed satisfaction with their service



Some customers expressed concerns about utility costs



Customers are seeking information related to water conservation and supply

Verbatim comments – need more info?

- This open house helped me to better understand where our water comes from and how it is distributed to me
- Spring Valley? How do you secure future water in Spring Valley? Do you cover within that area?
- More information to the public about safety of tap water as drinking water. More information about the work of Sweetwater Authority.
- Employee costs
- No, you did a great job, very clear.
- Possibility of an RO plant converting ocean water to drinking water?
- Tiered rate criteria and definition or expectations of water use for outside use, e.g. landscape, swimming pools, animals, etc.
- No, this was fully explained to me

Verbatim comments - other

- How many water reservoirs do we have?
- (Utility is) not cost effective
- I appreciate advanced technology and environmental awareness used by Sweetwater
- Expansion plans for the future resorts on the bay
- Just keep us informed of any changes that affect us. It was a good experience.
- Health care for directors – no.
- What else can we do to reduce our water usage? Are we wasting water someplace that we can correct?

Open House Summary Report



RESOLUTION 18-15

RESOLUTION OF THE GOVERNING BOARD OF SWEETWATER AUTHORITY ADOPTING WATER RATES AND CHARGES

RECITALS

WHEREAS, Sweetwater Authority (the Authority) is a Joint Powers Agency created by a Joint Powers Agreement between the South Bay Irrigation District and the City of National City entered into pursuant to Government Code Section 6500 et seq.; and

WHEREAS, pursuant to the Joint Powers Agreement, the Authority exercises powers of an Irrigation District under the Irrigation District Law and is authorized to fix and collect charges for the provision of water service pursuant to Water Code Section 22280; and

WHEREAS, the Authority is committed to maximizing value for its rate payers in accordance with its mission and vision; and

WHEREAS, the Authority has not raised water rates since 2015; and

WHEREAS, the expenses incurred by the Authority have been increasing: the cost of water, which represents one-fourth of expenses in the coming year, has increased 22 percent in the last five years and costs to repair and replace aging pipes, which represent almost one-fifth of expenses in the coming year, are up 42 percent since 2013; and

WHEREAS, based on cost containment policies implemented by the Board, the Authority overhead expenses have only increased two percent cumulatively since 2013; and

WHEREAS, the Authority performed an evaluation of costs necessary to continue providing safe and reliable drinking water and accepted the Five-year Water Rates Study on June 13, 2018; and

WHEREAS, based on this evaluation, it has been determined that increases to the rates for its water service charges are necessary to recover the Authority's costs of providing water service; and

WHEREAS, the Authority performed outreach to its rate payers through a comprehensive plan which included 18 community presentations and two Open House events; and

WHEREAS, the Chula Vista Chamber of Commerce Board unanimously supports the proposed rate increase based on the Authority's demonstrated ability to control costs and its transparency as demonstrated through its robust outreach program; and

WHEREAS, pursuant to California Constitution Article X, section 2, 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; and

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WHEREAS, California Water Code Section 375 et seq. authorizes water suppliers to adopt and enforce a comprehensive water conservation program to conserve the water resources and encourage water conservation through rate structure design; and

WHEREAS, pursuant to California Water Code Section 375 et seq., the Governing Board adopted Resolution 09-12 on May 27, 2009, adopting a water conservation and drought response program, which remains in full force and effect and is incorporated herein by this reference; and

WHEREAS, the Authority derives water primarily through locally developed sources of supply, including local surface water and groundwater, and also indirectly purchases water from the Metropolitan Water District of Southern California (MWD) through the San Diego County Water Authority (SDCWA); and

WHEREAS, MWD imposes on the Authority: (1) a Readiness-to-Serve Charge (MWD-RTS) and (2) a Capacity Charge (MWD-CC). The MWD-RTS is imposed on the Authority as an allocation of MWD's cost to provide peak capacity within MWD's distribution system. The MWD-CC is imposed on the Authority as an allocation of MWD's costs associated with standby and peak conveyance capacity and system emergency storage capacity. These MWD charges are determined on the basis of multi-year averages of the amount of water purchased by the Authority from SDCWA; and

WHEREAS, SDCWA imposes on the Authority: (1) an Infrastructure Access Charge (IAC); (2) a Customer Service Charge (CSC); and (3) an Emergency Storage Charge (ESC). The IAC is a fixed charge that is established on the basis of the size of the customer's meter and is imposed on the Authority as an additional source of revenue to SDCWA to provide better coverage for SDCWA's projected fixed costs. The CSC is imposed on the Authority as an allocation of SDCWA's customer service related costs. The ESC is imposed on the Authority as an allocation of SDCWA's costs for its emergency and carryover water storage program to provide sufficient water to the region in the event of an emergency. These latter two charges are determined on the basis of a three-year rolling average of the amount of water purchased by the Authority from SDCWA; and

WHEREAS, the Governing Board seeks to have the Authority pass the MWD-RTS, MWD-CC, IAC, CSC, and ESC (collectively referred to herein as the "Pass-Throughs") imposed by MWD and SDCWA on the Authority through to customers, and authorize adjustments to the Pass-Throughs to account for increased costs from MWD and SDCWA commencing January 1, 2020, through and including December 31, 2024; and

WHEREAS, the Governing Board adopted Resolution 15-20, on August 31, 2015, adopting rates for water service charges for the Authority; and

WHEREAS, the Governing Board seeks to adopt new rates for its water service charges commencing January 1, 2019, and to further authorize automatic annual adjustments to account for rising costs of providing water service for a five-year period, commencing January 1, 2020, and each January 1 thereafter through and including January 1, 2024; and

RESOLUTION 18-15

WHEREAS, the proposed rate structure for the water service charges has four customer classes – (1) single-family residential customers, (2) multi-family residential customers, (3) public agency customers, and (4) commercial customers. The proposed rate structure for each customer class is comprised of two components: (1) a Readiness-to-Serve Charge and (2) a Commodity Charge, which includes the Authority's Commodity Charge and the SDCWA Wholesale Water Purchase Charge. Customers with a separate fire service lateral will also have a Private Fire Service Charge; and

WHEREAS, the proposed Readiness-to-Serve Charge is a fixed service charge established on the basis of the size of a meter serving a property and is calculated to recover the Authority's fixed costs, such as the costs of billings and collections, customer service, meter reading, and meter maintenance, as well as capital and infrastructure costs; and

WHEREAS, for single-family residential customers, the proposed Commodity Charge is a variable water usage charge calculated on the basis of the cost of providing water service and consists of four (4) tiers which will impose higher rates per hundred cubic feet ("HCF") of water usage as the level of water consumption increases, and for all other customers, the proposed Commodity Charge is a uniform rate per HCF of water usage; and

WHEREAS, the Commodity Charge is proposed to have two charge components: (1) the Authority's Commodity Charge, which covers the cost of treating and distributing water from any of the Authority's sources, including imported water, and (2) the SDCWA Wholesale Water Purchase Charge, which includes the SDCWA Municipal and Industrial Supply Rate, Transportation Rate, and Treatment Rate, and covers the cost of purchasing and importing water from SDCWA when necessary; and

WHEREAS, for customers with a separate fire service lateral, the proposed Private Fire Service Charge is a condition of providing water service upon the request of the customer or property owner for delivery of water to the property for the purpose of fire protection service and is a bi-monthly fixed charge determined by the size of the separate private fire protection lateral serving the property; and

WHEREAS, the Authority anticipates that SDCWA and MWD will increase the rates of the Pass-Throughs and the SDCWA Wholesale Water Purchase Charge, and in order to ensure that there are sufficient revenues to provide water services to customers, the Authority proposes to annually pass through to customers any increases in the Pass-Throughs and the SDCWA Wholesale Water Purchase Charge for a five-year period commencing January 1, 2020, and any time thereafter through and including December 31, 2024, to reflect any such increases by SDCWA and/or MWD, provided however that the Authority shall not increase the Pass-Throughs or the SDCWA Wholesale Water Purchase Charge in any year by more than 10 percent in such year, in no event shall the rates be increased by more than the cost of providing water service, and the Authority will provide customers at least 30 days written notice prior to an increase (each a "Wholesale Pass-through Adjustment"); and

WHEREAS, the Authority further anticipates that, as a result of inflation and other cost increases, the cost of providing water service will increase annually, and in order to ensure that there are sufficient revenues to provide water services to customers, the Authority proposes to annually adjust the Readiness-to-Serve Charge, the Authority's Commodity

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Charge, and the Private Fire Service Charge for a five-year period commencing January 1, 2020, and each January 1 thereafter through and including January 1, 2024, in accordance with the twelve-month change in the Consumer Price Index for the San Diego Area as of June 30 of the preceding year, provided, however, that the Authority shall not increase the rates for the Readiness-to-Serve Charge, the Authority's Commodity Charge, or the Private Fire Service Charge by more than 10 percent in such year, in no event shall the rates be increased by more than the cost of providing water service, and the Authority will provide customers at least 30 days written notice prior to an increase (the "Inflationary Adjustments"); and

WHEREAS, the revenues derived from the water services charges (with such term defined to include the Readiness-to-Serve Charge, the Authority's Commodity Charge, the SDCWA Wholesale Water Purchase Charge, the Private Fire Service Charge, and the Pass-Throughs) will not exceed the funds required to provide the services and shall be used exclusively for the operation and maintenance of the water systems; and

WHEREAS, the water service charges are equitable to all customer classes; and

WHEREAS, the amount of the proposed water service charges will not exceed the proportional cost of the services attributable to each parcel upon which they are proposed for imposition; and

WHEREAS, the proposed water service charges will not be imposed on a parcel unless the services are actually used by, or immediately available to, the owner of the parcel; and

WHEREAS, Article XIII D, section 6 of the California Constitution ("Article XIII D") requires that prior to imposing any new property-related fee such as the water service charges, or increase to existing water service charges, the Authority shall provide written notice (the "Notice") by mail of the proposed increases to the water service charges to the record owner of each parcel upon which the water service charges are proposed for imposition and any tenant directly liable for payment of the water service charges, the amount of the water service charges proposed to be imposed on each parcel, the basis upon which the water service charges were calculated, the reason for the water service charges, and the date time and location of a public hearing (the "Hearing") on the proposed water service charges; and

WHEREAS, pursuant to Article XIII D, such Notice is required to be provided to the affected property owners and tenants directly liable for the payment of the water service charges not less than forty-five days prior to the Hearing on the proposed Charges; and

WHEREAS, the Authority did provide such Notice to the affected property owners and tenants in compliance with Article XIII D; and

WHEREAS, in addition, the Authority held public workshops on May 22, 2018 and August 9, 2018 for the purpose of providing an opportunity for the public to hear about the proposed water service charges and provide input on such water service charges prior to the date of the Hearing; and

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WHEREAS, at the Hearing, the Governing Board considered all written materials and written protests to the proposed new or increased water service charges received prior to the close of the Hearing, and heard oral testimony concerning the establishment and imposition of the proposed water service charges, and at the close of the Hearing the Authority determined that it did not receive written protests against the establishment and imposition of the proposed water service charges from a majority of the affected property owners or tenants directly liable for the payment of such water service charges; and

WHEREAS, the Governing Board now desires to adopt the water service charges in the maximum amounts and on the dates set forth in Exhibit A, effective January 1, 2019; and

WHEREAS, the Governing Board further desires to authorize the Wholesale Pass-Through Adjustments for the Pass-Throughs for a five-year period, commencing on January 1, 2020, through and including December 31, 2024, and to authorize the Inflationary Adjustments for a five-year period, commencing on January 1, 2020, and each January 1 thereafter through and including January 1, 2024, all subject to the limitations included herein;

NOW, THEREFORE, BE IT HEREBY RESOLVED, DETERMINED, AND ORDERED by the Governing Board of the Authority as follows:

Section 1. The matters set forth in the Recitals to this Resolution are true and correct statements and are incorporated as an operative part of this resolution and made findings and determinations of the Governing Board.

Section 2. The Governing Board of the Authority has been presented with data showing the estimated reasonable costs of providing water service and data showing the revenue sources available to cover the costs of providing such water service.

Section 3. The rates for water service charges set forth in the Schedule of Water Rates attached hereto as Exhibit "A" are hereby adopted. Such rates shall be in effect commencing January 1, 2019, and shall be included in the Supplement to the Authority's Rates and Rules, and the General Manager of the Authority is hereby authorized and directed to: (1) revise the Supplement to the Authority's Rates and Rules to reflect the new Schedule of Water Rates, effective January 1, 2019; and (2) take all actions necessary to implement and collect the new Schedule of Water Rates for all water delivered after such effective date.

Section 4. Inflationary and Wholesale Pass-Through Adjustments.

(a) The Authority is hereby authorized to implement any Wholesale Pass-Through Adjustment, commencing January 1, 2020, and any time thereafter through and including December 31, 2024, provided, however, that (1) any increase in the rates for the Pass-Throughs or the SDCWA Wholesale Water Purchase Charge shall not exceed 10 percent for such year, (2) in no event shall such rates be increased as a result of a Wholesale Pass-Through Adjustment by more than the cost of providing water service, and (3) prior to implementing any Wholesale Pass-Through Adjustment, the Authority shall provide written notice of such Wholesale Pass-Through Adjustment to the Authority's customers not less than 30 days prior to the effect date of the

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adjustment.

(b) The Authority is hereby authorized to implement any Inflationary Adjustment, commencing January 1, 2020, and each January 1 thereafter through and including January 1, 2024, in accordance with the 12 month change in the Consumer Price Index for the San Diego Area as of June 30 of the preceding year, provided, however, that (1) any increase in the rates for the water service charges subject to the Inflationary Adjustment shall not exceed 10 percent for such year, (2) in no event shall such rates be increased as a result of an Inflationary Adjustment by more than the cost of providing water service, and (3) prior to implementing any Inflationary Adjustment, the Authority shall provide written notice of such Inflationary Adjustment to the Authority's customers not less than 30 days prior to the effect date of the adjustment.

(c) On or before the effective date of any future Wholesale Pass-Through Adjustment or any Inflationary Adjustment, the General Manager is hereby authorized and directed to: (1) revise the Supplement to the Authority's Rates and Rules to reflect the new Schedule of Water Rates, effective January 1 of each year; and (2) take all actions necessary to implement and collect the new Schedule of Water Rates for all water delivered after such effective date.

Section 5. The Governing Board finds that the water service charges, including any Inflationary and Wholesale Pass-Through Adjustments to such water service charges, will result in revenue to the Authority, taking into consideration the estimated reasonable costs of providing water service and the sources of revenue available to the Authority to cover the costs of such services, which will not exceed the estimated costs of the services for which the water rates are charged.

Section 6. The Governing Board finds that the water service charges, including any Pass-Through Adjustments to such charges, taking into consideration the estimated reasonable costs of providing all services by the Authority and the sources of revenue, therefore, will result in a fair and reasonable revenue program, reasonably allocating the cost of water services to those who receive service.

Section 7. The Governing Board finds that the water service charges, including as adjusted in the future by any Inflationary and Wholesale Pass-Through Adjustments, established by this Resolution are for the purposes of: (A) meeting operational expenses; (B) purchasing or leasing supplies, equipment, or materials; (C) meeting financial reserve needs and requirements; and (D) obtaining funds for capital projects necessary to maintain service within existing service areas, as set forth in this Resolution, and more particularly described in the Authority's Budget for the Fiscal Year 2018-19, and therefore, the establishment of such rates is not subject to the California Environmental Quality Act.

Section 8. The Governing Board finds that: (1) the revenue derived from the water service charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, established by this Resolution does not exceed the funds required to provide water services; (2) the revenue derived from the water service

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charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, established by this Resolution is not used for any other purpose than that for which the service fees are imposed; (3) the amount of the water service charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, imposed on parcels within the Authority do not exceed the proportional cost of providing water service to parcels within the Authority; and (4) the water service charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, are imposed for water services which are immediately available to Authority customers and are not levied for general governmental services.

Section 9. If any section, subsection, subdivision, sentence, clause, or phrase in this Resolution or any part thereof is for any reason held to be unconstitutional, invalid, or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Resolution or any part thereof. The Governing Board hereby declares that it would have adopted each section irrespective of the fact that any one or more subsections, subdivisions, sentences, clauses, or phrases be declared unconstitutional, invalid, or ineffective.

Section 10. To the extent any water service charges, including the Pass-Throughs, established by this Resolution are inconsistent with any other fee or charge previously adopted by the Governing Board, it is the explicit intention of the Governing Board that the water service charges, including the Pass-Throughs, adopted pursuant to this Resolution shall prevail. Except as otherwise provided herein, all other rates for Authority's water service charges, including any authorization to pass through increases in the wholesale cost of water purchased from the San Diego County Water Authority, shall remain in full force and effect.

Section 11. This Resolution shall take effect upon its adoption.

ADOPTED, SIGNED, AND APPROVED this 20th day of August 2018, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

Teresa Thomas, Chair

Attest:

Janet Gonzalez, Board Secretary

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**EXHIBIT "A" TO RESOLUTION 18-15
SCHEDULE OF WATER RATES (EFFECTIVE January 1, 2019)**

**Readiness-to-Serve Charge and SDCWA Infrastructure Access Charge
All Customer Classes - Proposed Rates Effective 1/1/2019**

Meter Size (Inches)	Sweetwater Authority Rates for Bi-Monthly Fixed Charge	SDCWA Rates for Bi-Monthly Infrastructure Access Fixed Charge
5/8 ⁽¹⁾	\$18.73	\$6.02
1	\$27.88	\$9.64
1½	\$44.15	\$18.06
2	\$62.44	\$31.30
3	\$118.91	\$57.80
4	\$200.68	\$98.74
6	\$403.93	\$180.60
8	\$665.97	\$313.04
10	\$1,013.03	\$469.56

Commodity Charges

Single-Family Residential Proposed Rates Effective 1/1/2019	Variable Rate for Bi-Monthly Sweetwater Authority Charge	Variable Rate for Bi-Monthly SDCWA Wholesale Water Purchase Charge
Tiers by Units of Water Served	\$/HCF ⁽²⁾	\$/HCF
Tier 1 0-10 HCF	\$3.72	\$1.05
Tier 2 11-16 HCF	\$4.43	\$1.25
Tier 3 17-27 HCF	\$4.56	\$1.28
Tier 4 28+ HCF	\$5.50	\$1.55
Proposed Rates For All Other Customers Effective 1/1/2019	Uniform Rate for Bi-Monthly Sweetwater Authority Charge	Uniform Rate for Bi-Monthly SDCWA Wholesale Water Purchase Charge
Customer Class	\$/HCF	\$/HCF
Multi-family Residential	\$5.10	\$1.43
Commercial	\$4.87	\$1.37
Public Agency	\$6.02	\$1.69
Construction	\$7.36	\$2.07

(1) Typical residential meter size

(2) HCF = One hundred cubic feet or 748 gallons of water

**EXHIBIT "A" TO RESOLUTION 18-15
SCHEDULE OF WATER RATES (EFFECTIVE January 1, 2019)**

SDCWA and MWD Volumetric Pass-through Charges

Uniform Rate for Bi-Monthly Pass Through Charge Proposed Rates Effective 1/1/2019	SDCWA Customer Service Charge	SDCWA Emergency Storage Charge	SDCWA Supply Reliability Charge	MWD Readiness To Serve Charge	MWD Capacity Charge
All Customer Classes	\$/HCF \$0.11	\$/HCF \$0.30	\$/HCF \$0.11	\$/HCF \$0.03	\$/HCF \$0.02

Private Fire Service Charge

Proposed Rates Effective 1/1/2019	
Lateral Size	Bi-Monthly Charge
1 inch	\$1.02
1½ inch	\$2.96
2 inch	\$6.31
3 inch	\$18.33
4 inch	\$39.06
6 inch	\$113.45
8 inch	\$241.77
10 inch	\$434.78
12 inch	\$702.30

NOTICE OF PUBLIC HEARING AND RATE ADJUSTMENTS



August 20, 2018
6:00 p.m.



505 Garrett Avenue
Chula Vista, California 91910

The Governing Board of Sweetwater Authority (Authority) will conduct a public hearing on **August 20, 2018 at 6:00 p.m.**, in the Board Room of the Authority's administrative office, located at **505 Garrett Avenue, Chula Vista, California 91910**, to consider adjusting the rates for its water service charges. The proposed rates are described in this notice.

Any property owner of a parcel upon which the water service charges are pro-

posed for imposition or any tenant directly liable for the payment of water service charges (i.e., a water customer who is not a property owner) may submit a written protest to the proposed adjustments to the rates of the Authority's water service charges described in this notice; however, only one protest will be counted per identified parcel. Any written protest must: (1) state that the identified property owner or tenant is opposed to the proposed rate adjustments; (2) provide the location of the identified parcel (by street address or assessor's parcel number); and (3) include the name and signature of the property owner or tenant submitting the protest. Written protests may be submitted by mail or in person to the Board Secretary at Sweetwater Authority, 505 Garrett Avenue, Chula Vista, California 91910, or at the public hearing, so long as they are received prior to the close of the public hearing. Any protest submitted via e-mail or other electronic means will not be accepted.

The Governing Board will accept and consider all written protests and hear and consider all oral comments to the proposed rate adjustments at the public hearing. Oral comments at the public hearing will not qualify as formal protests unless accompanied by a written protest. Upon the conclusion of the public hearing, the Governing Board will consider adoption of the proposed changes to the rates for water service charges as described herein. If written protests against the proposed rates, as outlined above, are not presented by a majority of the property owners or tenants of the identified parcels subject to the water service charges, the Governing Board will be authorized to adopt the rate adjustments to the water service charges. If approved, the Governing Board will be able to increase rates for a five-year period commencing January 1, 2020, through December 31, 2024, to account for inflation and wholesale cost increases.

REASONS FOR THE RATE ADJUSTMENTS

The Authority provides water service to its customers, and continually strives to maximize cost reductions and better utilization of its assets. The Authority must also be fiscally responsible to ensure financial stability in the years to come. To this end, the Authority engaged an independent consultant to perform a cost of service analysis and rate study for its water service charges. Based on the rate study, the Authority anticipates that rate adjustments to the water service charges are necessary to:

- Recover current and projected costs of operations and maintenance, and capital infrastructure improvements needed to repair and update the Authority's aging water system
- Recover the costs of imported wholesale water and prepare for periods of reduced local water supply
- Maintain operational and financial stability

- Comply with state mandated regulatory requirements
- Meet and comply with annual debt service requirements
- Avoid operational deficits and depletion of reserves

The Authority gets its water primarily through locally developed sources of supply, including local surface water and groundwater. The Authority also purchases water from the San Diego County Water Authority (SDCWA). The amount of water that the Authority must purchase from SDCWA varies from year to year, and depends on the condition and availability of local supply. During wet years, local supply may be sufficient to fully meet all of the Authority's needs. In dry years, however, the Authority will have to purchase significantly more water from SDCWA. Water purchased from SDCWA is more expensive than local water supply.

As a result, the proposed rate structure for the water service charges includes a surcharge equal to the additional cost per unit to purchase water from SDCWA. This charge is necessary to pay for the cost of purchasing SDCWA water during periods of reduced local supply, and to build a rate stabilization reserve to be used to offset future increases in times of reduced local supply.

A copy of the rate study and cost of service analysis providing justification for the proposed rates for water service charges is on the Authority's website and on file at the Authority's Administrative Office. You may also call Customer Service to request a copy.



619-420-1413
www.sweetwater.org

HOW RATES ARE CALCULATED

The Authority's water service charges are billed on a bi-monthly basis. The proposed rate structure for the water service charges has four customer classes: (1) Single-Family Residential; (2) Multi-Family Residential, which includes apartments, condominiums, and mobile homes; (3) Commercial, which includes industrial and institutional; and (4) Public Agency. The proposed rate structure for each customer class is comprised of two components: (1) a Readiness-to-Serve Charge and (2) a Commodity Charge, which includes the Authority's Commodity Charge and the SDCWA Wholesale Water Purchase Charge. Customers with a separate fire service lateral will also have a private fire service charge. In addition, the Authority pays certain charges to the Metropolitan Water District of Southern California (MWD) and SDCWA, which are directly passed through to customers as separate charges, all as described in further detail below.

Readiness-to-Serve Charge (Table A)

The proposed Readiness-to-Serve Charge is a fixed charge that recovers a portion of the Authority's fixed costs in providing water service. The rates for the Readiness-to-Serve Charge are the same for all customer classes, and are determined based on the size of the meter serving the property.

The proposed rates for the Readiness-to-Serve Charge are set forth in Table A at the end of this notice, and are proposed to take effect on January 1, 2019. To keep up with rising costs due to inflation, the Authority is proposing to authorize the Governing Board to increase the rates for the Readiness-to-Serve Charge for a five-year period commencing January 1, 2020, and on each January 1 thereafter through and including January 1, 2024, in an amount equal to the twelve-month change in the US Bureau of Labor Statistics Consumer Price Index for the San Diego Area as of June 30 of the preceding year; provided, however, (1) any increase to the rates for the Readiness-to-Serve Charge may not exceed 10 percent per year; (2) in no event will the rates be increased in any year by more than the cost of providing the respective water service; and (3) the Authority shall provide all customers at least 30 days' written notice prior to implementing any such increase.

Commodity Charge (Table B)

The Authority is proposing two commodity charge components: (1) the Authority's Commodity Charge, which covers the cost of supplying, treating and distributing water from any of the Authority's sources, including imported water, and (2) the SDCWA Wholesale Water Purchase Charge, which includes the SDCWA Municipal and Industrial Untreated Supply Rate, Transportation Rate, and Treatment Rate, and covers the cost of purchasing and importing water from SDCWA when necessary. The SDCWA Wholesale Water Purchase Charge also recovers revenue to fund the Authority's rate stabilization fund, which will be used exclusively to offset impacts of reduced local water supply on rates. Once the Authority has met its rate stabilization fund target, the SDCWA Wholesale Water Purchase Charge will only be imposed to cover the cost of imported water the Authority must purchase from SDCWA, and the Governing Board of the Authority may apply funds in the revenue stabilization fund to offset such charge. The Authority's Commodity Charge and the SDCWA Wholesale Water Purchase Charge are collectively referred to as the Commodity Charges.

For Single-Family Residential customers, the Commodity Charge is a variable water usage charge and consists of four tiers which impose higher rates per one hundred cubic feet (HCF) of water usage as the level of water consumption increases. (One hundred cubic feet is equal to 748 gallons of water.) The rates within each tier are designed to proportionately allocate the incrementally higher costs of providing service to those whose water usage creates greater demands and burdens on the Authority's water system and water

resources and therefore generates additional costs to the Authority for providing water service. The incremental costs incurred by the Authority to meet this additional demand include: sizing, operating and maintaining the water system; developing additional water supplies; and funding water conservation programs.

For the Multi-Family Residential, Commercial, and Public Agency customer classes, the Commodity Charge is a distinct uniform rate per HCF of water usage, because of similarities in usage and demand characteristics for such customers.

The proposed rates for the Commodity Charges are set forth in Table B at the end of this notice, and are proposed to take effect on January 1, 2019. To keep up with rising costs due to inflation, the Authority is proposing to authorize the Governing Board to increase the rates for the Authority's Commodity Charge for a five-year period commencing January 1, 2020, and on each January 1 thereafter through and including January 1, 2024, in an amount equal to the twelve-month change in the Consumer Price Index for the San Diego Area as of June 30 of the preceding year.

To keep up with wholesale increases by SDCWA in the cost of purchasing water, the Authority is also proposing to authorize the Governing Board to increase the SDCWA Wholesale Water Purchase Charge, commencing January 1, 2020, and at any time thereafter through and including December 31, 2024, to pass through any cost increases by SDCWA.

These amounts are the maximum authorized rate for the Commodity Charges in each respective year, but the Governing Board may impose the Commodity Charges at a lower rate. However, (1) any increase to the rates for the Commodity Charges may not exceed 10 percent per year; (2) in no event will the rates be increased in any year by more than the cost of providing the respective water service; and (3) the Authority shall provide all customers at least 30 days' written notice prior to implementing any such increase.

Private Fire Service Charge (Table C)

The Authority imposes the Private Fire Service Charge on certain properties that have a private fire protection lateral. The payment of the charge is a condition of providing water service upon the request of the customer or property owner for delivery of water to the property for the purpose of fire protection service. The Private Fire Service Charge is a bi-monthly fixed charge, and is determined by the size of the separate private fire protection lateral serving the property. The proposed rates for the Private Fire Service Charge are set forth in Table C at the end of this notice, and are proposed to take effect on January 1, 2019.

To keep up with rising costs due to inflation, the Authority is proposing to authorize the Governing Board to increase the rates for the Private Fire Service Charge for a five-year period commencing January 1, 2020, and on each January 1 thereafter through and including January 1, 2024, in an amount equal to the twelve-month change in the Consumer Price Index for the San Diego Area as of June 30 of the preceding year; provided, however, (1) any increase to the rates for the Private Fire Service Charge may not exceed 10 percent per year; (2) in no event will the rates be increased in any year by more than the cost of providing the respective water service; and (3) the Authority shall provide all customers at least 30 days' written notice prior to implementing any such increase.

SDCWA/MWD Pass-Through (Table A & D) Charges and Increases

The Authority indirectly purchases wholesale water from MWD through SDCWA. Regardless of how much water is purchased from SDCWA, SDCWA imposes on the Authority: (1) an Infrastructure Access Charge (IAC); (2) a Customer Service Charge (CSC); (3) an Emergency Storage Charge (ESC); and (4) a Supply Reliability Charge (SRC and, together with the IAC, CSC, ESC, and SRC, the SDCWA Pass-Throughs). The IAC is a fixed charge that is determined

mined based on meter size, and is imposed on the Authority as an additional source of revenue to SDCWA to provide better coverage for SDCWA's projected fixed costs. The CSC is imposed on the Authority as an allocation of SDCWA's customer service related costs. The ESC is imposed on the Authority as an allocation of SDCWA's costs for its emergency and carryover water storage program to provide sufficient water to the region in the event of an emergency. The SRC is imposed on the Authority as an allocation of SDCWA's cost to maintain reliable water supplies. These latter three charges are determined on the basis of a multi-year average of the amount of water purchased by the Authority from SDCWA.

MWD imposes on the Authority: (1) a Readiness-to-Serve charge (MWD-RTS) and (2) a Capacity Charge (MWD-CC and, together with the MWD-RTS, the MWD Pass-Throughs). The MWD-RTS is imposed on the Authority as an allocation of MWD's cost to provide peak capacity within the MWD's distribution system. The MWD-CC is imposed on the Authority as an allocation of MWD's costs associated with standby and peak conveyance capacity and system emergency storage capacity. These MWD charges are determined on the basis of multi-year averages of the amount of water purchased by the Authority from SDCWA.

Effective January 1, 2019, the Authority proposes to pass-through the SDCWA IAC to customers based on meter size, as set forth in Table A at the end of this notice. The remaining SDCWA Pass-

Throughs, and the MWD Pass-Throughs, are proposed to be passed-through to customers effective January 1, 2019 per HCF of water used, in the amounts set forth in Table D at the end of this notice. The Authority anticipates that MWD and SDCWA will increase the MWD Pass-Throughs and the SDCWA Pass-Throughs in the future, and the Authority is proposing to authorize automatic pass-throughs of any future increases to customers. If approved, the Governing Board may implement any increase to the MWD Pass-Throughs and SDCWA Pass-Throughs for the five-year period commencing January 1, 2020, through and including December 31, 2024, provided, however, that (1) any increase in the rates of the MWD Pass-Throughs or SDCWA Pass-Throughs described above shall not exceed 10 percent per year; (2) in no event shall the rates be increased by more than the cost of providing water service; and (3) the Authority shall provide all customers at least 30 days' written notice prior to implementing any MWD or CWA Pass-Through adjustment.

Questions regarding the SDCWA Pass-Throughs should be directed to the Finance Department: San Diego County Water Authority - 4677 Overland Avenue, San Diego, CA 92123 or via telephone at (858) 522-6684.

For more information about regional water wholesale agencies, visit www.sdcwa.org and www.mwdh2o.com.

PROPOSED RATES

To estimate your water bill, please visit www.sweetwater.org/billestimator

TABLE A: READINESS-TO-SERVE CHARGE AND SDCWA INFRASTRUCTURE ACCESS CHARGE

All Customer Classes Proposed Rates Effective 1/1/2019		
Meter Size (Inches)	Sweetwater Authority Rates for Bi-Monthly Fixed Charge	SDCWA Rates for Bi-Monthly Infrastructure Access Fixed Charge
5/8 ⁽¹⁾	\$18.73	\$6.02
1	\$27.88	\$9.64
1½	\$44.15	\$18.06
2	\$62.44	\$31.30
3	\$118.91	\$57.80
4	\$200.68	\$98.74
6	\$403.93	\$180.60
8	\$665.97	\$313.04
10	\$1,013.03	\$469.56

TABLE C: PRIVATE FIRE SERVICE CHARGE

Proposed Rates Effective 1/1/2019	
Lateral Size	Bi-Monthly Charge
1 inch	\$1.02
1½ inch	\$2.96
2 inch	\$6.31
3 inch	\$18.33
4 inch	\$39.06
6 inch	\$113.45
8 inch	\$241.77
10 inch	\$434.78
12 inch	\$702.30

TABLE B: COMMODITY CHARGES

Single-Family Residential Proposed Rates Effective 1/1/2019	Variable Rate for Bi-Monthly Sweetwater Authority Charge	Variable Rate for Bi-Monthly SDCWA Wholesale Water Purchase Charge
Tiers by Units of Water Served	\$/HCF ⁽²⁾	\$/HCF
Tier 1 0 -10 HCF	\$3.72	\$1.05
Tier 2 11-16 HCF	\$4.43	\$1.25
Tier 3 17-27 HCF	\$4.56	\$1.28
Tier 4 28+ HCF	\$5.50	\$1.55
Proposed Rates For All Other Customers Effective 1/1/2019	Uniform Rate for Bi-Monthly Sweetwater Authority Charge	Uniform Rate for Bi-Monthly SDCWA Wholesale Water Purchase Charge
Customer Class	\$/HCF	\$/HCF
Multi-family Residential	\$5.10	\$1.43
Commercial	\$4.87	\$1.37
Public Agency	\$6.02	\$1.69
Construction	\$7.36	\$2.07

(1) Typical residential meter size

(2) HCF = one hundred cubic feet or 748 gallons of water

TABLE D: SDCWA AND MWD VOLUMETRIC PASS-THROUGH CHARGES

Uniform Rate for Bi-Monthly Pass Through Charge Proposed Rates Effective 1/1/2019	SDCWA Customer Service Charge	SDCWA Emergency Storage Charge	SDCWA Supply Reliability Charge	MWD Readiness To Serve Charge	MWD Capacity Charge
All Customer Classes	\$/HCF	\$/HCF	\$/HCF	\$/HCF	\$/HCF
	\$0.11	\$0.30	\$0.11	\$0.03	\$0.02



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\$0.27

Administration costs
 (technology, public outreach,
 safety and overhead)



\$0.03

Customer service



\$0.13

Infrastructure improvements and replacements



\$0.25

Purchase of additional water supplies



\$0.17

Water distribution system maintenance and repair



\$0.15

Water service (storage, treatment, and delivery of water)



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SWEETWATER AUTHORITY

Water Rate Study

Final Report / June 13, 2018



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June 13, 2018

Mr. Rich Stevenson
Finance Director
Sweetwater Authority
505 Garrett Ave
Chula Vista, CA 91910

Subject: Water Rate Study Report

Dear Mr. Stevenson:

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to present this water rate study (Study) to the Sweetwater Authority (Authority). The Study involved a comprehensive review of the Authority's Financial Plan and pass-through alternatives.

The report includes a brief Executive Summary followed by study assumptions and a detailed rate derivation in subsequent sections.

It was a pleasure working with you and we wish to express our thanks for your and other staff member support during the study. If you have any questions, please call me at (626) 583-1894

Sincerely,
RAFTELIS FINANCIAL CONSULTANTS, INC.

A blue ink signature of Sudhir D. Pardiwala, written in a cursive style.

Sudhir D. Pardiwala, PE
Executive Vice President

A blue ink signature of Steve Gagnon, written in a cursive style.

Steve Gagnon, PE
Manager

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1 Executive Summary

1.1 Background

The Sweetwater Authority (Authority) contracted with Raftelis Financial Consultants (Raftelis) to conduct a Water Rate Study (Study) to include a five-year Financial Plan. This report presents the Financial Plan and the resulting rates for implementation on January 1, 2019.

This Executive Summary summarizes the proposed water rates and pass-throughs. The Authority's last rate adjustment was effective on September 1, 2015. As a result of changed conditions of the Authority, the Authority wishes to establish fair and equitable rates that:

- » Meet the Authority's fiscal needs in terms of operational expenses, reserve goals, and capital investment to maintain the system;
- » Maintain low bills for customers with low water use to encourage water conservation;
- » Proportionately allocate the costs of providing service in accordance with California Constitution Article XIII D, Section 6 (commonly referred to as Proposition 218).

1.2 Rate Changes

To ensure adequate cost recovery, the Authority proposes to separate water purchase costs from the remainder of the Authority's costs and pass that cost through to customers via a separate rate. The Authority receives water from multiple sources including National City wells, the Richard A. Reynolds Groundwater Desalination Plant, local Sweetwater and Loveland Reservoirs and water purchased from San Diego County Water Authority (SDCWA). Since the water from the reservoirs is dependent on rainfall, which varies significantly from year to year, the Authority needs to purchase additional water from SDCWA during dry years which can significantly increase the revenue required from rates (i.e. its costs). To address this potential change in revenue requirement, the Authority proposes to break out as – separate charges to customers the costs of three wholesaler charges that are currently embedded in the Authority's rates. The three charges are:

- 1) a separate charge for the SDCWA Municipal and Industrial water purchase costs,
- 2) a pass-through charge for the Metropolitan Water District (MWD) Readiness-to-Serve Charge and,
- 3) a pass-through charge for the MWD Capacity Charge.

The charges described above address a portion of the costs of purchased water. To address increases in the remaining costs (sometimes referred to as Authority costs) incurred in operating and maintaining the utility, the Authority proposes to pass-through cost increases due to inflation by indexing its rates to the change in the Bureau of Labor Statistics Consumer Price Index for San Diego (BLS CPI). This is sometimes referred to as an inflationary pass-through, though it does not create a separate charge as the charges discussed above do.

There are no changes to the tier breakpoints and/or to the level of fixed revenue in proportion to the Authority's total revenue (not including wholesale costs) collected from the Readiness-to-Serve to Serve (RTS) charge. The Authority will continue to collect approximately 13% of its revenue (not including the charges mentioned above but including fire protection charges) through the RTS charge.

1.3 Process

Raffelis modeled the Authority’s five-year cash flow based on a revenue adjustment to take place on January 1, 2019. Subsequent revenue adjustments would be based on the BLS CPI for San Diego. On June 13th, the Board of Directors will consider a revenue adjustment of 8.9%. This revenue adjustment is a percentage of the Authority’s *current rate revenue before wholesale costs*. Therefore, this is the correct revenue adjustment to compare to prior fiscal year revenue. In other words, the Authority selected a one-time revenue increase of 8.9% compared to budgeted revenue for Fiscal Year 2018. Note that the revenue adjustment is only a 4.1% increase when comparing to prior year projected revenue.

1.4 Methodology

The water rates were developed using cost of service principles set forth by the American Water Works Association M1 Manual Titled *Principles of Water Rates, Fees and Charges* (AWWA M1 Manual). Cost of service principles endeavor to distribute costs to customer classes in accordance with the way each class uses the water system. This methodology is described in detail in Sections 4 and 5. The Base-Extra Capacity Method of the AWWA M1 Manual was used to distribute costs. This method separates costs into four components: “(1) base costs, (2) extra capacity costs, (3) customer costs, and (4) fire protection costs.” Base costs are costs that are associated with meeting average daily demand needs and include operations and maintenance costs and capital costs designed to meet average load conditions. Base costs include supply, treatment and delivery costs. Extra capacity costs are costs associated with meeting peak demand. Customer costs are costs associated with serving customers, such as meter reading, billing, customer service, etc. Fire protection costs are related solely to the fire protection function of a water system, such as fire hydrant repair and maintenance and private fire-fighting capacity.

1.5 Results and Recommendations

Table 1-1 shows the recommended revenue adjustment. Future revenue adjustments will be based on the year to year change of the BLS CPI for San Diego. The revenue adjustment shown is in comparison to budgeted Fiscal Year 2018 revenue, not projected revenue.

Table 1-1: Revenue Adjustment

	FYE 2019
Revenue Adjustment	8.9%

FACTORS AFFECTING REVENUE ADJUSTMENTS

The following items affect the Authority’s revenue requirement (i.e. costs) and thus its water rates. The Authority’s expenses include Operation and Maintenance (O&M) expenses, capital expenses, and maintaining reserves.

- » **O&M and Capital expenses:** Overall, the Authority’s O&M expenses (excluding wholesale water purchase costs) are expected to increase 8% from fiscal year (FY) 2018 to FY 2019. The Authority anticipates using reserves over the next four years to minimize rate increases to cover the higher level of capital investment discussed below.
- » **Water System Capital Investment:** The Authority forecasts a high level of capital investment compared to the prior two years – the average rate funded capital expenses are approximately \$8

million per year. Total capital expenses are much higher – an average of \$23 million per year over the next two years. Much of this investment is funded by grants and reserves.

- » **Reserve Funding:** The Authority anticipates using reserves from the Operating Fund for the next four years to offset rate increases. However, depleted reserves should be returned to target levels in the long term. Section 3 shows the projected reserve balances.

1.6 Proposed Water Rates

The Authority’s water service fees are comprised of two components: (1) a Readiness-to-Serve Charge, and (2) a Commodity Charge. The Readiness-to-Serve Charge is a fixed charge based on the size of meter serving a property and is calculated to recover a portion of the Authority’s fixed costs, such as the costs of billing and collections, customer service, meter reading, meter maintenance, and a portion of capacity related costs. The commodity rate recovers all remaining costs associated with serving water (base and extra capacity costs).

Table 1-2 shows the current and proposed bi-monthly Readiness-to-Serve charge by meter size. The charge is decreasing because the Authority is implementing three new charges for wholesale costs thus lowering the amount to be recovered from the Authority’s (non-wholesale) rates.

Table 1-2: Current and Proposed Bi-Monthly Readiness-to-Serve Charges

Line No.	Meter Size	Current RTS Charge	Proposed Charge
1	5/8" inch	\$21.80	\$18.73
2	1"	\$30.68	\$27.88
3	1 1/2"	\$46.86	\$44.15
4	2"	\$64.62	\$62.44
5	3"	\$118.88	\$118.91
6	4"	\$196.88	\$200.68
7	6"	\$381.98	\$403.93
8	8"	\$619.74	\$665.97
9	10"	\$925.72	\$1,013.03

Table 1-3 shows the current and proposed commodity rates by user class along with the new SDCWA Wholesale Water Purchase Charge which is described below Table 1-3. The proposed commodity rates are decreasing due to the proposed new charges for wholesale costs as mentioned in the prior paragraph. The rates are fully derived in Sections 5 and 6 of this Study.

Table 1-3: Current and Proposed Commodity Rates (\$/Hundred Cubic Feet (HCF))

Line No.	Customer Class	Current	Proposed	Proposed
		Commodity Rate (\$ / HCF)	Commodity Rate (\$/ HCF)	SDCWA Wholesale Water Purchase Charge (\$ /HCF)
1	SFR			
2	Tier 1	\$3.86	\$3.72	\$1.05
3	Tier 2	\$4.75	\$4.43	\$1.25
4	Tier 3	\$6.39	\$4.56	\$1.28
5	Tier 4	\$6.90	\$5.50	\$1.55
6	MFR	\$5.93	\$5.10	\$1.43
7	Commercial	\$6.08	\$4.87	\$1.37
8	Public Agencies	\$6.58	\$6.02	\$1.69
9	Construction	\$9.35	\$7.36	\$2.07

PROPOSED SDCWA WHOLESALE WATER PURCHASE CHARGE

The Authority proposes a new SDCWA Wholesale Water Purchase Charge as shown in Table 1-3 and derived below. The Authority purchases water from the SDCWA at the Municipal and Industrial (M&I) water rate. The amount it purchases every year varies significantly based on the amount of local water that is stored in its two reservoirs. Reservoir water storage is dependent on local rainfall. Purchased water costs can vary from zero, when its two reservoirs are full, to over \$10 million. The Authority’s proposed SDCWA Wholesale Water Purchase Charge would pass-through these water purchase costs to customers. To minimize the impact on customers, the Authority proposes to establish a Rate Stabilization Reserve to be funded over time. The Authority would maintain the proposed charge to fund the Rate Stabilization Reserve during years in-which it purchases a lower than average volume of water¹. During times when the Authority must purchase more than an average volume of water, the Rate Stabilization Reserve would be drawn upon before increasing this charge - therefore helping to stabilize this charge and minimize customer impacts. The Rate Stabilization Reserve would not be funded beyond the Board approved target.

Table 1-7 shows the derivation of the proposed SDCWA Wholesale Water Purchase Charge for calendar year (CY) 2019. In summary, it is the estimated M&I water purchase cost divided by the calendar year water use. Line three shows the total amount of estimated water production in acre feet. From this amount we subtract the anticipated water supply from the NC Wells, desalination plant, and reservoir water (line 6). The Authority anticipates no reservoir water for CY 2019, therefore the amount of SDCWA purchased water is historically high as shown in line 7. The M&I water purchase cost, in line

¹ The Authority could maintain the charge at its prior level or decrease it based on how quickly it would like to fund the Rate Stabilization Reserve. It is anticipated that the Authority would review the balance in the Rate Stabilization Reserve periodically to set this charge. Sweetwater Staff proposed a Rate Stabilization targets to the Governing Board as part of the financial policies included in the FY 2018-19 Budget.

10, is line 7 multiplied by line 8 (the M&I rate) to yield the total water purchase cost in line 10. Dividing this cost by calendar year water use (line 9) yields the charge in line 11.

Table 1-4: Derivation of the CY 2019 SDCWA Wholesale Water Purchase Charge

Line No.	SDCWA Wholesale Water Purchase Charge	CY 2019
1	Note: All Water Units in Acre Feet	
2	Actual Calendar Year Water Use (AF)	17,114
3	Actual Water Produced (5% Water Loss, AF)	18,015
4	NC Wells (AF)	2,100
5	Desalination Plant (AF)	6,200
6	Estimated Reservoir Water (AF)	-
7	Purchased Raw Water (AF)	9,715
8	CY M&I Rate (\$/ AF)	\$1,029
9	CY Use (HCF)	7,454,761
10	M&I Water Purchase Cost	\$9,996,221
11	Water Purchase Charge (\$/ HCF)	\$1.34

Note: Numbers may not calculate exactly due to rounding

The charge shown in line 11 of Table 1-7 shall be applied proportionally to each class and tier based on the ratio of the rate in each class/tier to the weighted average rate for all customers. Table 1-8 shows the proportionality ratios in column B and the charge for each tier and class in column C.

Table 1-5: Proposed SDCWA Wholesale Water Purchase Charge - Applied Proportionally

Line No.	Customer Class (A)	Rate Ratio (B)	Proportional SDCWA Wholesale Charge (\$/HCF) (C)
1	Uniform Wholsale Water Purchase Charge		\$1.34
2			
3	SFR		
4	Tier 1	78%	\$1.05
5	Tier 2	93%	\$1.25
6	Tier 3	95%	\$1.28
7	Tier 4	115%	\$1.55
8	MFR	107%	\$1.43
9	Commercial	102%	\$1.37
10	Public Agencies	126%	\$1.69
11	Construction	154%	\$2.07

Note: Pass-through is rounded up

1.7 Current Pass-Throughs

The Authority currently implements four pass-throughs and will continue to pass-through the following four SDCWA pass-throughs: 1) Infrastructure Access Charge, 2) Customer Service Charge (CSC), 3) Emergency Service Charge (ESC), and 4) Supply Reliability Charge (SRC). Each January 1st, the Authority will update these charges to pass-through these costs from the SDCWA.

SAN DIEGO COUNTY WATER AUTHORITY INFRASTRUCTURE ACCESS CHARGE (IAC)

The SDCWA sets the IAC every January 1 and it is anticipated that on January 1, 2019 it will not change. The anticipated CY 2019 charge is shown in Table 1-4.

Table 1-6: SDCWA IAC Bi-Monthly – January 1, 2019

SDCWA Infrastructure Access Charge	
Meter Size	January 1, 2019
5/8" inch	\$6.02
1"	\$9.64
1 1/2"	\$18.06
2"	\$31.30
3"	\$57.80
4"	\$98.74
6"	\$180.60
8"	\$313.04
10"	\$469.56

SAN DIEGO COUNTY WATER AUTHORITY CUSTOMER SERVICE CHARGE (CSC), EMERGENCY SERVICE CHARGE (ESC) AND SUPPLY RELIABILITY CHARGE (SRC)

Table 1-5 shows the derivation of each of the above pass-throughs by dividing the SDCWA's charge to the Authority by the estimated calendar year water use.

Table 1-7: SDCWA CSC, ESC and SRC – January 1, 2019

Line No.	SDCWA Pass-through	Customer Service Charge	Emergency Service Charge	Supply Reliability Charge
1	FY 2019 Cost	\$798,564	\$2,205,284	\$802,891
2	Calendar Year Water Use (HCF)	7,454,761	7,454,761	7,454,761
3				
4	Pass-through (\$/HCF)	\$0.11	\$0.30	\$0.11

1.8 Proposed Pass-Throughs

INFLATIONARY PASS-THROUGH

Though the term inflationary pass-through is used, it is not a true pass-through in the sense that the Authority is creating a separate rate (like those above) and passing through costs in that separate rate. The term inflationary pass-through simply means that the Authority will adjust its rates based on inflation to “pass-through” the effect of inflation. The Authority proposes to index the rates shown in Table 1-2 and Table 1-3 to the BLS CPI for San Diego, meaning it will increase the rates by the same percentage as the yearly change (from July 1 to June 30) in this index.

MWD PASS-THROUGHs

The Authority proposes to implement two new pass-throughs from the MWD. Table 1-6 shows the derivation of the two MWD proposed pass-throughs to be implemented on January 1, 2019. These pass-throughs would be updated every January 1 and be based on the charges from the MWD.

Table 1-8: Proposed MWD RTS and Capacity Charge Pass-Throughs

Line No.	MWD Pass-through	Readiness to Serve Charge	Capacity Charge
1	FY 2019 Cost	\$209,507	\$154,483
2	Calendar Year Water Use	7,454,761	7,454,761
3			
4	Pass-through (\$/HCF)	\$0.03	\$0.02

The Authority’s rates and all pass-throughs are structured to recover the proportionate costs of providing water service to each customer class and to manage the Authority’s water resources while incidentally deterring waste and encouraging water use efficiency. The following sections of this report describe the Five-year Financial Plan, water system, legal framework, and derive the rates in detail.

2 Water System

This section briefly describes the water system and the Authority provided customer account and water use data for FY 2018 which was used to project revenue, expenses and develop rates.

2.1 Water Sources and System Facilities

The Authority provides water service to approximately 190,000 people in a 32-square-mile area that includes the City of National City, Bonita, and the western and central portions of the City of Chula Vista, California. It owns and maintains 388 miles of pipelines and owns and operates three water treatment facilities: 1) the Robert A. Perdue Water Treatment Plant, 2) Richard A. Reynolds Desalination Facility, and 3) the National City Wells.

Water is procured from four sources: (1) deep freshwater wells located in National City; (2) capture of local runoff in the Sweetwater River with subsequent storage at Loveland Reservoir in Alpine, and Sweetwater Reservoir in Spring Valley; (3) San Diego Formation Wells in the lower Sweetwater River basin; and (4) purchase of imported water delivered by the SDCWA and the MWD.

The Authority endeavors to treat local runoff in the Purdue Plant to meet almost half of water demand in normal years; however, low rainfall/drought conditions may require the Authority to purchase more than 10,000 acre-feet of water, which is approximately 50% of its water supply. During high rainfall years the Authority typically avoids purchasing water from the SDCWA. On average, the Authority obtains most of its water from local supplies and purchases approximately 6,000 acre-feet (34% of total supply) from the SDCWA.

2.2 Number of Accounts

Table 2-1 shows the estimated number of potable water accounts by meter size for FY 2019 – which is known as the test-year. The test year is the year with which rates are set – meaning the rates are based on the revenue requirement, number of accounts, and water use for that year. Raftelis estimated the future number of accounts by tabulating FY 2018 account data provided by the Authority and escalating the number of accounts using the growth factors described in Section 2.3. The number of accounts are used to forecast the amount of fixed revenue the Authority will collect from the RTS Charge.

Table 2-1: Estimated Potable Water Accounts by Meter Size (Projected - FY 2019)

Meter Size	Single Family Residential	Multi-family Residential	Commercial/Industrial	Public Agencies	Construction	Total
5/8" inch	24,504	1,792	1,288	65	-	27,649
1"	1,742	858	606	106	1	3,314
1 1/2"	20	383	426	82	-	910
2"	5	544	439	281	-	1,269
3"	-	-	2	-	27	29
4"	-	5	1	2	-	8
6"	-	6	1	-	-	7
8"	-	2	2	-	-	4
10"	-	-	3	1	-	4
Total	26,271	3,589	2,767	538	28	33,194

2.3 Account and Water Use Growth Assumptions

The revenue calculated for each fiscal year in the Financial Plan is a function of the number of accounts, account growth, water use, and existing rates. The Authority has had very low account growth for the past few years and continues to expect low account growth. Historical account growth was used to project future account growth as shown in Table 2-2. The bottom of Table 2-2 shows that the Authority expects a small decrease in water use in FY 2019 due to potential drought proclamations by the State followed by steady water use.

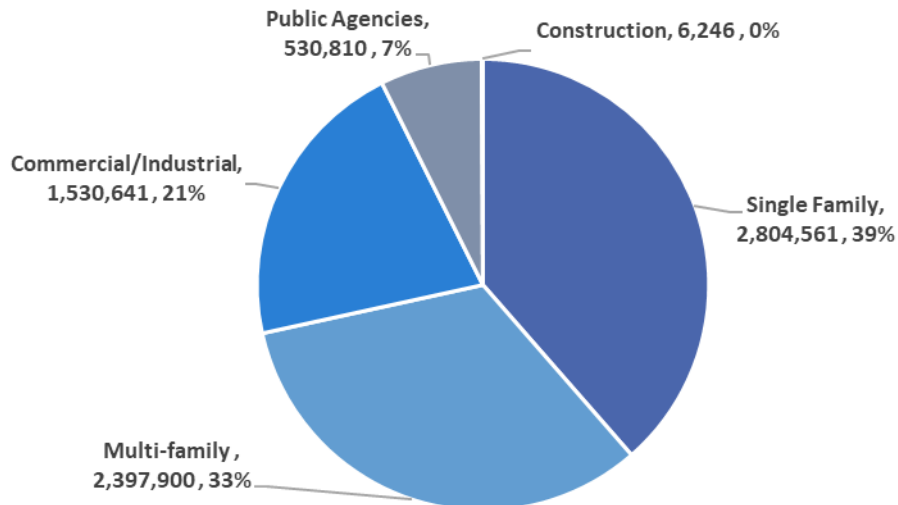
Table 2-2: Account Growth and Water Use Assumptions

Account Growth	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023
Single Family Residential	0.10%	0.10%	0.10%	0.10%	0.05%
All Other Classes	0.07%	0.07%	0.07%	0.07%	0.07%
Water Use					
Single Family Residential	98.5%	100.0%	100.0%	100.0%	100.0%
All Other Classes	100.0%	100.0%	100.0%	100.0%	100.0%

2.4 Water Use by Class

Figure 2-1 shows the FY 2017 water use by customer class. The first number shown in the pie chart is the water use in HCF followed by the percentage of total water used by the class. The total water use for FY 2017 is 7.27 million HCF. Note that this is noticeably lower than the water use in the FY 2015 rate study of 8.85 million HCF due to the changes in water use habits by the Authority's customers; customer reduced usage in response to the State-mandated conservation measures enacted during the most recent drought. Much of the Authority's costs are fixed and lower water use necessitates higher water rates to collect sufficient revenue to pay for the Authority's fixed costs.

Figure 2-1: Water Use by Customer Class



3 Financial Plan

This section shows the projected Financial Plan. It is important to know that the Authority proposes to break out as separate charges the costs of three wholesaler charges that are currently embedded in the Authority’s rates. The Authority also proposes to adjust its rates based on the BLS CPI index for San Diego. The proposed changes include:

- 1) a separate charge for SDCWA Municipal and Industrial water purchase costs called the SDCWA Wholesale Water Purchase Charge,
- 2) a pass-through charge for the Metropolitan Water District (MWD) Readiness-to-Serve Charge,
- 3) a pass-through charge for the MWD Capacity Charge and,
- 4) an inflationary pass-through for other (non-wholesale) costs increases.

The first three items recover *wholesale costs*. The last item (number 4) is known as an *inflationary pass-through* to cover *Authority costs*. The *inflationary pass-through* implies that rates (i.e. revenue) will increase the same amount as the Authority’s costs² increase. The financial plan shown assumes that both revenue adjustments and the Authority’s costs will increase three percent a year - which is the long-term average for inflation. The Authority will set rates based on the year to year change in the BLS-CPI Index for San Diego which may be more or less than three percent.

3.1 Inflationary and Other Assumptions

Table 3-1 shows the inflationary assumptions incorporated in the five-year Financial Plan. Inflationary assumptions for water purchase costs are not shown because these costs will be passed-through and as such do not affect the financial plan.

Table 3-1: Inflationary Assumptions

Item	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023
General Inflation	3.0%	3.0%	3.0%	3.0%	3.0%
Reserve Interest Rate	1.5%	1.8%	2.0%	2.3%	2.5%

3.2 Financial Plan

To develop the Financial Plan, Raftelis projected annual expenses and revenues, capital expenditures and calculated debt service coverage ratios to estimate the yearly ending reserve balances. This section of the report provides a discussion of O&M expenses, the Capital Investment Plan (CIP), reserve funding, projected revenue under existing rates and the revenue adjustments needed to ensure the fiscal sustainability and solvency of the Authority.

² All costs but wholesale water purchase costs.

3.3 Utility Expenses

The Authority's expenses include O&M expenses, capital expenses, and debt service payments. Sections 3.4 through 3.6 discuss the details of each of these expenses.

3.4 O&M Expenses

The Authority's O&M expenses for FY 2019 are shown in Table 3-2. Fiscal year 2019 is the year with which rates were calculated (known as the test year). The Financial Plan study period is from FY 2019 to 2023. Table 3-2 shows total non-water purchase costs in line 8. For future years, these costs were escalated according to the inflationary assumptions shown in Table 3-1. Water purchase costs are shown in lines 10 through 17. Shown in line 16, the SDCWA M&I purchases costs can vary widely from year to year and for FY 2109 Sweetwater staff projects low reservoir levels requiring the Authority to purchase just under 10,000 acre feet of water at a cost of nearly \$10 million.

Table 3-2: Projected FY 2019 Water O&M Expenses

Line No.	Expense Item	Amount
1	Administration	\$13,069,200
2	Information Systems	\$1,539,300
3	Administrative Services	\$1,843,700
4	Customer Service	\$2,024,100
5	Water Quality	\$8,975,400
6	General Engineering	\$2,309,900
7	Distribution	\$4,303,300
8	Subtotal	\$34,064,900
9	Purchased Water Costs (Passed-through)	
10	SDCWA Infrastructure Access Charge	\$1,568,492
11	SDCWA Customer Service Charge	\$727,134
12	SDCWA Emergency Storage Charge	\$1,972,579
13	SDCWA Supply Reliability Charge	\$729,050
14	MWD Readiness-to-Serve Charge	\$209,507
15	MWD Capacity Charge	\$156,147
16	SDCWA M&I	\$9,996,221
17	Total	\$49,424,031

3.5 Capital Improvement Plan

Table 3-3 shows the Authority's detailed five-year CIP along with the anticipated funding sources in lines 10 through 13. Line 15 shows the anticipated rate and/or reserve (cash) funded CIP. Note that the rates proposed as part of this rate study fund on average about eight million per year in capital. Should the Authority need to fund significantly more than eight million in capital it would have to adjust rate revenue more than the yearly change in the BLS CPI for San Diego.

Table 3-3: Detailed Capital Improvement Plan

Line No.	CIP Expense Type	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023
1	Administration	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
2	Information Systems	\$100,000	\$290,000	\$0	\$0	\$0
3	Water Quality	\$350,000	\$214,200	\$1,936,000	\$2,130,000	\$1,390,000
4	Engineering	\$7,726,100	\$5,760,500	\$4,204,900	\$3,813,400	\$4,588,500
5	SWA Dam Improvements	\$3,811,500	\$2,790,200	\$0	\$0	\$0
6	Bond Funded Projects	\$7,437,200	\$14,133,200	\$1,100,000	\$0	\$0
7	Distribution	\$1,749,700	\$1,828,500	\$2,004,700	\$1,696,300	\$1,522,700
8	Total	\$21,424,500	\$25,266,600	\$9,495,600	\$7,889,700	\$7,751,200
9						
10	Possible Maximum Flood Reserve	-\$3,811,500	-\$2,790,200	-\$245,400	\$0	\$0
11	2017A Bonds	-\$7,437,200	-\$14,133,200	-\$854,600	\$0	\$0
12	Carryover Funding	-\$2,256,600	\$0	\$0	\$0	\$0
13	Total Funding	-\$13,505,300	-\$16,923,400	-\$1,100,000	\$0	\$0
14						
15	Rate Funded Capital	\$7,919,200	\$8,343,200	\$8,395,600	\$7,889,700	\$7,751,200

3.6 Existing Debt Service

Table 3-4 shows the Authority’s existing debt service. Note that the 2016 bond debt service ends in FY 2023, the same year that the Water Revenue Bonds Series 2017A increases to both interest and principle payments.

Table 3-4: Existing and Proposed Debt Service

Debt Service	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023
Water Revenue Bonds Series 2017 A	\$833,131	\$833,131	\$833,131	\$833,131	\$1,343,131
2016 Bond Debt Service	\$3,080,450	\$3,327,700	\$3,331,200	\$3,328,000	
Total Debt Service	\$3,913,581	\$4,160,831	\$4,164,331	\$4,161,131	\$1,343,131

3.7 Proposed Financial Plan and Revenue Adjustments

As mentioned at the beginning of Section Three, the Authority will pass-through all water purchase costs and increases in Authority costs (Authority costs refers to any non-water purchase costs) by adjusting rates according to the BLS CPI for San Diego. In theory, if the Authority’s costs increase in-line with inflation (CPI) and rates reflect this, then the net change in cash reserves should be minimal – *assuming no major changes in capital spending and debt service*. Therefore, the **first revenue adjustment** for the five-year study period is crucial to ensure healthy reserves and capital expenditures and compliance with bond covenants. The Financial Plan assumes the revenue adjustments occur on January 1 of each year. This is when the Authority’s wholesaler changes its rates, making this an opportune time to change all rates – both the Authority’s and pass-throughs, instead of adjusting rates twice a year.

Table 3-5 shows the proposed initial revenue adjustment for FY 2019. The rates presented in Section 6 are based on this revenue adjustment. Note that the revenue adjustment shown is a percent of the Authority’s current budgeted rate revenue (approximately \$46.7M) before removing the revenue associated with the proposed pass-throughs and SDCWA Wholesale Water Purchase Charge. Therefore, this revenue adjustment is the proper one to compare to historical revenue adjustments. Note that the revenue adjustment is only a 4.1% increase when comparing to prior year projected rate revenue.

Table 3-5: Proposed Rate Adjustments and Debt Issues

	FYE 2019
Revenue Adjustment	8.9%

Table 3-6 shows the Authority’s projected cash flow over the next five years assuming the initial revenue adjustment shown in Table 3-5. A few items to note in-regards to Table 3-6:

- 1) The Authority currently does not pass-through the wholesale charges shown in lines 6 through 10, and is proposing to do so on Jan 1, 2019. Therefore, we must remove this revenue that is embedded in the Authority’s current rates as it will be passed through to customers in a separate rate.
- 2) Line 12 shows the additional revenue from the revenue adjustment in Table 3-5.
- 3) Line 17 shows the current pass-through revenue for the wholesale charges that the Authority currently passes through.
- 4) Line 23 shows the current and proposed pass-through revenue.

- 5) Line 25 shows other non-rate revenue such as interest revenue, tank/tower leases, reconnection fees and contributions.
- 6) Line 39 shows the total cost of all pass-throughs – note that the cost in line 39, is equal to the revenue in line 23. Therefore pass-throughs do not affect the financial plan.
- 7) Line 42 through 49 show the Authority’s expenses.
- 8) Lines 57 and 58 show debt service and rate funded capital expenses.
- 9) Line 62 shows that the Authority is operating at a deficit and will use reserves over the next four years.

As shown in Table 3-6, the Authority is projected to have an operating deficit for four years and therefore by using reserves the Authority will minimize customer bill impacts.

Table 3-6: Five-Year Water Operating Cash Flow

Line No.	Revenue	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023
1	Sweetwater Rate Revenue					
2	Fixed Rate Revenue	\$5,057,726	\$5,062,372	\$5,067,022	\$5,071,676	\$5,074,563
3	Volumetric Revenue	41,698,265	41,732,375	41,766,514	41,800,682	41,828,042
4	Private Fire Protection	380,000	383,800	387,638	391,514	395,430
5	Subtotal	47,135,991	47,178,547	47,221,174	47,263,872	47,298,035
6	Less Proposed New Pass-throughs					
7	MWD Readiness to Serve Charge	(209,507)	(209,507)	(209,507)	(209,507)	(209,507)
8	MWD Capacity Charge	(156,147)	(156,147)	(156,147)	(156,147)	(156,147)
9	SDCWA Untreated M&I	(9,996,221)	(9,996,221)	(9,996,221)	(9,996,221)	(9,996,221)
10	Subtotal	(10,361,875)	(10,361,875)	(10,361,875)	(10,361,875)	(10,361,875)
11	SWA Rate Revenue	36,774,116	36,816,672	36,859,299	36,901,997	36,936,159
12	Total Additional Revenue	2,096,125	4,812,307	6,068,194	7,364,540	8,700,584
13	Revenue + Rev Adjustment	38,870,240	41,628,979	42,927,493	44,266,537	45,636,743
14	Current Pass-Through Revenue					
15	SDCWA IAC	1,568,492	1,569,904	1,571,317	1,572,731	1,573,651
16	SDCWA CSC, ESC, SRC	3,428,763	3,928,073	4,193,159	4,454,790	4,733,710
17	Total Pass-Through Revenue	4,997,255	5,497,977	5,764,476	6,027,522	6,307,362
18	Proposed Pass-through Revenue					
19	MWD Readiness to Serve Charge	209,507	211,602	213,718	215,855	218,014
20	MWD Capacity Charge	156,147	169,931	194,649	214,113	235,525
21	Subtotal Fixed Charge Pass-throughs	365,654	381,533	408,367	429,969	453,539
22	SDCWA Wholesale Water Purchase Charge	9,996,221	4,187,809	4,245,434	4,301,787	4,357,231
23	Total Pass-through Revenue	15,359,131	10,067,319	10,418,277	10,759,278	11,118,131
24	Total Projected Rate Revenue	54,229,371	51,696,298	53,345,770	55,025,815	56,754,874
25	Other Revenue	2,981,242	3,204,653	3,152,557	3,145,666	3,177,105
26	Total Revenue	57,210,612	54,900,950	56,498,327	58,171,481	59,931,979
27	Water Purchase Costs	5.2%				
28	Current Pass-throughs					
29	SDCWA Infrastructure Access Charge	1,568,492	1,569,904	1,571,317	1,572,731	1,573,651
30	SDCWA Customer Service Charge	727,134	816,553	858,094	901,748	947,444
31	SDCWA Emergency Storage Charge	1,972,579	2,254,962	2,369,680	2,490,234	2,616,426
32	SDCWA Supply Reliability Charge	729,050	856,559	965,386	1,062,808	1,169,840
33	Current Pass-through Costs	4,997,255	5,497,977	5,764,476	6,027,522	6,307,362
34	Proposed Pass-through Costs					
35	MWD Readiness-to-Serve Charge	209,507	211,602	213,718	215,855	218,014
36	MWD Capacity Charge	156,147	169,931	194,649	214,113	235,525
37	Subtotal (Fixed) Pass-through Cost	365,654	381,533	408,367	429,969	453,539
38	SDCWA M&I Volumetric Cost of Water	9,996,221	4,187,809	4,245,434	4,301,787	4,357,231
39	Total Pass-through Costs	15,359,131	10,067,319	10,418,277	10,759,278	11,118,131
41	SWA Expenses					
42	Administration	13,069,200	13,461,276	13,865,114	14,281,068	14,709,500
43	Information Systems	1,539,300	1,585,479	1,633,043	1,682,035	1,732,496
44	Administrative Services	1,843,700	1,899,011	1,955,981	2,014,661	2,075,101
45	Customer Service	2,024,100	2,084,823	2,147,368	2,211,789	2,278,142
46	Water Quality	8,975,400	9,244,662	9,522,002	9,807,662	10,101,892
47	General Engineering	2,309,900	2,379,197	2,450,573	2,524,090	2,599,813
48	Distribution	4,303,300	4,432,399	4,565,371	4,702,332	4,843,402
49	Sutotal SWA Expenses	34,064,900	35,086,847	36,139,452	37,223,636	38,340,345
50	Total Operating Expenses	49,424,031	45,154,166	46,557,730	47,982,914	49,458,476
54	Water Revenue Bonds Series 2017 A	833,131	833,131	833,131	833,131	1,343,131
55	2016 Bond Debt Service	3,080,450	3,327,700	3,331,200	3,328,000	-
56	Proposed Debt	-	-	-	-	-
57	Total Debt	3,913,581	4,160,831	4,164,331	4,161,131	1,343,131
58	Rate Funded Capital Investment	7,919,200	8,343,200	8,395,600	7,889,700	7,751,200
59						
60	Total Expenses	61,256,812	57,658,197	59,117,661	60,033,745	58,552,807
61						
62	Net Cashflow	(4,046,199)	(2,757,247)	(2,619,334)	(1,862,264)	1,379,172

Figures 3-1 through 3-5 display the FY 2019 through FY 2023 Financial Plan in graphical format. Figure 3-1 shows the modeled revenue adjustments (blue bars) for the next five years.

Note that the figure assumes *three percent future revenue adjustments* which is identical to the Authority’s modeled cost increases. The Authority’s future revenue adjustments, after Jan 1, 2019, will be identical to the year to year change in the BLS CPI for San Diego. Figure 3-1 also graphs the calculated and minimum debt coverage requirements as shown by the blue and gray lines respectively. Note that the revenue adjustment is a percent of FY 2018 rate revenue (before the new pass-through revenue is removed).

Figure 3-1: Proposed Revenue Adjustments

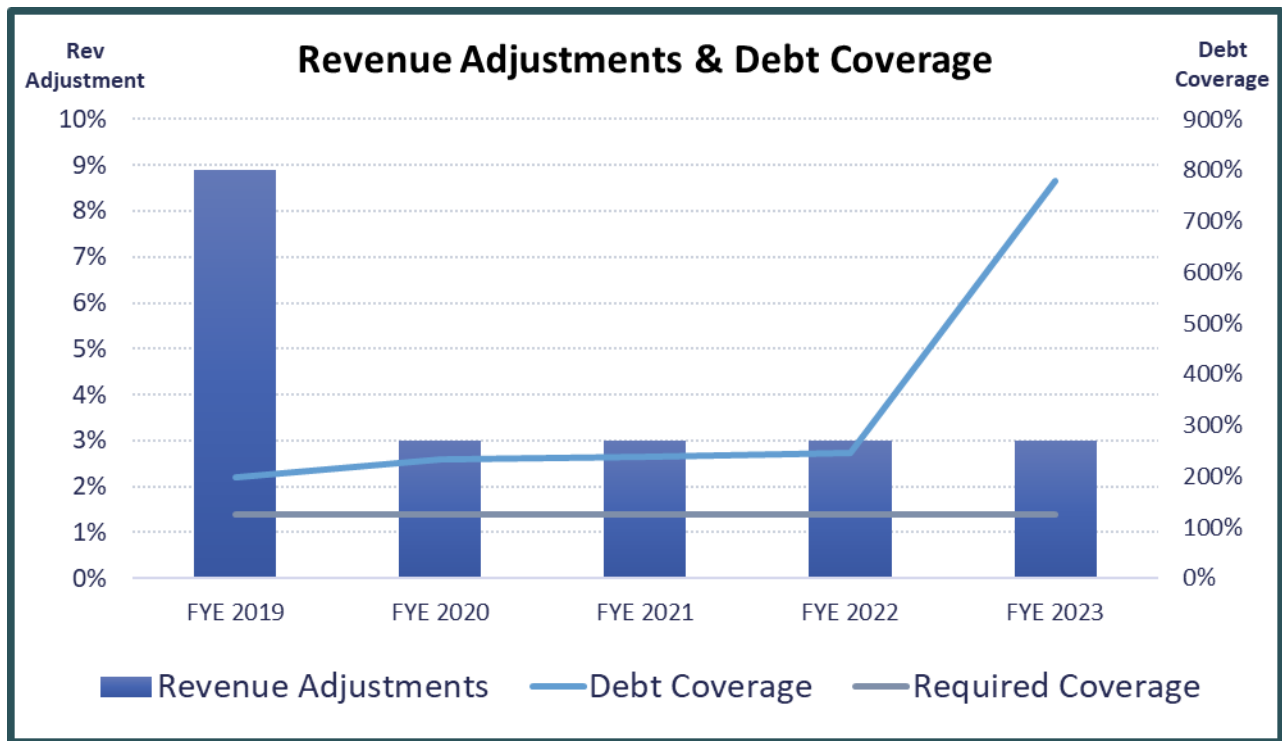


Figure 3-2 graphically illustrates the operating Financial Plan – it compares existing and proposed revenues with projected expenses. The data to create Figure 3-2 is taken from Table 3-6. The expenses include O&M, purchased water, debt service, and reserve funding; and total revenues at existing and proposed rates are shown by the horizontal red and green lines respectively. Current revenue from existing rates, in blue, does not meet future total expenses and shows the need for revenue adjustments. Note that the Authority is projected to have a yearly operating deficit – and thus uses reserves as shown by the turquoise bar below the x-axis.

Figure 3-2: Proposed Operating Financial Plan

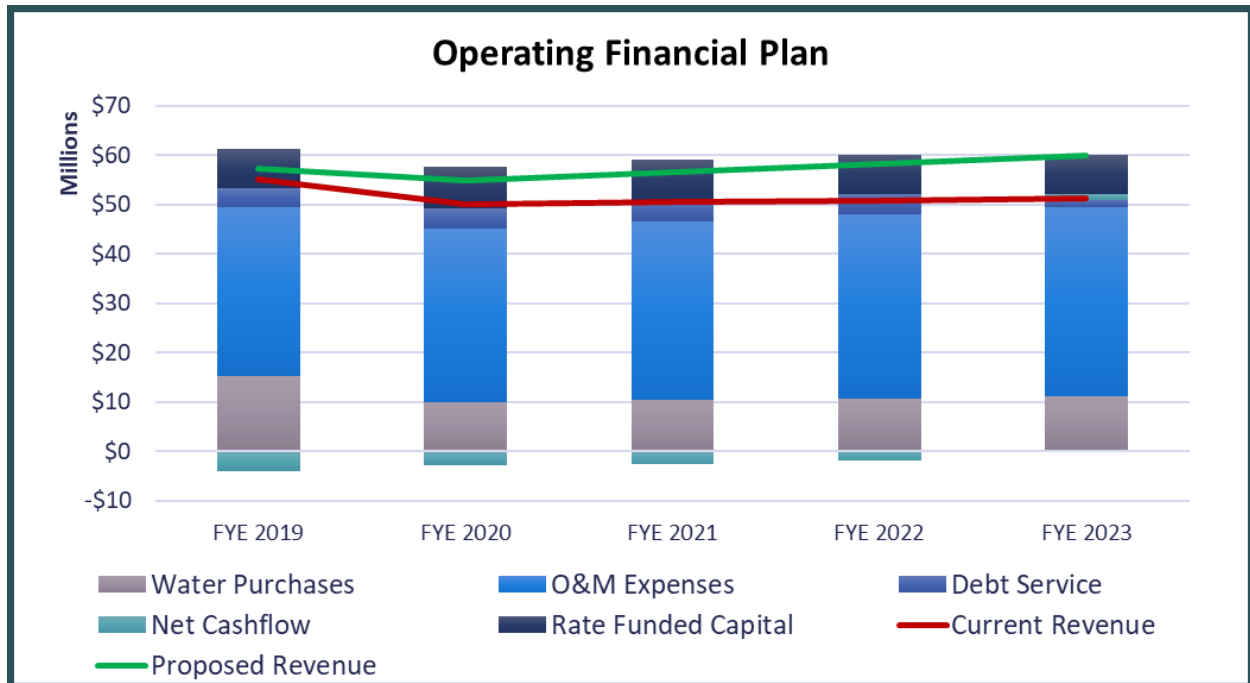
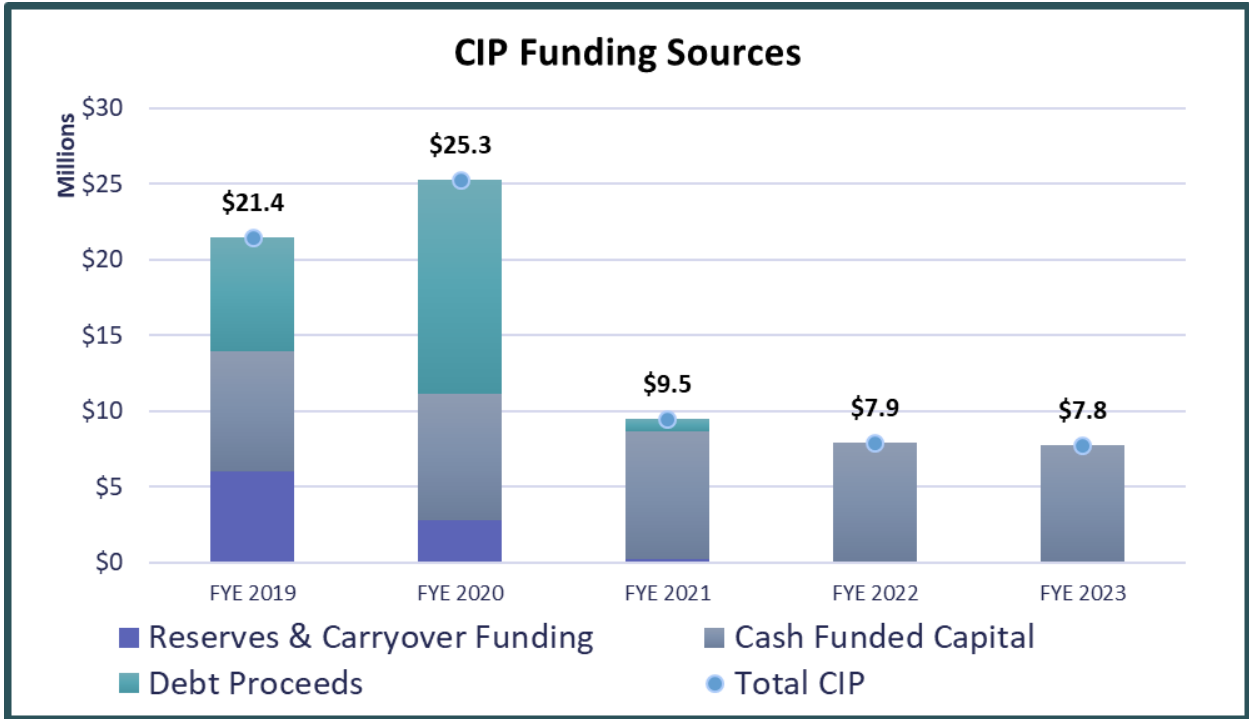


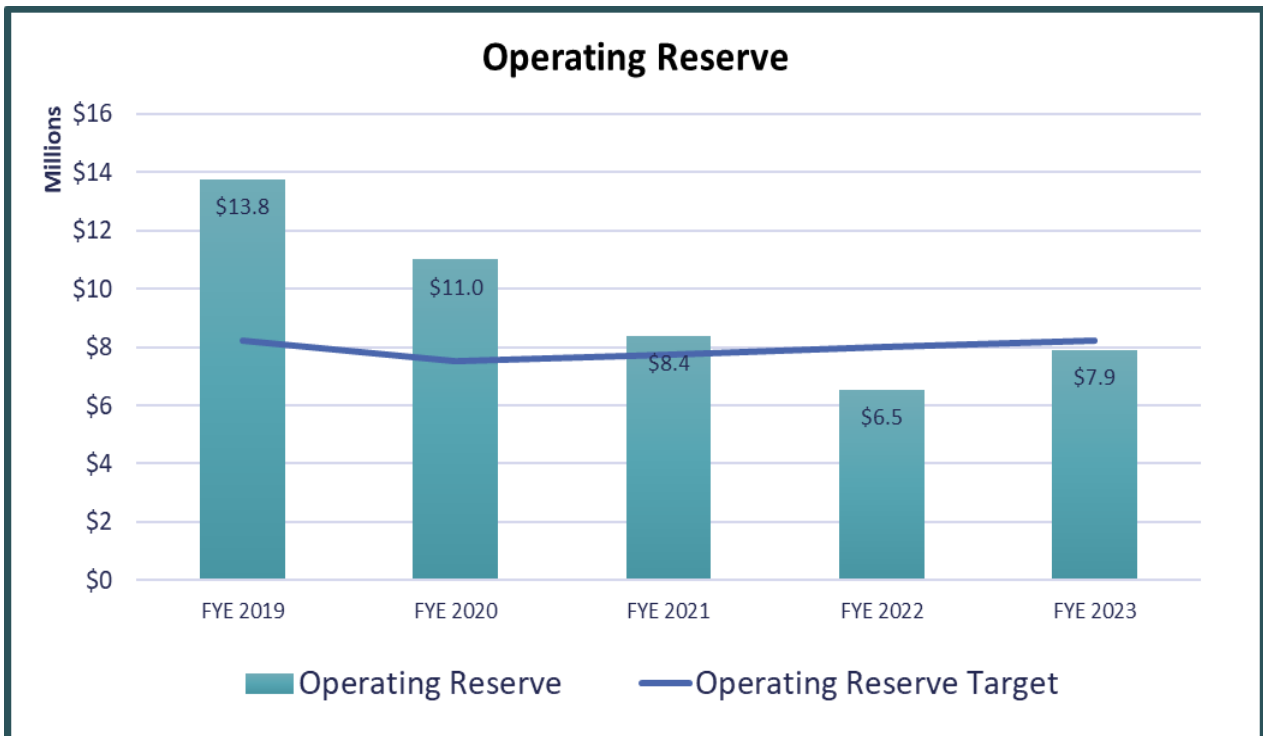
Figure 3-3 summarizes the projected CIP and its funding sources – debt, grants, rates/reserves or water supply reserve funded. As shown, the Authority plans to make large capital investments in the next two fiscal years with a major portion of those investments funded by debt proceeds.

Figure 3-3: Projected CIP and Funding Sources



The bars in Figure 3-4 displays the operating fund yearly ending balance. The blue horizontal line is the operating fund target balance which is two months of O&M expenses based on current Board policy. As shown, the operating fund is anticipated to dip below the target in FY 2022 however is expected to recover in the following fiscal year.

Figure 3-4: Projected Operating Reserve Balances



4 Legal Framework and Rate Setting Methodology

4.1 Legal Framework

This section of the report describes the legal framework that was considered to ensure that the calculated cost of service rates provide a fair and equitable allocation of costs to customer classes.

CALIFORNIA CONSTITUTION - ARTICLE XIII D, SECTION 6 (PROPOSITION 218)

Proposition 218, reflected in the California Constitution as Article XIII D, was enacted in 1996 to ensure that rates and fees are reasonable and proportional to the cost of providing service. The principal requirements for fairness of the fees, as they relate to public water service are as follows:

1. A property-related charge (such as water rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners.
6. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

As stated in AWWA's *MI Manual*, "water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." Proposition 218 requires that water rates cannot be "arbitrary and capricious," meaning that the rate-setting methodology must be sound and that there must be a nexus between costs and the rates charged. Raftelis followed industry standard rate setting methodologies set forth by the AWWA *MI Manual* to ensure this study meets Proposition 218 requirements and creates rates that do not exceed the proportionate cost of providing water services.

CALIFORNIA CONSTITUTION - ARTICLE X, SECTION 2

Article X, Section 2 of the California Constitution (established in 1976) states the following:

- "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."

As stated above Article X, section 2 of the State Constitution institutes the need to preserve the State's water supplies and to discourage the wasteful or unreasonable use of water by encouraging conservation.

As such, public agencies are constitutionally mandated to maximize the beneficial use of water, prevent waste, and encourage conservation.

In addition, Section 106 of the Water Code declares that the highest priority use of water is for domestic purposes, with irrigation secondary. To meet the objectives of Article X, section 2, Water Code section 375 et seq., a water purveyor may utilize its water rate design to incentivize the efficient use of water. The Authority established single family tiered rates to incentivize customers to conserve water. The tiered rates (as well as rates for the remaining classes) need to be based on the proportionate costs incurred to provide water to customer classes to achieve compliance with Proposition 218.

Tiered Rates – “Inclining” block rate structures (which are synonymous with “increasing” block rate structures and tiered rates) when properly designed and differentiated by customer class, allow a water utility to send consistent conservation price incentives to customers. Due to heightened interest in water conservation, tiered rates have gained widespread use, especially in relatively water-scarce regions, such as Southern California. Tiered rates meet the requirements of Proposition 218 as long as the tiered rates reflect the proportionate cost of providing service.

4.2 Cost-Based Rate-Setting Methodology

As stated in the AWWA M1 Manual, “the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers.” To develop utility rates that comply with Proposition 218 and industry standards while meeting other emerging goals and objectives of the utility, there are four major steps discussed below.

1) CALCULATE REVENUE REQUIREMENT

The rate-making process starts by determining the test year revenue requirement - which for this study is FY 2019. The revenue requirement should sufficiently fund the utility’s O&M, debt service, and capital expenses, and reserve funding.

2) COST OF SERVICE ANALYSIS (COS)

The annual cost of providing water service is distributed among customer classes commensurate with their service requirements. A COS analysis involves the following:

1. Functionalizing costs. Examples of functions are supply, treatment, transmission, distribution, storage, meter servicing and customer billing and collection.
2. Allocating functionalized costs to cost causation components. Cost causation components include base, maximum day, maximum hour³, meter service, customer servicing and conservation costs.
3. Distributing the cost causation components. Distribute cost causation components, using unit costs, to customer classes in proportion to their demands on the water system. This is described in the M1 Manual published by AWWA.

A COS analysis considers both the average quantity of water consumed (base costs) and the peak rate at which it is consumed (peaking or capacity costs as identified by maximum day and maximum hour

³ Collectively maximum day and maximum hour costs are known as peaking costs or capacity costs.

demands).⁴ Peaking costs are costs that are incurred during peak times of consumption. There are additional costs associated with designing, constructing, and operating and maintaining facilities to meet peak demands. These peak demand costs need to be allocated to those imposing such costs on the utility. In other words, not all customer classes share the same responsibility for peaking related costs.

3) RATE DESIGN AND CALCULATIONS

Rates do more than simply recover costs. Within the legal framework and industry standards, properly designed rates should support and optimize a blend of various utility objectives, such as conservation, affordability for essential needs and revenue stability among other objectives. Rates may also act as a public information tool in communicating these objectives to customers.

4) RATE ADOPTION

Rate adoption is the last step of the rate-making process to comply with Proposition 218. Raftelis documented the rate study results in this Study Report to help educate the public about the proposed changes, the rationale and justifications behind the changes and their anticipated financial impacts in lay terms.

⁴ System capacity is the system's ability to supply water to all delivery points at the time when demanded. Coincident peaking factors are calculated for each customer class at the time of greatest system demand. The time of greatest demand is known as peak demand. Both the operating costs and capital asset related costs incurred to accommodate the peak flows are generally allocated to each customer class based upon the class's contribution to the peak month, day and hour event.

5 Cost of Service Analysis

The principles and methodology of a cost of service analysis were described in Section 4.2. A cost of service analysis distributes a utility's revenue requirements (costs after accounting for other sources of revenue) to each customer class. After determining a utility's revenue requirement, the next step in a cost of service analysis is to functionalize its O&M costs to the following **functions**:

1. Water Supply
2. Treatment
3. Pumping
4. Storage (Distribution Storage)
5. Transmission and Distribution
6. Customer Billing and Service
7. Meter Service
8. General and Administrative

The functionalization of costs allows a better allocation of the functionalized costs to the **cost causation components**. The cost causation components include:

1. Supply (includes treatment)
2. Base (average daily demand)
3. Peaking (maximum day and maximum hour)
4. Meter service
5. Billing and customer service
6. Fire protection (includes public and private fire protection)
7. Conservation
8. General and administrative

Peaking costs are further divided into maximum day and maximum hour demand. The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum usage in an hour on the maximum usage day. Different facilities, such as distribution and storage facilities, and the O&M costs associated with those facilities, are designed to meet the peaking demands of customers. Therefore, extra capacity⁵ costs include the O&M and capital costs associated with meeting peak customer demand. This method is consistent with the American Water Works Association M1 Manual, and is widely used in the water industry to perform cost of service analyses.

5.1 Functionalization of O&M Expenses

Table 5-1 shows the functionalization of the Authority's O&M expenses. The percentages shown can be applied to the O&M expenses for any year (i.e., the test year) provided that there are no major budgetary changes in any particular line item. Functionalizing O&M expenses allows Raftelis to follow the principles of rate setting theory in which the end goal is to allocate the Authority's O&M expenses to cost causation components. This is further explained in Section 5.2. Note that the functionalized expenses

⁵ The terms *extra capacity*, *peaking* and *capacity costs* are used interchangeably.

shown in Table 5-1 match with the FY 2019 O&M expenses shown in line 50 of Table 3-6. Also note that water purchase costs shown at the top of the table can vary significantly from year to year.

Table 5-1: Functionalization of O&M Expenses

Function	Amount	Percent
Supply - All Wholesale Water Purchase Costs	\$15,359,131	31.1%
Supply (Non-Water Purchase Costs)	\$2,881,680	5.8%
Treatment	\$3,910,650	7.9%
Pumping	\$2,264,210	4.6%
Storage	\$149,850	0.3%
Transmission and Distribution	\$5,951,880	12.0%
Customer Billing and Service	\$1,113,255	2.3%
Meter Service	\$910,845	1.8%
General and Administrative	\$16,089,200	32.6%
Direct Fire Protection	\$430,330	0.9%
Conservation	\$363,000	0.7%
Total	\$49,424,031	100.0%

5.2 Allocation of Functionalized Expenses to Cost Causation Components

After functionalizing expenses, the next step is to allocate the functionalized expenses to cost causation components. To do so, Raftelis identified the system wide peaking factors shown in column A, Table 5-2. The system-wide peaking factors were taken from the Authority’s 2015 Water Distribution System Master Plan and are used to derive the cost causation component allocation bases (i.e., percentages) shown in columns B through D of Table 5-2. Functionalized expenses are then allocated to the cost causation components using these allocation bases. To understand the interpretation of the percentages shown in columns B through D we must first establish the base use as the average daily demand during the year.

The functionalized expenses that are allocated to the cost causation components using the maximum day bases assume 61% (1.00/1.63) of costs are due to base demands with the remaining 39% (100%-61%) of costs allocated to the maximum day cost causation component. Expenses allocated using the maximum hour bases attribute 37% of the costs to the base cost causation component, 23% to maximum day and 40% to maximum hour. Collectively the maximum day and hour cost causation components are known as peaking costs. These allocation bases are used to assign the functionalized costs in Table 5-1 to the cost causation components.

Table 5-2: System-Wide Peaking Factors and Allocation to Cost Components

System Peaking	Peaking Factor (A)	Base (B)	Max Day (C)	Max Hour (D)	Meter Service (E)	Customer Service (F)	Fire Protection (G)	Conservation (H)	Gen & Admin (I)
Base	1.00	100%							
Max Bi-Monthly / Average Bi-Monthly ¹	1.18	85%	15%						
Max Day	1.63	61%	39%						
Max Hour	2.71	37%	23%	40%					
Meter Service					100%				
Customer Service						100%			
Fire Protection							100%		
Conservation								100%	
Gen & Admin									100%

¹Source is the Authority's water use data for FY 2017

Table 5-3 allocates the functionalized O&M expenses shown in column Q, in the lower half of the table, (and also shown earlier in Table 5-1) to each cost causation component using the bases shown in the upper portion of Table 5-3 – which are the same as those shown in Table 5-2. The functions are allocated according to industry standards that are defined based on the nature of the water treatment function. For example: pumping, in line 21, is operated to serve base and Maximum day demand – therefore it is allocated using the Maximum day basis to the base and Maximum day components in line 21 of Table 5-3 by multiplying the total amount in column Q by the percentages shown in line 3. This allocation is performed in a similar manner for all other functions. Note that many of the functions have the same name as the cost causation component – these functions are allocated entirely to the cost causation component with the same name. For example, the meter service function is allocated to the meter service cost causation component.

Columns J through P show the current and proposed pass-through cost causation components. The acronyms are as follows:

- IAC – SDCWA Infrastructure Access Charge
- CSC – SDCWA Customer Service Charge
- ESC – SDCWA Emergency Storage Charge
- SRC – SDCWA Supply Reliability Charge
- RTS – MWD Ready to Serve Charge
- M&I – SDCWA Municipal and Industrial purchased water

The most important line of Table 5-3 is line 38 – it shows the resulting cost causation component allocation for O&M expenses. This resulting allocation is used to allocate the Authority's operating revenue requirement (discussed in Section 5.3) to the cost causation components.

Table 5-3: Allocation of Functionalized O&M to Cost Causation Components

Line No.	Functions	Allocation Basis (A)	Supply & Treatment (B)	Base (C)	Max Day (D)	Max Hour (E)	Meter Service (F)	Customer Service (G)	Fire Protection (H)	Conservation (I)	Gen & Admin (J)	Current Pass-throughs				Proposed Pass-throughs			Total (R)	
												IAC (K)	CSC (L)	ESC (M)	SRC (N)	RTS (O)	Capacity Charge (P)	M&I Purchased Water (Q)		
1	Supply	Supply & Trmt																		0%
2	Treatment	Supply & Trmt																		0%
3	Pumping	Max Day		61%	39%	0%	0%	0%	0%	0%	0%									100%
4	Storage	Max Hour		61%	39%	0%	0%	0%	0%	0%	0%									100%
5	Transmission & Distribution	Max Hour		37%	23%	40%	0%	0%	0%	0%	0%									100%
6	Customer Service	Customer Service		0%	0%	0%	0%	100%	0%	0%	0%									100%
7	Meter Service	Meter Service		0%	0%	0%	100%	0%	0%	0%	0%									100%
8	General and Admin	Gen & Admin		0%	0%	0%	0%	0%	0%	0%	100%									100%
9	Direct Fire Protection	Fire Protection		0%	0%	0%	0%	0%	100%	0%	0%									100%
10	Conservation	Conservation		0%	0%	0%	0%	0%	0%	100%	0%									100%
11	IAC											100%								100%
12	CSC												100%							100%
13	ESC													100%						100%
14	SRC														100%					100%
15	RTS															100%				100%
16	Capacity Charge																100%			100%
17	M&I Purchased Water																		100%	100%
18	Functions	Allocation Basis	Supply & Treatment	Base	Max Day	Max Hour	Meter Service	Customer Service	Fire Protection	Conservation	Gen & Admin	IAC	CSC	ESC	SRC	RTS	Capacity Charge	M&I Purchased	Total	
19	Supply	Supply & Trmt	\$2,881,680																	\$2,881,680
20	Treatment	Supply & Trmt	\$3,910,650																	\$3,910,650
21	Pumping	Max Day		\$1,389,086	\$875,124															\$2,264,210
22	Storage	Max Day		\$91,933	\$57,917															\$149,850
23	Transmission & Distribution	Max Hour		\$2,199,675	\$1,385,795	\$2,366,410														\$5,951,880
24	Customer Service	Customer Service						\$1,113,255												\$1,113,255
25	Meter Service	Meter Service					\$910,845													\$910,845
26	General and Admin	Gen & Admin									\$16,089,200									\$16,089,200
27	Direct Fire Protection	Fire Protection							\$430,330											\$430,330
28	Conservation	Conservation								\$363,000										\$363,000
29	IAC											\$1,568,492								\$1,568,492
30	CSC												\$727,134							\$727,134
31	ESC													\$1,972,579						\$1,972,579
32	SRC														\$729,050					\$729,050
33	RTS															\$209,507				\$209,507
34	Capacity Charge																\$156,147			\$156,147
35	M&I Purchased Water																	\$9,996,221		\$9,996,221
36																				
37	Total		\$6,792,330	\$3,680,693	\$2,318,837	\$2,366,410	\$910,845	\$1,113,255	\$430,330	\$363,000	\$16,089,200	\$1,568,492	\$727,134	\$1,972,579	\$729,050	\$209,507	\$156,147	\$9,996,221	\$49,424,031	
38	O&M Alloc w/o Wholesale Water Purchase Co		19.9%	10.8%	6.8%	6.9%	2.7%	3.3%	1.3%	1.1%	47.2%								100.0%	

Table 5-4 shows the total resulting allocation for the Authority’s capital assets. The resulting total asset allocation is derived in a similar manner as the O&M allocation - first, Raftelis functionalized the Authority’s assets and then allocated them to the cost causation components using the allocation bases and percentages shown in lines 1-6 of Table 5-4. The computations are identical to those in Table 5-3 - resulting in the asset allocation shown in line 15. Note that Base costs include Supply and Treatment though they are not identified separately as shown in Table 5-3. Part of the Authority’s revenue requirement includes rate/reserve funded capital. This capital portion of the revenue requirement is allocated to the cost causation components using the resulting asset allocation in line 15.

Table 5-4: Allocation of Functionalized Assets to Cost Causation Components

Line No.	Functionalized Assets	Allocation Basis (A)	Base (B)	Max Day (C)	Max Hour (D)	Meter Service (E)	Customer Service (F)	Fire Protection (G)	Conservation (H)	Gen & Admin (I)	Total (J)
1	Supply	Base	100%	0%	0%	0%	0%	0%	0%	0%	100%
2	Pumping	Max Day	61%	39%	0%	0%	0%	0%	0%	0%	100%
3	Treatment	Base	100%	0%	0%	0%	0%	0%	0%	0%	100%
4	Transmission and Distribution	Max Hour	37%	23%	40%	0%	0%	0%	0%	0%	100%
5	Meter	Meter Service	0%	0%	0%	100%	0%	0%	0%	0%	100%
6	General & Administration	Gen & Admin	0%	0%	0%	0%	0%	0%	0%	100%	100%
7	Functionalized Assets	Allocation Basis	Base	Max Day	Max Hour	Meter Service	Customer Service	Fire Protection	Conservation	Gen & Admin	Total
8	Supply	Base	\$250,475,401	\$0							\$250,475,401
9	Pumping	Max Day	\$4,064,587	\$2,560,690							\$6,625,278
10	Treatment	Base	\$46,084,156	\$0							\$46,084,156
11	Transmission and Distribution	Max Hour	\$57,175,704	\$36,020,694	\$61,509,623						\$154,706,021
12	Meter	Meter Service				\$11,609,031					\$11,609,031
13	General & Administration	Gen & Admin								\$28,050,880	\$28,050,880
14	Total Assets		\$357,799,848	\$38,581,384	\$61,509,623	\$11,609,031	\$0	\$0	\$0	\$28,050,880	\$497,550,766
15	Capital Allocation		71.9%	7.8%	12.4%	2.3%	0.0%	0.0%	0.0%	5.6%	100%

5.3 Revenue Requirement Determination

Table 5-5 shows the revenue requirement derivation with the total revenue required from rates shown in line 28, column L – this includes revenue to recover wholesale costs. The revenue required to cover Authority costs (i.e. costs not associated with revenues to recover SDCWA wholesale costs) is shown in line 28 column D. The totals shown in columns B and C are the total O&M and capital revenue requirements that are allocated to the cost causation components using the allocation percentages shown in lines 38 and 15 of Tables 5-3 and 5-4 respectively.

Raftelis calculated the revenue requirement using FY 2019 expenses, which include water purchases, O&M expenses, capital expenses, and existing debt service. O&M expenses include costs directly related to the supply, treatment, and distribution of water as well as routine maintenance of system facilities. To arrive at the rate revenue requirement, the revenue offsets are subtracted from other expenses and adjustments are made for annual cash balances and for the fact that the impending rate adjustment will take place six months into the fiscal year (on January 1st) and we must therefore annualize this revenue adjustment shown in line 25. The adjustments, shown as negative values are subtracted (therefore added as a result of subtracting a negative number) to arrive at the total revenue required from Authority rates in line 28 column D. This is the amount that the Authority’s fixed (RTS) and commodity rates are designed to collect.

Lines 11 through 14 can be traced to the expenses in Table 3-6. The revenue offsets shown in line 18 through 21 are also traced back to the other revenue in line 25 of Table 3-6. The adjustment for cash balance is the net cash balance taken from line 62 in Table 3-6. The adjustment for mid-year increase in

line 25 allows the annualization of the revenue adjustment shown in the cash flow Table 3-6, line 12. The rates are designed to collect the *annualized* amounts shown in line 12 (FY 2019) of Table 3-6 because the revenue shown in this table is the revenue collected if the rate adjustment was applied mid-year as opposed to a full year.

Table 5-5: Revenue Requirement Determination

FY 2019		Current Pass-throughs							Proposed Pass-throughs		M&I	
Line No.	Revenue Requirements (A)	Operating (B)	Capital (C)	Sub -Total SWA Expenses (D)	IAC (E)	CSC (F)	ESC (G)	SRC (H)	RTS (I)	Capacity Charge (J)	Purchased Water (K)	Total (L)
1	Current Pass-throughs											
2	SDCWA Infrastructure Access Charge				\$1,568,492							\$1,568,492
3	SDCWA Customer Service Charge					\$727,134						\$727,134
4	SDCWA Emergency Storage Charge						\$1,972,579					\$1,972,579
5	SDCWA Supply Reliability Charge							\$729,050				\$729,050
6	Proposed Pass-throughs											
7	MWD Readiness-to-Serve Charge								\$209,507			\$209,507
8	MWD Capacity Charge									\$156,147		\$156,147
9	SDCWA M&I Volumetric Cost of Water											\$0
10	SDCWA M&I Volumetric Pass-through										\$9,996,221	\$9,996,221
11	SWA Expenses	\$34,064,900		\$34,064,900								\$34,064,900
12	Current Debt Service		\$3,913,581	\$3,913,581								\$3,913,581
13	Propose Debt Service											\$0
14	Rate Funded Capital Investment		\$7,919,200	\$7,919,200								\$7,919,200
15	Total Revenue Requirement	\$34,064,900	\$11,832,781	\$45,897,681	\$1,568,492	\$727,134	\$1,972,579	\$729,050	\$209,507	\$156,147	\$9,996,221	\$61,256,812
16												
17	Less: Revenue Offsets											
18	Other Operating Revenue	\$1,441,000		\$1,441,000								\$1,441,000
19	Non-operating/Interest	\$386,442		\$386,442								\$386,442
20	Non-operating/Other/Contributions	\$1,153,800		\$1,153,800								\$1,153,800
21	Total Revenue Offsets	\$2,981,242		\$2,981,242								\$2,981,242
22												
23	Less: Adjustments											
24	Adjustment for Cash Balance	\$4,046,199		\$4,046,199								\$4,046,199
25	Adjustment for Mid-Year Increase	-\$2,096,125		-\$2,096,125								(\$2,096,125)
26	Total Adjustments	\$1,950,075		\$1,950,075								\$1,950,075
27												
28	Revenue Required from Rates	\$29,133,584	\$11,832,781	\$40,966,365	\$1,568,492	\$727,134	\$1,972,579	\$729,050	\$209,507	\$156,147	\$9,996,221	\$56,325,495

5.4 Unit Cost Causation Component Derivation

The goal is to distribute the cost causation components to each user class. To do so the cost causation component unit costs are calculated, which starts by assessing the total units demanded by each class for each cost causation component. This is shown across the bottom of Table 5-6 in line 12. Table 5-6 also shows the peaking factors for each tier and class in column D.⁶ The maximum day peaking factor in column E is the bi-monthly peaking factor in column D multiplied by 1.38 – which is the ratio of maximum day to bi-monthly/average monthly peaking factors shown in Table 5-2 ($1.63/1.18 = 1.38$). In other words, the 1.38 factor is a conversion factor to extrapolate maximum day factors from bi-monthly use data. The Authority does not read meters on a daily basis; therefore, we use this factor to estimate maximum day use. Column H, the maximum hour factor, is column E multiplied by 1.66. This is a reasonable industry standard factor to convert maximum day demand to maximum hour demand. In summary, bi-monthly peaking factors are used to estimate the maximum day and hour requirements for each class and are the reason for the peaking unit rate differentials discussed in Table 6-8 of Section 6.

Table 5-7 shows the revenue requirement allocation to the cost causation components. In line 1, the operating revenue requirement shown in column D, line 28 of Table 5-5 is allocated to the cost causation components using the O&M allocation from line 38 of Table 5-3. In line 2, the capital revenue

⁶ A user class with higher peaking (capacity) needs is allocated a larger share of the capacity costs compared to other classes. The peaking factors are used to derive the proportion of water demanded by each class during times of peak demand.

requirement in column C of Table 5-5 is allocated to the cost causation components using the asset allocation from line 15 of Table 5-4. In Table 5-7, lines 4 and 5, the general and administrative costs are reallocated to the remaining cost causation components proportionally. Line 6 shows the revenue requirement allocation to each cost causation component. Note that HCF stands for hundred cubic feet.

Table 5-6: Derivation of Units of Service

Line No.	Customer Class (A)	Annual Usage (HCF) (B)	Average Daily Usage (HCF) (C)	Max Bi-monthly / Average Bi-monthly Peaking Factor (D)	Max Day Peaking (E)	Max Day Demand (HCF/day) (F)	Max Day Requirement above Average Use (HCF/day) (G)	Max Hour Factor (H)	Max Hour Demand (I)	Max Hour Requirement above Max Day Use (HCF/day) (J)	Cost Equivalent Meters (K)	Hydraulically Equivalent Meters (L)	Number of Accounts (M)
1	SFR										26,988	29,000	26,271
2	Tier 1	1,426,752	3,909	1.03	1.42	5,562	1,653	2.36	9,232	3,671			
3	Tier 2	592,803	1,624	1.44	1.99	3,231	1,606	3.30	5,363	2,132			
4	Tier 3	453,887	1,244	1.44	1.99	2,474	1,230	3.30	4,106	1,633			
5	Tier 4	348,766	956	1.79	2.47	2,363	1,407	4.10	3,922	1,559			
6													
7	MFR	2,485,696	6,810	1.12	1.55	10,536	3,726	2.57	17,490	6,954	5,608	11,019	3,589
8	Commercial	1,586,684	4,347	1.15	1.59	6,906	2,559	2.64	11,463	4,558	4,525	9,388	2,767
9	Public Agencies	550,245	1,508	1.42	1.96	2,957	1,450	3.26	4,909	1,952	1,274	3,246	538
10	Construction	6,475	18	2.35	3.25	58	40	5.39	96	38	143	476	28
11	Total Fire Protection Capacity						1,283			6,417			
12	Totals	7,451,307	20,415			34,085	14,954		56,581	28,913	38,537	53,129	33,194

Table 5-7: Allocation of Revenue Requirement to Cost Causation Components

Line No.	Revenue Requirements (A)	Allocation Basis (B)	Supply & Treatment (C)	Base (D)	Max Day (E)	Max Hour (F)	Meter Service (G)	Meter - Capacity (H)	Customer Service (I)	Direct Fire Protection (J)	Conservation (K)
1	Operating	O&M Allocation	\$5,809,056	\$3,147,867	\$1,983,156	\$2,023,843	\$778,989		\$952,098	\$368,034	\$310,451
2	Capital	Capital Allocation	\$0	\$8,509,217	\$917,545	\$1,462,825	\$276,087		\$0	\$0	\$0
3	Total Cost of Service		\$5,809,056	\$11,657,084	\$2,900,701	\$3,486,668	\$1,055,076		\$952,098	\$368,034	\$310,451
4	Percent without Gen & Admin & Conservation			22%	44%	11%	13%		4%	1.4%	
5	Allocation of Gen & Admin		\$3,195,291	\$6,412,019	\$1,595,541	\$1,917,854	\$580,348		\$523,705	\$202,439	\$0
6	Subtotal		\$9,004,347	\$18,069,103	\$4,496,242	\$5,404,522	\$1,635,424		\$1,475,802	\$570,473	\$310,451

The interim unit rates are now derived for each cost causation component shown in Table 5-8 so that total fire protection costs can be estimated. The unit rates are calculated, shown in line 4 of Table 5-8, by dividing the cost by cost causation component (derived in line 6 of Table 5-7 and restated in line 1) by the units of service (derived in Table 5-6 and restated in line 2). Note the maximum day and maximum hour unit costs in columns D and E. These are used to estimate the cost for providing adequate capacity in the system for fire protection purposes.

Table 5-8: Interim Unit Cost Derivation

Line No.	Supply & Treatment (A)	Base / Delivery (C)	Max Day (D)	Max Hour (E)	Meter Service (F)	Meter - Capacity (G)	Customer Service (H)	Direct Fire Protection (I)	Conservation (J)	Total (K)	
1	Cost of Service	\$9,004,347	\$18,069,103	\$4,496,242	\$5,404,522	\$1,635,424	\$0	\$1,475,802	\$570,473	\$310,451	\$40,966,365
2	Units of Service	7,451,307	7,451,307	14,954	28,913	231,224	318,772	199,161	318,772	7,451,307	
3	Unit of Measure	HCF	HCF	HCF/day	HCF/day	Cost Equivalent meters	Hydraulically Equivalent Meters	No. of bills	Hydraulically Equivalent Meters	HCF	
4	Unit Cost	\$1.21	\$2.42	\$300.68	\$186.92	\$7.07	\$0.00	\$7.41	\$1.79	\$0.04	

Table 5-9 shows the cost to maintain sufficient capacity for fire protection purposes in line 5. The unit rates shown in line 4 of Table 5-8 show the cost for maximum day and maximum hour capacity which has been converted from dollars per HCF to dollars per 1,000 gallons per day in line 1 of Table 5-9. A fire is a high-flow short term event requiring maximum day and maximum hour capacity. We assume a four-hour fire duration requiring 4,000 gallons per minute which is typical for highly populated and industrialized areas. This fire would require the short-term capacity shown in line 4 of Table 5-9 in thousands of gallons per day. Multiplying line 4 by line 1 (the unit rates) yields the fire protection costs shown in line 5, with the total fire-fighting capacity cost shown in line 5, column E.

Table 5-9: Total Fire Protection Cost

Line No.	Fire Protection Cost Allocation (A)	Max Day (B)	Max Hour (C)	Total (D)
1	Unit Cost of Service		\$401.98	\$249.90
2	Unit		\$/ 1,000 gal per day	\$/ 1,000 gal per day
3	Fire Protection Service			
4	Capacity Demanded (1,000 gallons per day)		960	4,800
5	Allocated Cost of Service		\$385,899	\$1,199,509
6	Public Fire Protection		\$191,018	\$784,770
7	Private Fire Service		\$194,881	\$800,638

The total fire-fighting capacity costs to public (fire hydrants) and private fire accounts is allocated in proportion to the potential demand from each. This is shown in Table 5-10. The fire demand potential from each account or hydrant is the diameter of the connection raised to the 2.63 power which stems from the Hazen-Williams equation for flow through open conduits. The Hazen-Williams equation is used in the design of water distribution systems such as fire sprinkler systems, and relates water flow with the physical properties of the pipe (diameter, material). Multiplying the potential demand in column B by the number of each connection or hydrant in column C yields the total potential demand shown in column D. Lines 1 and 12 show the potential demand from public and private accounts, respectively – which is approximately 50% for each as shown in lines 14 and 15. The total fire protection costs are allocated accordingly and the result is shown in lines 6 and 7 of Table 5-9.

Table 5-10: Public and Private Fire Demand

Line No.	Fire Line Size - Public Hydrants	Fire Demand Potential	Number of Fire Hydrants	Total Potential Demand
	(A)	(B)	(C)	(D)
1	6" x 4"x 2.5" Type	49.45	2,595	128,327
	Fire Line Size - Private Fire	Fire Demand Potential	Number of Lines	Total Potential Demand
2	1"	1.0	6	6
3	1.5"	2.9	0	0
4	2"	6.2	8	50
5	3"	18.0	0	0
6	4"	38.3	52	1,993
7	6"	111.3	341	37,957
8	8"	237.2	239	56,692
9	10"	426.6	56	23,888
10	12"	689.0	15	10,336
11				
12	Subtotal		717	130,922
13	Total			259,248
14	Percent Allocated to Public Fire Protection			49%
15	Percent Allocated to Private Fire Protection			51%

With public and private fire costs known, the allocation of the revenue requirement is finalized by cost causation components as shown in Table 5-11, line 6 and calculate final unit costs as shown in line 10. Line 1 of Table 5-11 is the same as line 1 of Table 5-8, however the costs for private and public fire protection are calculated as shown in lines 2 and 3. In line 2, the Maximum Day and Hour (for private fire) costs are reallocated in columns D and E, from Table 5-9, line 7, to the private fire cost causation component in column K. The public fire-fighting capacity are treated the same way by reallocating both Maximum Day and Hour costs, in columns D and E, from Table 5-9, line 6, and direct fire protection costs in column I to the meter capacity component in column G. Direct fire protection costs are costs associated with maintaining/repairing public fire hydrants. It is a common practice to collect these costs through a fixed charge (the Authority's RTS Charge), therefore we reallocate these costs to the meter capacity component to collect these costs through the RTS Charge. Line 10 shows the final unit cost derivation, derived in the exact manner as Table 5-8. These unit costs are used to distribute costs to each customer class described in the next section.

Table 5-11: Final Revenue Requirement Allocation to Cost Causation Components

Line No.	(A)	Supply & Treatment (B)	Base (C)	Max Day (D)	Max Hour (E)	Meter Service (F)	Meter - Capacity (G)	Customer Service (H)	Direct Fire Protection (I)	Conservation (J)	Private Fire Service (K)	Total (L)
1	Cost of Service	\$9,004,347	\$18,069,103	\$4,496,242	\$5,404,522	\$1,635,424	\$0	\$1,475,802	\$570,473	\$310,451	\$0	\$40,966,365
2	Private Fire Service			(\$194,881)	(\$605,758)						\$800,638	\$0
3	Allocation of Public Fire Capacity Costs to RTS Charge			(\$191,018)	(\$593,752)		\$1,355,243		(\$570,473)			\$0
4	Capacity Costs Collected through Meter Charge			\$0	\$0		\$0					\$0
5												
6	Revenue Requirement by Cost Component	\$9,004,347	\$18,069,103	\$4,110,343	\$4,205,013	\$1,635,424	\$1,355,243	\$1,475,802	\$0	\$310,451	\$800,638	\$40,966,365
7												
8	Units of Service	7,451,307	7,451,307	13,670	22,496	231,224 Cost	318,772 Hydraucially	199,161	318,772	7,451,307	130,922 \$/ yr /	
9	Unit of Measure	HCF	HCF	HCF / day	HCF / day	Equivalent meters	Equivalent Meters	No. of bills	HCF	HCF	Equivalent Connection	
10	Unit Cost	\$1.21	\$2.42	\$300.68	\$186.92	\$7.07	\$4.25	\$7.41	NA	\$0.04	\$6.12	

5.5 Distribution of Cost Causation Components to Customer Classes

The final step in a cost of service analysis is to distribute the cost causation components to the customer classes using the unit costs derived in Table 5-11. This is the ultimate goal of a cost of service analysis and yields the cost to serve each customer class. Note that the total amounts in each table have remained consistent (\$40.9M). Table 5-12 shows the derivation of the cost to serve (i.e., cost of service for) each customer class.

To derive the cost to serve each class, the unit costs from line 10 in Table 5-11 are multiplied by the units of service shown in Table 5-6 (columns B, F, J, K, L, and M) for each class. For example, using the Commercial customer class, the unit costs in columns B and C, Table 5-8, are multiplied by the annual commercial use in Table 5-6 (use is also shown in Table 5-12, column A). The Maximum Day and Maximum Hour rates in line 10, Table 5-11, are multiplied by the commercial Maximum Day and Hour requirements in columns G and J in Table 5-6. Multiplying meter service, capacity and customer service unit costs in columns F, G and H, Table 5-11, by commercial units of service in columns K, L and M of Table 5-6 yields the amounts shown on line 8, column F, G and H in Table 5-12. Similar calculations for each of the remaining customer classes and cost causation components yield the total cost to serve each customer class shown in column K of Table 5-12. Note that the total cost of service in line 12, column K is equal to the revenue requirement in Table 5-4 as intended. The cost to serve each customer class is now calculated and the rates to collect the cost to serve each class can be derived. That is – the rates to collect the amount shown for each class in column K of Table 5-12 are derived. The amount shown in column K does not include the proposed pass-throughs or SDCWA Wholesale Water Purchase Charge.

Table 5-13 shows how the Authority will collect each cost causation component – whether through the fixed RTS charge or through a volumetric rate. Approximately 13% of the Authority’s revenue (before pass-throughs and including private fire protection) will be collected through a fixed charge. Note that private fire service is not included in the RTS charge but it is still a fixed charge.

Table 5-12: Derivation of the Cost to Serve Each Class

Line No.	Customer Class	Annual Usage (HCF) (A)	Supply & Treatment (B)	Base (C)	Max Day (D)	Max Hour (E)	Meter Service (F)	Meter - Capacity (G)	Customer Service (H)	Conservation (I)	Private Fire Service (J)	Subtotal SWA Cost to Serve (K)
1	SFR	2,822,208	\$3,410,427	\$6,843,734	\$1,772,910	\$1,681,331	\$1,145,281	\$739,764	\$1,168,042	\$117,584		\$16,879,074
2	Tier 1	1,426,752	\$1,724,123	\$3,459,813	\$496,926	\$686,130				59,444		
3	Tier 2	592,803	\$716,358	\$1,437,521	\$483,042	\$398,560				24,699		
4	Tier 3	453,887	\$548,489	\$1,100,657	\$369,847	\$305,162				18,911		
5	Tier 4	348,766	\$421,457	\$845,742	\$423,095	\$291,479				14,531		
6												
7	MFR	2,485,696	\$3,003,778	\$6,027,708	\$1,120,317	\$1,299,830	\$237,970	\$281,082	\$159,579	103,564		\$12,233,829
8	Commercial	1,586,684	\$1,917,388	\$3,847,640	\$769,293	\$851,940	\$192,040	\$239,468	\$123,024	66,108		\$8,006,901
9	Public Agencies	550,245	\$664,930	\$1,334,321	\$435,841	\$364,809	\$54,054	\$82,794	\$23,910	22,925		\$2,983,585
10	Construction	6,475	\$7,824	\$15,701	\$11,981	\$7,104	\$6,077	\$12,134	\$1,247	270		\$62,338
11	Private Fire Service										\$800,638	\$800,638
12	Total	7,451,307	\$9,004,347	\$18,069,103	\$4,110,343	\$4,205,013	\$1,635,424	\$1,355,243	\$1,475,802	\$310,451	\$800,638	\$40,966,365

Table 5-13: Fixed Versus Volumetric Revenue Collection

Cost Component	Fixed (RTS) Charge	Volumetric Rate	Total
Supply & Treatment		\$9,004,347	\$9,004,347
Base		\$18,069,103	\$18,069,103
Max Day		\$4,110,343	\$4,110,343
Max Hour		\$4,205,013	\$4,205,013
Meter Service	\$1,635,424		\$1,635,424
Meter - Capacity	\$1,355,243		\$1,355,243
Customer Service	\$1,475,802		\$1,475,802
Conservation		\$310,451	\$310,451
Private Fire Service	\$800,638		\$800,638
Total	\$5,267,107	\$35,699,258	\$40,966,365
Percent	13%	87%	100%

6 Rate Derivation

6.1 Existing Rate Structure and Rates

The Authority’s existing rate structure consists of a bi-monthly service charge (the RTS Charge), which is a fixed charge determined by the size of the meter serving a property. The rate structure also consists of a four-tier, variable volumetric rate for single family customers, and uniform volumetric rates for all remaining classes. Table 6-1 shows the existing rate structure and rates. The Authority is maintaining this rate structure.

Table 6-1: Existing Rate Structure and Rates (Bi-Monthly)

Size	Ready to Serve Charge	Class	Current Volumetric Rate
		SFR	
5/8" inch	\$21.80	Tier 1	\$3.86
1"	\$30.68	Tier 2	\$4.75
1 1/2"	\$46.86	Tier 3	\$6.39
2"	\$64.62	Tier 4	\$6.90
3"	\$118.88		
4"	\$196.88	MFR	\$5.93
6"	\$381.98	Commercial	\$6.08
8"	\$619.74	Public Agencies	\$6.58
10"	\$925.72	Construction	\$9.35

6.2 Proposed Rates

The Authority proposes to break out, as separate charges, the costs of three wholesaler charges that are currently embedded in the Authority’s rates. The three charges are:

- 1) a separate charge for SDCWA Municipal and Industrial water purchase costs,
- 2) a pass-through charge for the Metropolitan Water District (MWD) Readiness-to-Serve Charge and,
- 3) a pass-through charge for the MWD Capacity Charge.

In addition, the Authority proposes to adjust rates for inflation (not including the three charges above) in proportion to the change in the BLS CPI for San Diego. The three charges above cause the Authority’s current rates to decrease. This is because the three costs items above are removed from the Authority’s current rates and create separate charges. The use of the term “Authority’s rates” means all rates other than the rates to recover wholesale costs.

6.3 Proposed Readiness-to-Serve Charge

Table 6-2 shows the derivation of the RTS Charge in column J. The cost of service analysis shown in Table 5-11 derived the three components of the RTS charge for the smallest size meter – shown in columns G, H and I for 5/8-inch meters for the meter service, meter capacity and customer service charge respectively. The RTS charges shown in Table 6-2 do not include the SDCWA IAC (Infrastructure Access Charge) pass through charge.

Table 6-2: Derivation of the RTS Charge

Line no.	Meter Size (A)	Number of Meters (B)	AWWA Capacity (gpm) (C)	AWWA Capacity Ratio (D)	Meter Cost (E)	Meter Cost Equivalency (F)	Customer Charge (G)	Meter Service (H)	Meter Capacity (I)	Total SWA RTS Charge (J)	Revenue (K)
1	5/8" inch	27,649	20	1.00	\$143	1	\$7.41	\$7.07	\$4.25	\$18.73	\$3,107,877
2	1"	3,314	50	2.50	\$199	1.39	\$7.41	\$9.84	\$10.63	\$27.88	\$554,356
3	1 1/2"	910	100	5.00	\$313	2.19	\$7.41	\$15.48	\$21.26	\$44.15	\$241,141
4	2"	1,269	160	8.00	\$425	2.97	\$7.41	\$21.02	\$34.01	\$62.44	\$475,383
5	3"	29	350	17.50	\$750	5.24	\$7.41	\$37.10	\$74.40	\$118.91	\$20,720
6	4"	8	630	31.50	\$1,200	8.39	\$7.41	\$59.35	\$133.92	\$200.68	\$9,647
7	6"	7	1,400	70.00	\$2,000	13.99	\$7.41	\$98.92	\$297.60	\$403.93	\$16,990
8	8"	4	2,400	120.00	\$3,000	20.98	\$7.41	\$148.38	\$510.17	\$665.97	\$16,007
9	10"	4	3,800	190.00	\$4,000	27.97	\$7.41	\$197.84	\$807.78	\$1,013.03	\$24,348
Total		33,194									\$4,466,468

RTS CHARGE COMPONENTS

There are three components that comprise the RTS Charge: meter capacity, meter service, and customer charge; they are described below. The RTS charge recognizes the fact that even when a customer does not use any water, the Authority incurs fixed costs in connection with maintaining the ability to serve each connection – thus the name Readiness to Serve.

METER CAPACITY COMPONENT (COLUMN I)

The meter capacity component collects capacity (also known as peaking) related costs as well as public fire protection (capacity) costs and direct fire protection costs. A portion of capacity related costs can be allocated to and collected through the RTS Charge by meter size. This assumes that larger meters have the potential to demand more capacity, or said differently, exert more peaking characteristics compared to smaller meters. The potential capacity demanded (peaking) is proportional to the potential flow through each meter size as established by the AWWA hydraulic capacity ratios which are shown in column D of Table 6-2. The ratios shown are the ratio of potential flow through each meter size compared to the flow through a 5/8-inch meter. For example, column D shows that the flow through a 2-inch meter is 8 times that of a 5/8-inch and therefore the meter capacity component of the RTS charge is 8 times that of the 5/8-inch meter. The meter capacity cost causation component for a 5/8-inch meter is derived in column G of Table 5-11 and the capacity component for larger meters is scaled up using the AWWA capacity ratios shown in column D of Table 6-2.

Allocating capacity costs by meter size (instead of to the maximum day and maximum hour cost causation components using the peaking factors shown in column I of Table 5-5) is a common way to provide greater revenue stability, especially in-light of decreasing revenues during a drought or other water shortage.

METER SERVICE COMPONENT (COLUMN H)

The meter service component recovers costs associated with maintaining and servicing meters. These costs are proportional to the replacement cost of a meter shown in column F of Table 6-2. Column F shows the ratio of the replacement cost by meter size to that of a 5/8-inch meter. The meter service component for a 5/8-inch meter is derived in column F of Table 5-11 and the meter service component for larger meter sizes is scaled up using the meter cost ratios shown in Table 6-2 column F.

CUSTOMER COMPONENT (COLUMN G)

The customer component recovers costs associated with meter reading, customer billing and collection as well as answering customer calls. These costs are the same for all meter sizes as it costs the same to bill a small meter as it does a larger meter. The customer component is derived in column H of Table 5-11 and Table 6-2, column G, shows that it is the same cost for all meter sizes.

6.4 Private Fire Connection Rates

The Authority reviewed its fire rates as part of this Study. Raftelis derived private fire service costs in Table 5-9, column E and the yearly private fire charge in Table 5-11, column K. The yearly cost is simply the total revenue requirement divided by the number of equivalent connections (this is a yearly cost per equivalent connection). Table 6-3 derives the charges for each connection size as the yearly charge shown in Table 5-11, divided by 6 to create a bi-monthly cost and then multiplied by the potential flow for each connection size shown in column C. For example, the charge for a 1-inch meter is $\$6.12/6 \times 1.00 = \1.02 as shown in column E.

Table 6-3: Derivation of Private Fire Charges

Line No.	Meter Size (A)	Number of Connections (B)	Potential Demand (C)	Equivalent Demand (D)	Bi-Monthly Private Fire Charge (E)	Current Bi- monthly Charge (F)	\$ Difference (G)	Revenue (H)
1	5/8"	0	0.29	-	\$0.30	\$40.00	-\$39.70	\$0
2	3/4"	0	0.47	-	\$0.48	\$40.00	-\$39.52	\$0
3	1"	6	1.00	6	\$1.02	\$40.00	-\$38.98	\$37
4	1.5"	0	2.90	-	\$2.96	\$40.00	-\$37.04	\$0
5	2"	8	6.19	50	\$6.31	\$40.00	-\$33.69	\$303
2	3"	0	17.98	-	\$18.33	\$40.00	-\$21.67	\$0
3	4"	52	38.32	1,993	\$39.06	\$40.00	-\$0.94	\$12,186
4	6"	341	111.31	37,957	\$113.45	\$76.00	\$37.45	\$232,122
5	8"	239	237.21	56,692	\$241.77	\$114.00	\$127.77	\$346,697
6	10"	56	426.58	23,888	\$434.78	\$132.00	\$302.78	\$146,088
7	12"	15	689.04	10,336	\$702.30	\$152.00	\$550.30	\$63,207
Subtotal		717	1,531	130,922				\$800,638

6.5 Commodity Rates

SINGLE FAMILY TIER DEFINITIONS

The Authority has not changed the tier breakpoints as part of this study. The breakpoint for the first tier approximately equates to a two-person household using 55 gallons per day per person (gpcd). This level of use is identified in Water Code section 10608.20 as essential indoor use. The second tier is set at the average minimum (winter) bi-monthly use – this represents the average indoor single-family use since outdoor watering needs are minimal during the winter. The third tier is set at the maximum (summer) bi-monthly use, when water use is at its highest -water use beyond this tier is primarily outdoor, discretionary water use. The tiers are shown below:

- Tier 1 – 10 HCF bimonthly
- Tier 2 – 16 HCF bimonthly
- Tier 3 – 27 HCF bimonthly
- Tier 4 - >27 HCF bimonthly

UNIT COST DEFINITIONS

The commodity rates for each class and tier are derived by summing of the unit rates (\$ / hcf) for:

1. Water Supply
2. Delivery
3. Peaking
4. Conservation

Water Supply costs are the costs associated with obtaining and treating water to make it ready for transmission and distribution. The Authority has four sources of water, shown in Table 6-4.

Delivery costs are the operating and capital costs associated with delivering water to all customers at a constant average rate of use – also known as serving customers under average daily demand conditions. Therefore, delivery costs are spread over all units of water irrespective of customer class or tiers.

Peaking costs, or extra-capacity costs, represent costs incurred to meet customer peak demands in excess of a base use (or average daily demand). Total extra capacity costs are comprised of Maximum Day and Maximum Hour O&M and Capital costs. The peaking costs are distributed to each tier and class using peaking factors derived from customer use data.

Conservation costs are costs which cover water conservation and efficiency programs and efforts. These programs are targeted to high volume water users. Therefore, conservation costs were allocated to Tiers 3 and 4, where water consumption is considered discretionary and for which conservation programs are designed to promote water efficiency. Allocation of conservation costs to upper tiers helps provide a strong price signal for conservation, consistent with Article X Section 2 of the State of California Constitution, and proportionately allocates such costs to those customers whose greater demand create the need for conservation and efficiency programs and efforts.

UNIT COST DERIVATION BY COST CAUSATION COMPONENT

The first step in the commodity rate calculation is the derivation of the supply rate for each tier and class. The supply rate for each tier and class is a function of the cost and amount of water allocated from each of the Authority's water sources. Table 6-4 shows the estimated *production* volume and cost of each Authority water source. The cost by source derivation is provided in Appendix A. It also shows the estimated water supply and treatment cost assuming an average year – meaning the long-term average of water supply from the Authority's reservoirs – which is approximately 5,700-acre feet.

Table 6-4: Average Year Water Sources and Costs

Line No.	Water Source for Rate Setting (A)	Acre Feet (AF) (B)	% of Supply (C)	Water Use (HCF) (D)	% of Local Sources (E)	Cost by Source	Cost by Source	Rank (H)	Water Cost (Supply & Trmt) (I)
						(Includes Supply & Trmt) (\$/ AF) (F)	(Includes Supply & Trmt) (\$/ HCF) (G)		
1	NC Wells	2,100	12%	869,022	15%	\$170	\$0.39	1	\$339,390
2	Reservoir Water	5,700	32%	2,358,774	41%	\$224	\$0.52	2	\$1,214,980
3	Desal	6,200	34%	2,565,684	44%	\$411	\$0.94	3	\$2,418,240
4				5,793,480	100%				\$3,972,610
5	Pass-through								
6	Purchase Raw	4,006	22%	1,657,827		\$1,308	\$3.00	4	\$4,976,264
7	Purchase Treated	-	0%	-		\$1,378	\$3.16	5	
8		18,006	100%	7,451,307					\$8,948,874

The water sources shown in Table 6-4 were allocated to each user class in proportion to the number of accounts – meaning that a class with a higher number of accounts is allocated a higher proportion of the most economical water. The number and percentage of accounts, as well as use by customer class is shown in Table 6-5. Columns E, F, G and H allocate the total amount of water from each source, shown in line 1, to each class in proportion to column D - percent of accounts.

Table 6-5: Accounts and Use by User Class

Line No.	Customer Class (A)	Water Use (HCF) (B)	Percent of Water Use (%) (C)	Percent of Accounts (%) (D)	NC Wells (HCF) (E)	Reservoir Water (HCF) (F)	Desalination Plant (HCF) (G)	Purchased Raw (HCF) (H)	Total (I)
1	Total Water Available				869,022	2,358,774	2,565,684	1,657,827	
2	SFR	2,822,208	37.9%	79.1%	687,799	1,866,882	2,030,643	1,312,109	5,897,433
3	Tier 1	1,426,752							
4	Tier 2	592,803							
5	Tier 3	453,887							
6	Tier 4	348,766							
7	MFR	2,485,696	33.4%	10.8%	93,968	255,055	277,428	179,262	805,713
8	Commercial	1,586,684	21.3%	8.3%	72,442	196,629	213,877	138,197	621,145
9	Public Agencies	550,245	7.4%	1.6%	14,079	38,216	41,568	26,859	120,722
10	Construction	6,475	0.1%	0.08%	734	1,993	2,167	1,400	6,295
11		7,451,307	100%	100.00%	869,022	2,358,774	2,565,684	1,657,827	7,451,307

Table 6-6 derives the supply rate by customer class shown in column I. First the demand for single family residential (SFR) is fulfilled – shown in line 3. Of the amount available to SFR, derived in Table 6-5, SFR demand is met from the lowest cost water sources. Line 3 shows the amounts from each source in columns D, E, F and G.

Lines 5 through 8 further allocate this amount to each tier with the lower tiers fulfilling their needs from lower cost water sources. As shown, there is enough well, reservoir, and desalination plant water to meet SFR needs. We calculate the supply rate for each tier, shown in column I, by multiplying the total amount of water from each source by the supply cost for each source (shown in line 17) and dividing by total SFR water use. This calculation is the weighted average of the supply cost by source.

Line 9 shows the water remaining after the needs of SFR are met. The remaining water is allocated either in proportion to the number of accounts – which is the case of columns D and F in lines 11 through 14 or, if there is ample water left over because SFR needs are met, which is the case for desalination water in column G, then this water is further allocated in proportion to the remaining accounts (without SFR), shown in column C. Column G, purchased raw water is the last supply source that meets the total demand for non-SFR classes once the other supply sources are used. To calculate the average supply cost by customer class, we take the weighted average - weighted by the use from each source - of the *supply cost for each source* (shown in line 17). The *supply rate for each class* is shown in column I of Table 6-6. This is the first component of the rate derivation for each class.

Table 6-6: Derivation of Supply Costs by User Class

Line No.	Customer Class (A)	Water Use (HCF) (B)	Percent of Accounts without SFR				Total (H)	Supply Rate (\$/HCF) (I)	
			(C)	NC Wells (HCF) (D)	Reservoir Water (HCF) (E)	Desalination Plant (HCF) (F)			Purchased Raw (HCF) (G)
1	Total Water Available			869,022	2,358,774	2,565,684	1,657,827		
2	Amount Available to SFR			687,799	1,866,882	2,030,643	1,312,109	5,897,433	
3	Amount Required by SFR	2,822,208		687,799	1,866,882	267,527	-	2,822,208	\$0.53
4									
5	Tier 1	1,426,752		687,799	738,954	-	-	1,426,752	\$0.46
6	Tier 2	592,803		-	592,803	-	-	592,803	\$0.52
7	Tier 3	453,887		-	453,887	-	-	453,887	\$0.52
8	Tier 4	348,766		-	81,239	267,527	-	348,766	\$0.84
9	Amount Remaining after SFR (line 1 minus 3)			181,223	491,892	2,298,157	1,657,827	4,629,100	
10									
11	MFR	2,485,696	52%	93,968	255,055	1,196,484	940,190	2,485,696	\$1.66
12	Commercial	1,586,684	40%	72,442	196,629	922,401	395,212	1,586,684	\$1.38
13	Public Agencies	550,245	8%	14,079	38,216	179,272	318,678	550,245	\$2.09
14	Construction	6,475	0%	734	1,993	-	3,748	6,475	\$1.94
15		7,451,307	100%	869,022	2,358,774	2,565,684	1,657,827	7,451,307	
16									
17	Supply Cost by Source			\$0.39	\$0.52	\$0.94	\$3.00		

DELIVERY UNIT COST

We derive the delivery unit cost by subtracting the Authority’s average supply and treatment costs derived in column I of Table 6-4 and shown in line 2 of Table 6-7, from the supply, treatment and delivery rate (line 1) to yield the delivery cost shown in line 3 of Table 6-7. Dividing the delivery cost by total use in line 4, yields the delivery rate for all classes. The delivery rate is the cost to deliver water under average daily demand conditions and is the same for all classes and for all single-family tiers.

Table 6-7: Derivation of the Delivery Unit Cost

Line No.		
1	Supply, Treatment and Delivery	\$27,073,451
2	Supply and Treatment	\$8,948,874
3	Delivery	\$18,124,577
4	Water Use (HCF)	7,451,307
5	All Classes - Delivery Rate	\$2.43

PEAKING UNIT COST

Table 6-8 shows the derivation of the peaking unit costs for single family tiers and each customer class. The peaking costs shown in column B were derived in the cost of service section in Table 5-12. The peaking costs in column B are the summation of columns D and E in Table 5-12. The peaking rate is calculated by dividing the peaking costs (column B) by the use (column C). Note that the peaking rate is correlated with the peaking factor – a higher peaking factor correlates to a higher peaking rate. Also note that the total peaking costs in column B of Table 6-8 matches the total peaking costs (Maximum day and Maximum hour) shown in columns D and E in Table 5-12.

Table 6-8: Derivation of Peaking Unit Cost

Line No.	Class	Peaking Cost (A)	Use (HCF) (C)	Peaking Unit Rate (\$/HCF) (D)	Bi-Monthly Peaking Factors (E)
1	SFR	\$3,454,241	2,822,208	\$1.22	
2					
3	Tier 1	\$1,183,056	1,426,752	\$0.83	1.03
4	Tier 2	\$881,601	592,803	\$1.49	1.44
5	Tier 3	\$675,010	453,887	\$1.49	1.44
6	Tier 4	\$714,574	348,766	\$2.05	1.79
7					
8	MFR	\$2,420,148	2,485,696	\$0.97	1.12
9	Commercial	\$1,621,233	1,586,684	\$1.02	1.15
10	Public Agencies	\$800,650	550,245	\$1.46	1.42
11	Construction	\$19,085	6,475	\$2.95	2.35
12					
13	Subtotal	\$8,315,356	7,451,307		

CONSERVATION UNIT COST

Table 6-9 shows the derivation of the conservation unit rates. The conservation costs were derived in the cost of service analysis, shown in column I of Table 5-12. The conservation costs for SFR are allocated using the allocation factors, shown in column C, to allocate the total conservation costs to Tiers 3 and 4. Customers in these tiers are the highest volume users, and the higher allocation factors recognize the fact that conservation and efficiency programs are targeted at these users who create the need, and therefore generate the costs, for these programs. The allocation factor in column C is weighted by the use in column D, resulting in the percent responsibility for conservation costs shown in column F. The conservation rate is derived by dividing the conservation costs in column G by the use in column D and is shown in column H.

The conservation rate for the remaining user classes is calculated by dividing the conservation costs by the use (columns B and D) to yield the conservation rate in column H. The total conservation costs shown in column B matches with that derived in column I of Table 5-12.

Table 6-9: Derivation of Conservation Unit Costs

Line No.	Customer Class (A)	Conservation Cost (B)	Allocation of Conservation Cost (C)	Use (HCF) (D)	Weighted Use (HCF) (E)	Percent Responsibility for Conservation (F)	Allocated Conservation Cost (\$) (G)	Conservation Rate (\$ /HCF) (H)
1	Total Conservation Cost	\$310,451						
2	SFR							
3	Tier 1	\$59,444	0.00	1,426,752	-	0%	\$0	\$0.00
4	Tier 2	\$24,699	0.00	592,803	-	0%	\$0	\$0.00
5	Tier 3	\$18,911	1.00	453,887	453,887	46%	\$54,624	\$0.12
6	Tier 4	\$14,531	1.50	348,766	523,149	54%	\$62,960	\$0.18
7		\$117,584			977,036		\$117,584	
8	MFR	\$103,564	1.00	2,485,696	2,485,696			\$0.04
9	Commercial	\$66,108	1.00	1,586,684	1,586,684			\$0.04
10	Public Agencies	\$22,925	1.00	550,245	550,245			\$0.04
11	Construction	\$270	1.00	6,475	6,475			\$0.04
12								
13	Subtotal	\$310,451		7,451,307	5,606,135			

FINAL RATE DERIVATION

The unit rates for supply, delivery, peaking and conservation for single family tiers and for the other classes are calculated in Tables 6-4 through 6-9. Table 6-10 shows the final rates by summing each unit cost to derive the total rate for each tier and class shown in column H. Note that the total revenue shown in line 12, column H, matches the total volumetric revenue requirement shown in Table 5-13 and that the rates shown in Table 6-10 do not include pass-through charges or the SDCWA Wholesale Water Purchase Charge.

Table 6-10: Derivation of Rates by Tier and Class

Line No.		Use (HCF) (C)	Supply Rate (\$ / HCF) (D)	Delivery Rate (\$/ HCF) (E)	Peaking Rate (\$/ HCF) (F)	Conservation Rate (\$ /HCF) (G)	Total Volumetric Rate (\$/ HCF) (H)
	(A)						
1	SFR Total						
2	Tier 1	1,426,752	\$0.46	\$2.43	\$0.83	\$0.00	\$3.72
3	Tier 2	592,803	\$0.52	\$2.43	\$1.49	\$0.00	\$4.43
4	Tier 3	453,887	\$0.52	\$2.43	\$1.49	\$0.12	\$4.56
5	Tier 4	348,766	\$0.84	\$2.43	\$2.05	\$0.18	\$5.50
6							
7	MFR	2,485,696	\$1.66	\$2.43	\$0.97	\$0.04	\$5.10
8	Commercial	1,586,684	\$1.38	\$2.43	\$1.02	\$0.04	\$4.87
9	Public Agencies	550,245	\$2.09	\$2.43	\$1.46	\$0.04	\$6.02
10	Construction	6,475	\$1.94	\$2.43	\$2.95	\$0.04	\$7.36
11							
12	Subtotal	7,451,307	\$8,948,874	\$18,124,577	\$8,315,356	\$310,451	\$35,699,258

SDCWA WHOLESALE WATER PURCHASE CHARGE

The Authority purchases wholesale water from SDCWA at the M&I water rate. The amount it purchases every year varies significantly based on the amount of local water that is stored in its two reservoirs. Reservoir water storage is dependent on local rainfall. Purchased water costs can vary from zero to over \$10 million. The Authority’s proposed SDCWA Wholesale Water Purchase Charge would pass-through these water purchase costs to customers. To minimize the impact on customers, the Authority proposes to establish a Rate Stabilization Reserve to be funded slowly over time. The Authority would maintain the charge to fund the Rate Stabilization Reserve during years in-which it purchases less than an average volume of water⁷. During times when it must purchase more than an average volume of water, the Rate Stabilization Reserve would be drawn upon before increasing this charge -therefore helping to stabilize this charge and minimize customer impacts.

Table 6-14 shows the derivation of the proposed SDCWA Wholesale Water Purchase Charge for CY2019. Line 3 shows the total amount of estimated water production in acre feet. From this amount the anticipated supply from the NC Wells, desalination plant, and local water is subtracted (line 6). The Authority anticipates no reservoir water for CY 2019, therefore the amount of SDCWA purchased water is historically high as shown in line 7. The M&I water purchase cost, in line 10, is line 7 multiplied by line 8 (the M&I rate) to yield the total water purchase cost in line 10. Dividing this cost by calendar year water use (line 9) yields the wholesale charge in line 11.

⁷ The Authority could maintain the charge at its prior level or decrease it based on how quickly it would like to fund the Rate Stabilization Reserve. It is anticipated that the Authority would review the balance in the Rate Stabilization Reserve periodically to set the pass-through. Sweetwater Staff proposed Rate Stabilization targets to the Governing Board as part of the financial policies included in the FY 2018-19 Budget.

**Table 6-11: Derivation SDCWA Wholesale Water Purchase Charge
Portion of Commodity Rate**

Line No.	SDCWA Wholesale Water Purchase Charge	CY 2019
1	Note: All Water Units in Acre Feet	
2	Actual Calendar Year Water Use	17,114
3	Actual Water Produced (5% Water Loss)	18,015
4	NC Wells	2,100
5	Desalination Plant	6,200
6	Estimated Reservoir Water	-
7	Purchased Raw Water (Acre Feet)	9,715
8	CY M&I Rate (\$/ Acre Foot)	\$1,029
9	CY Use (HCF)	7,454,761
10	M&I Water Purchase Cost	\$9,996,221
11	Water Purchase Charge (\$/ HCF)	\$1.34

Note: Numbers may not calculate exactly due to rounding

The charge shown in line 11 of Table 6-14 shall be applied proportionally to each class and tier based on the rate in each class/tier to the weighted average rate for all customers developed in Table 6-10. Table 6-15 shows the proportionality ratios in column B and the SDCWA Wholesale Purchased Water Charge when applied proportionally to each tier and class in column C.

Table 6-15: SDCWA Wholesale Water Purchase Charge Applied Proportionally

Line No.	Customer Class (A)	Rate Ratio (B)	Proportional SDCWA Wholesale Charge (\$/HCF) (C)
1	Uniform Pass-through		\$1.34
2			
3	SFR		
4	Tier 1	78%	\$1.05
5	Tier 2	93%	\$1.25
6	Tier 3	95%	\$1.28
7	Tier 4	115%	\$1.55
8	MFR	107%	\$1.43
9	Commercial	102%	\$1.37
10	Public Agencies	126%	\$1.69
11	Construction	154%	\$2.07

Note: Pass-through is rounded up

6.6 Proposed Inflationary Adjustments (Pass-Throughs)

In the preceding sections, the report derived the Authority’s RTS charge, the private fire charges and the volumetric rates. The Authority proposes to index these rates to the Bureau of Labor Statistics Consumer Price Index for San Diego, meaning it will increase the rates by the same percentage as the yearly change (from July 1 to June 30) in this index. The average change in this index over the last ten years has been 1.7%. The last ten years has been a low inflationary time compared to long term averages – which are closer to 2.5% to 3%.

6.7 Current Pass-Throughs

The Authority currently implements four pass-through charges and will continue to pass-through the following four wholesale costs, which are derived below. Each January 1st, the Authority will update these charges to pass-through these costs from the SDCWA.

SAN DIEGO COUNTY WATER AUTHORITY INFRASTRUCTURE ACCESS CHARGE (IAC)

The SDCWA sets the IAC every January 1 and it is anticipated that on January 1, 2019 it will not change. The charge is shown in Table 6-11.

Table 6-12: SDCWA Bi-monthly IAC – January 1, 2019

SDCWA Infrastructure Access Charge	
Meter Size	January 1, 2019
5/8" inch	\$6.02
1"	\$9.64
1 1/2"	\$18.06
2"	\$31.30
3"	\$57.80
4"	\$98.74
6"	\$180.60
8"	\$313.04
10"	\$469.56

SAN DIEGO COUNTY WATER AUTHORITY CUSTOMER SERVICE CHARGE (CSC), EMERGENCY SERVICE CHARGE (ESC) AND SUPPLY RELIABILITY CHARGE (SRC)

Table 6-12 shows the derivation of each of the above pass-throughs by dividing the wholesaler cost by the estimated calendar year water use.

Table 6-13: SDCWA CSC, ESC and SRC – January 1, 2019

Line No.	SDCWA Pass-through	Customer Service Charge	Emergency Service Charge	Supply Reliability Charge
1	FY 2019 Cost	\$798,564	\$2,205,284	\$802,891
2	Calendar Year Water Use (HCF)	7,454,761	7,460,964	7,467,172
3				
4	Pass-through (\$/HCF)	\$0.11	\$0.30	\$0.11

6.8 Proposed Pass-Throughs

The Authority proposes to implement two new pass-throughs from the Metropolitan Water District (MWD).

METROPOLITAN WATER DISTRICT PASS-THROUGHs

Table 6-13 shows the derivation of the two MWD proposed pass-throughs to be implemented on January 1, 2019. These pass-throughs would be updated every January 1 and be based on the charges from the MWD.

Table 6-14: Proposed MWD RTS and Capacity Charge Pass-Throughs

Line No.	MWD Pass-through	Readiness to Serve Charge	Capacity Charge
1	FY 2019 Cost	\$209,507	\$154,483
2	Calendar Year Water Use	7,454,761	7,454,761
3			
4	Pass-through (\$/HCF)	\$0.03	\$0.02

7 Bill Impacts

Section 7 demonstrates the customer bill impacts for each customer class with the new rates and pass-throughs after January 1, 2019. The bill impacts include all current and proposed pass-throughs and the SDCWA Wholesale Water Purchase Charge. The customer bill impacts are affected by a couple items. First, the availability of more desalination water compared to the 2015 study has shifted the allocation of water amongst classes. In the 2015 study, the desalination plant was under construction for expansion. Second, the M&I pass-through, which constitutes anywhere from 30 to 40% of the volumetric rate is now being applied proportionally. In the 2015 study, M&I water purchase costs were embedded in the Authority's rates. Removing this purchase cost and passing it through proportionally affects customer's bills.

SINGLE FAMILY BILL IMPACTS

Table 7-1 shows the bill impacts for the SFR class for different use points shown in column B.

Table 7-1: SFR Customer Impacts (5/8" Meter)

SFR - Meter Size 5/8 inch

(A)	Use (hcf) (B)	Current Bill (C)	Bill After Jan 1, 2019 (D)	Dollar Difference (E)	Percent Difference (F)	% of Users Below (G)	% of Users (H)
Low	5	\$49.22	\$51.39	\$2.17	4.4%	11%	11%
Mode (11 hcf Bi-monthly)	11	\$75.79	\$84.27	\$8.48	11.2%	37%	26%
Median (14 hcf Bi-monthly)	14	\$91.30	\$103.01	\$11.71	12.8%	51%	14%
Average (17 hcf Bi-monthly)	17	\$108.45	\$121.90	\$13.45	12.4%	62%	12%
High	32	\$213.15	\$223.97	\$10.82	5.1%	90%	28%
Very High	40	\$271.71	\$284.90	\$13.19	4.9%	95%	4%

APARTMENT/ MULTI-FAMILY BILL IMPACTS

Table 7-2 shows apartment/multi-family bill impacts.

Table 7-2: Multi-Family Customer Impacts (5/8" Meter)

MFR - 5/8 inch meter (A)	Use (hcf) (B)	Current Bill (C)	Bill After Jan 1, 2019 (D)	Dollar Difference (E)	Percent Difference (F)
Low	40	\$281.82	\$308.87	\$27.05	9.6%
Average	100	\$662.82	\$735.05	\$72.23	10.9%
High	300	\$1,932.82	\$2,155.65	\$222.83	11.5%

COMMERCIAL/INDUSTRIAL BILL IMPACTS

Table 7-3 shows the commercial/industrial bill impacts.

Table 7-3: Commercial/Industrial Customer Impacts (5/8" Meter)

Commercial/Ind - 5/8 inch (A)	Use (hcf) (B)	Current Bill (C)	Bill After Jan 1, 2019 (D)	Dollar Difference (E)	Percent Difference (F)
Low	20	\$157.82	\$160.89	\$3.07	1.9%
Average	70	\$482.82	\$501.24	\$18.42	3.8%
High	140	\$937.82	\$977.73	\$39.91	4.3%

PUBLIC AGENCY BILL IMPACTS

Table 7-4 shows the bill impacts for the public agencies user class assuming a 2-inch meter – the most common meter size for this class. Public agencies have one of the highest peaking factors, likely due to irrigation needs and since they are few, and water is allocated water in proportion to the number of accounts, this class is allocated higher water supply costs.

Table 7-4: Public Agencies Customer Impacts (2" Meter)

Public Agencies - 2 inch (A)	Use (hcf) (B)	Current Bill (C)	Bill After Jan 1, 2019 (D)	Dollar Difference (E)	Percent Difference (F)
Low	80	\$655.92	\$755.78	\$99.86	15.2%
Average	140	\$1,075.92	\$1,252.31	\$176.39	16.4%
High	240	\$1,775.92	\$2,079.85	\$303.93	17.1%

CONSTRUCTION BILL IMPACTS

Table 7-5 shows the bill impacts for the construction user class assuming a 3-inch meter. Construction customers are temporary customers who place demands on the system during the work day. Construction meters are billed monthly.

Table 7-5: Construction Customer Impacts (3" Meter)

Construction - 3 inch (A)	Use (hcf) (B)	Current Bill (C)	Bill After Jan 1, 2019 (D)	Dollar Difference (E)	Percent Difference (F)
Low	10	\$274.38	\$276.63	\$2.25	0.8%
Average	20	\$372.08	\$376.56	\$4.48	1.2%
High	40	\$567.48	\$576.41	\$8.93	1.6%

APPENDIX A:
**WATER SUPPLY COST
DERIVATION**

Calculation of Cost to Supply and Treat Water

Line No.	Treatment Costs	Local and Imported Raw Treatment	Desalination	NC Wells
1	General Plant	\$0		
2	Perdue Plant Treatment Cost	\$2,068,910		
3	Desalination Cost		\$2,418,240	
4	NC Wells Cost			\$339,390
5	Total Treatment Cost	\$2,068,910	\$2,418,240	\$339,390
6				
7	Local Water Treated at Perdue (Water Sold)	2,358,774		
8	Imported Water Treated at Perdue (Water Sold)	1,657,827		
9	Desal Water Sold		2,565,684	
10	NC Well Water Sold			869,022
11	Total Water Sold/Processed (hcf)	4,016,601	2,565,684	869,022
12	Treatment Rate - Imported Water (\$/hcf)	\$0.52	\$0.94	\$0.39
13	Treatment Rate -Imported Water (\$/AF)	\$224	\$411	\$170

RESOLUTION 18-15

RESOLUTION OF THE GOVERNING BOARD OF SWEETWATER AUTHORITY ADOPTING WATER RATES AND CHARGES

RECITALS

WHEREAS, Sweetwater Authority (the Authority) is a Joint Powers Agency created by a Joint Powers Agreement between the South Bay Irrigation District and the City of National City entered into pursuant to Government Code Section 6500 et seq.; and

WHEREAS, pursuant to the Joint Powers Agreement, the Authority exercises powers of an Irrigation District under the Irrigation District Law and is authorized to fix and collect charges for the provision of water service pursuant to Water Code Section 22280; and

WHEREAS, the Authority is committed to maximizing value for its rate payers in accordance with its mission and vision; and

WHEREAS, the Authority has not raised water rates since 2015; and

WHEREAS, the expenses incurred by the Authority have been increasing: the cost of water, which represents one-fourth of expenses in the coming year, has increased 22 percent in the last five years and costs to repair and replace aging pipes, which represent almost one-fifth of expenses in the coming year, are up 42 percent since 2013; and

WHEREAS, based on cost containment policies implemented by the Board, the Authority overhead expenses have only increased two percent cumulatively since 2013; and

WHEREAS, the Authority performed an evaluation of costs necessary to continue providing safe and reliable drinking water and accepted the Five-year Water Rates Study on June 13, 2018; and

WHEREAS, based on this evaluation, it has been determined that increases to the rates for its water service charges are necessary to recover the Authority's costs of providing water service; and

WHEREAS, the Authority performed outreach to its rate payers through a comprehensive plan which included 18 community presentations and two Open House events; and

WHEREAS, the Chula Vista Chamber of Commerce Board unanimously supports the proposed rate increase based on the Authority's demonstrated ability to control costs and its transparency as demonstrated through its robust outreach program; and

WHEREAS, pursuant to California Constitution Article X, section 2, 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; and

RESOLUTION 18-15

WHEREAS, California Water Code Section 375 et seq. authorizes water suppliers to adopt and enforce a comprehensive water conservation program to conserve the water resources and encourage water conservation through rate structure design; and

WHEREAS, pursuant to California Water Code Section 375 et seq., the Governing Board adopted Resolution 09-12 on May 27, 2009, adopting a water conservation and drought response program, which remains in full force and effect and is incorporated herein by this reference; and

WHEREAS, the Authority derives water primarily through locally developed sources of supply, including local surface water and groundwater, and also indirectly purchases water from the Metropolitan Water District of Southern California (MWD) through the San Diego County Water Authority (SDCWA); and

WHEREAS, MWD imposes on the Authority: (1) a Readiness-to-Serve Charge (MWD-RTS) and (2) a Capacity Charge (MWD-CC). The MWD-RTS is imposed on the Authority as an allocation of MWD's cost to provide peak capacity within MWD's distribution system. The MWD-CC is imposed on the Authority as an allocation of MWD's costs associated with standby and peak conveyance capacity and system emergency storage capacity. These MWD charges are determined on the basis of multi-year averages of the amount of water purchased by the Authority from SDCWA; and

WHEREAS, SDCWA imposes on the Authority: (1) an Infrastructure Access Charge (IAC); (2) a Customer Service Charge (CSC); and (3) an Emergency Storage Charge (ESC). The IAC is a fixed charge that is established on the basis of the size of the customer's meter and is imposed on the Authority as an additional source of revenue to SDCWA to provide better coverage for SDCWA's projected fixed costs. The CSC is imposed on the Authority as an allocation of SDCWA's customer service related costs. The ESC is imposed on the Authority as an allocation of SDCWA's costs for its emergency and carryover water storage program to provide sufficient water to the region in the event of an emergency. These latter two charges are determined on the basis of a three-year rolling average of the amount of water purchased by the Authority from SDCWA; and

WHEREAS, the Governing Board seeks to have the Authority pass the MWD-RTS, MWD-CC, IAC, CSC, and ESC (collectively referred to herein as the "Pass-Throughs") imposed by MWD and SDCWA on the Authority through to customers, and authorize adjustments to the Pass-Throughs to account for increased costs from MWD and SDCWA commencing January 1, 2020, through and including December 31, 2024; and

WHEREAS, the Governing Board adopted Resolution 15-20, on August 31, 2015, adopting rates for water service charges for the Authority; and

WHEREAS, the Governing Board seeks to adopt new rates for its water service charges commencing January 1, 2019, and to further authorize automatic annual adjustments to account for rising costs of providing water service for a five-year period, commencing January 1, 2020, and each January 1 thereafter through and including January 1, 2024; and

RESOLUTION 18-15

WHEREAS, the proposed rate structure for the water service charges has four customer classes – (1) single-family residential customers, (2) multi-family residential customers, (3) public agency customers, and (4) commercial customers. The proposed rate structure for each customer class is comprised of two components: (1) a Readiness-to-Serve Charge and (2) a Commodity Charge, which includes the Authority's Commodity Charge and the SDCWA Wholesale Water Purchase Charge. Customers with a separate fire service lateral will also have a Private Fire Service Charge; and

WHEREAS, the proposed Readiness-to-Serve Charge is a fixed service charge established on the basis of the size of a meter serving a property and is calculated to recover the Authority's fixed costs, such as the costs of billings and collections, customer service, meter reading, and meter maintenance, as well as capital and infrastructure costs; and

WHEREAS, for single-family residential customers, the proposed Commodity Charge is a variable water usage charge calculated on the basis of the cost of providing water service and consists of four (4) tiers which will impose higher rates per hundred cubic feet ("HCF") of water usage as the level of water consumption increases, and for all other customers, the proposed Commodity Charge is a uniform rate per HCF of water usage; and

WHEREAS, the Commodity Charge is proposed to have two charge components: (1) the Authority's Commodity Charge, which covers the cost of treating and distributing water from any of the Authority's sources, including imported water, and (2) the SDCWA Wholesale Water Purchase Charge, which includes the SDCWA Municipal and Industrial Supply Rate, Transportation Rate, and Treatment Rate, and covers the cost of purchasing and importing water from SDCWA when necessary; and

WHEREAS, for customers with a separate fire service lateral, the proposed Private Fire Service Charge is a condition of providing water service upon the request of the customer or property owner for delivery of water to the property for the purpose of fire protection service and is a bi-monthly fixed charge determined by the size of the separate private fire protection lateral serving the property; and

WHEREAS, the Authority anticipates that SDCWA and MWD will increase the rates of the Pass-Throughs and the SDCWA Wholesale Water Purchase Charge, and in order to ensure that there are sufficient revenues to provide water services to customers, the Authority proposes to annually pass through to customers any increases in the Pass-Throughs and the SDCWA Wholesale Water Purchase Charge for a five-year period commencing January 1, 2020, and any time thereafter through and including December 31, 2024, to reflect any such increases by SDCWA and/or MWD, provided however that the Authority shall not increase the Pass-Throughs or the SDCWA Wholesale Water Purchase Charge in any year by more than 10 percent in such year, in no event shall the rates be increased by more than the cost of providing water service, and the Authority will provide customers at least 30 days written notice prior to an increase (each a "Wholesale Pass-through Adjustment"); and

WHEREAS, the Authority further anticipates that, as a result of inflation and other cost increases, the cost of providing water service will increase annually, and in order to ensure that there are sufficient revenues to provide water services to customers, the Authority proposes to annually adjust the Readiness-to-Serve Charge, the Authority's Commodity

RESOLUTION 18-15

Charge, and the Private Fire Service Charge for a five-year period commencing January 1, 2020, and each January 1 thereafter through and including January 1, 2024, in accordance with the twelve-month change in the Consumer Price Index for the San Diego Area as of June 30 of the preceding year, provided, however, that the Authority shall not increase the rates for the Readiness-to-Serve Charge, the Authority's Commodity Charge, or the Private Fire Service Charge by more than 10 percent in such year, in no event shall the rates be increased by more than the cost of providing water service, and the Authority will provide customers at least 30 days written notice prior to an increase (the "Inflationary Adjustments"); and

WHEREAS, *the revenues derived from the water services charges (with such term defined to include the Readiness-to-Serve Charge, the Authority's Commodity Charge, the SDCWA Wholesale Water Purchase Charge, the Private Fire Service Charge, and the Pass-Throughs) will not exceed the funds required to provide the services and shall be used exclusively for the operation and maintenance of the water systems; and*

WHEREAS, *the water service charges are equitable to all customer classes; and*

WHEREAS, *the amount of the proposed water service charges will not exceed the proportional cost of the services attributable to each parcel upon which they are proposed for imposition; and*

WHEREAS, *the proposed water service charges will not be imposed on a parcel unless the services are actually used by, or immediately available to, the owner of the parcel; and*

WHEREAS, *Article XIII D, section 6 of the California Constitution ("Article XIII D") requires that prior to imposing any new property-related fee such as the water service charges, or increase to existing water service charges, the Authority shall provide written notice (the "Notice") by mail of the proposed increases to the water service charges to the record owner of each parcel upon which the water service charges are proposed for imposition and any tenant directly liable for payment of the water service charges, the amount of the water service charges proposed to be imposed on each parcel, the basis upon which the water service charges were calculated, the reason for the water service charges, and the date time and location of a public hearing (the "Hearing") on the proposed water service charges; and*

WHEREAS, *pursuant to Article XIII D, such Notice is required to be provided to the affected property owners and tenants directly liable for the payment of the water service charges not less than forty-five days prior to the Hearing on the proposed Charges; and*

WHEREAS, *the Authority did provide such Notice to the affected property owners and tenants in compliance with Article XIII D; and*

WHEREAS, *in addition, the Authority held public workshops on May 22, 2018 and August 9, 2018 for the purpose of providing an opportunity for the public to hear about the proposed water service charges and provide input on such water service charges prior to the date of the Hearing; and*

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WHEREAS, at the Hearing, the Governing Board considered all written materials and written protests to the proposed new or increased water service charges received prior to the close of the Hearing, and heard oral testimony concerning the establishment and imposition of the proposed water service charges, and at the close of the Hearing the Authority determined that it did not receive written protests against the establishment and imposition of the proposed water service charges from a majority of the affected property owners or tenants directly liable for the payment of such water service charges; and

WHEREAS, the Governing Board now desires to adopt the water service charges in the maximum amounts and on the dates set forth in Exhibit A, effective January 1, 2019; and

WHEREAS, the Governing Board further desires to authorize the Wholesale Pass-Through Adjustments for the Pass-Throughs for a five-year period, commencing on January 1, 2020, through and including December 31, 2024, and to authorize the Inflationary Adjustments for a five-year period, commencing on January 1, 2020, and each January 1 thereafter through and including January 1, 2024, all subject to the limitations included herein;

NOW, THEREFORE, BE IT HEREBY RESOLVED, DETERMINED, AND ORDERED by the Governing Board of the Authority as follows:

Section 1. The matters set forth in the Recitals to this Resolution are true and correct statements and are incorporated as an operative part of this resolution and made findings and determinations of the Governing Board.

Section 2. The Governing Board of the Authority has been presented with data showing the estimated reasonable costs of providing water service and data showing the revenue sources available to cover the costs of providing such water service.

Section 3. The rates for water service charges set forth in the Schedule of Water Rates attached hereto as Exhibit "A" are hereby adopted. Such rates shall be in effect commencing January 1, 2019, and shall be included in the Supplement to the Authority's Rates and Rules, and the General Manager of the Authority is hereby authorized and directed to: (1) revise the Supplement to the Authority's Rates and Rules to reflect the new Schedule of Water Rates, effective January 1, 2019; and (2) take all actions necessary to implement and collect the new Schedule of Water Rates for all water delivered after such effective date.

Section 4. Inflationary and Wholesale Pass-Through Adjustments.

(a) The Authority is hereby authorized to implement any Wholesale Pass-Through Adjustment, commencing January 1, 2020, and any time thereafter through and including December 31, 2024, provided, however, that (1) any increase in the rates for the Pass-Throughs or the SDCWA Wholesale Water Purchase Charge shall not exceed 10 percent for such year, (2) in no event shall such rates be increased as a result of a Wholesale Pass-Through Adjustment by more than the cost of providing water service, and (3) prior to implementing any Wholesale Pass-Through Adjustment, the Authority shall provide written notice of such Wholesale Pass-Through Adjustment to the Authority's customers not less than 30 days prior to the effect date of the

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adjustment.

(b) *The Authority is hereby authorized to implement any Inflationary Adjustment, commencing January 1, 2020, and each January 1 thereafter through and including January 1, 2024, in accordance with the 12 month change in the Consumer Price Index for the San Diego Area as of June 30 of the preceding year, provided, however, that (1) any increase in the rates for the water service charges subject to the Inflationary Adjustment shall not exceed 10 percent for such year, (2) in no event shall such rates be increased as a result of an Inflationary Adjustment by more than the cost of providing water service, and (3) prior to implementing any Inflationary Adjustment, the Authority shall provide written notice of such Inflationary Adjustment to the Authority's customers not less than 30 days prior to the effect date of the adjustment.*

(c) *On or before the effective date of any future Wholesale Pass-Through Adjustment or any Inflationary Adjustment, the General Manager is hereby authorized and directed to: (1) revise the Supplement to the Authority's Rates and Rules to reflect the new Schedule of Water Rates, effective January 1 of each year; and (2) take all actions necessary to implement and collect the new Schedule of Water Rates for all water delivered after such effective date.*

Section 5. *The Governing Board finds that the water service charges, including any Inflationary and Wholesale Pass-Through Adjustments to such water service charges, will result in revenue to the Authority, taking into consideration the estimated reasonable costs of providing water service and the sources of revenue available to the Authority to cover the costs of such services, which will not exceed the estimated costs of the services for which the water rates are charged.*

Section 6. *The Governing Board finds that the water service charges, including any Pass-Through Adjustments to such charges, taking into consideration the estimated reasonable costs of providing all services by the Authority and the sources of revenue, therefore, will result in a fair and reasonable revenue program, reasonably allocating the cost of water services to those who receive service.*

Section 7. *The Governing Board finds that the water service charges, including as adjusted in the future by any Inflationary and Wholesale Pass-Through Adjustments, established by this Resolution are for the purposes of: (A) meeting operational expenses; (B) purchasing or leasing supplies, equipment, or materials; (C) meeting financial reserve needs and requirements; and (D) obtaining funds for capital projects necessary to maintain service within existing service areas, as set forth in this Resolution, and more particularly described in the Authority's Budget for the Fiscal Year 2018-19, and therefore, the establishment of such rates is not subject to the California Environmental Quality Act.*

Section 8. *The Governing Board finds that: (1) the revenue derived from the water service charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, established by this Resolution does not exceed the funds required to provide water services; (2) the revenue derived from the water service*

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charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, established by this Resolution is not used for any other purpose than that for which the service fees are imposed; (3) the amount of the water service charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, imposed on parcels within the Authority do not exceed the proportional cost of providing water service to parcels within the Authority; and (4) the water service charges, including as adjusted by any Inflationary and Wholesale Pass-Through Adjustments, are imposed for water services which are immediately available to Authority customers and are not levied for general governmental services.

Section 9. If any section, subsection, subdivision, sentence, clause, or phrase in this Resolution or any part thereof is for any reason held to be unconstitutional, invalid, or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Resolution or any part thereof. The Governing Board hereby declares that it would have adopted each section irrespective of the fact that any one or more subsections, subdivisions, sentences, clauses, or phrases be declared unconstitutional, invalid, or ineffective.

Section 10. To the extent any water service charges, including the Pass-Throughs, established by this Resolution are inconsistent with any other fee or charge previously adopted by the Governing Board, it is the explicit intention of the Governing Board that the water service charges, including the Pass-Throughs, adopted pursuant to this Resolution shall prevail. Except as otherwise provided herein, all other rates for Authority's water service charges, including any authorization to pass through increases in the wholesale cost of water purchased from the San Diego County Water Authority, shall remain in full force and effect.

Section 11. This Resolution shall take effect upon its adoption.

ADOPTED, SIGNED, AND APPROVED this 20th day of August 2018, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

Teresa Thomas, Chair

Attest:

Janet Gonzalez, Board Secretary

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**EXHIBIT "A" TO RESOLUTION 18-15
SCHEDULE OF WATER RATES (EFFECTIVE January 1, 2019)**

**Readiness-to-Serve Charge and SDCWA Infrastructure Access Charge
All Customer Classes - Proposed Rates Effective 1/1/2019**

Meter Size (Inches)	Sweetwater Authority Rates for Bi-Monthly Fixed Charge	SDCWA Rates for Bi-Monthly Infrastructure Access Fixed Charge
5/8 ⁽¹⁾	\$18.73	\$6.02
1	\$27.88	\$9.64
1½	\$44.15	\$18.06
2	\$62.44	\$31.30
3	\$118.91	\$57.80
4	\$200.68	\$98.74
6	\$403.93	\$180.60
8	\$665.97	\$313.04
10	\$1,013.03	\$469.56

Commodity Charges

Single-Family Residential Proposed Rates Effective 1/1/2019	Variable Rate for Bi-Monthly Sweetwater Authority Charge	Variable Rate for Bi-Monthly SDCWA Wholesale Water Purchase Charge
Tiers by Units of Water Served	\$/HCF ⁽²⁾	\$/HCF
Tier 1 0-10 HCF	\$3.72	\$1.05
Tier 2 11-16 HCF	\$4.43	\$1.25
Tier 3 17-27 HCF	\$4.56	\$1.28
Tier 4 28+ HCF	\$5.50	\$1.55
Proposed Rates For All Other Customers Effective 1/1/2019	Uniform Rate for Bi-Monthly Sweetwater Authority Charge	Uniform Rate for Bi-Monthly SDCWA Wholesale Water Purchase Charge
Customer Class	\$/HCF	\$/HCF
Multi-family Residential	\$5.10	\$1.43
Commercial	\$4.87	\$1.37
Public Agency	\$6.02	\$1.69
Construction	\$7.36	\$2.07

(1) Typical residential meter size

(2) HCF = One hundred cubic feet or 748 gallons of water

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**EXHIBIT "A" TO RESOLUTION 18-15
SCHEDULE OF WATER RATES (EFFECTIVE January 1, 2019)**

SDCWA and MWD Volumetric Pass-through Charges

Uniform Rate for Bi-Monthly Pass Through Charge Proposed Rates Effective 1/1/2019	SDCWA Customer Service Charge	SDCWA Emergency Storage Charge	SDCWA Supply Reliability Charge	MWD Readiness To Serve Charge	MWD Capacity Charge
All Customer Classes	\$/HCF	\$/HCF	\$/HCF	\$/HCF	\$/HCF
	\$0.11	\$0.30	\$0.11	\$0.03	\$0.02

Private Fire Service Charge

Proposed Rates Effective 1/1/2019	
Lateral Size	Bi-Monthly Charge
1 inch	\$1.02
1½ inch	\$2.96
2 inch	\$6.31
3 inch	\$18.33
4 inch	\$39.06
6 inch	\$113.45
8 inch	\$241.77
10 inch	\$434.78
12 inch	\$702.30