

1. Agenda

Documents:

[05-21-18_WATER_RATES_ADVISORY_COMMITTEE_AGENDA.PDF](#)

2. Meeting Materials

Documents:

[05-21-18_WATER_RATES_ADVISORY_COMMITTEE_PACKET.PDF](#)

**WATER RATES ADVISORY COMMITTEE
MONDAY, MAY 21, 2018
3:30- 5:00 PM
LOCATION: Soquel Creek Water District office
5180 Soquel Drive, Soquel, CA 95073**

AGENDA

- 1. ROLL CALL**
- 2. ORAL COMMUNICATIONS (*items not on the Agenda*)**
- 3. BUSINESS**
 - 3.1 Discuss Components of CustomerSelect Rate Model as Recommended by Raftelis
- 4. ADJOURNMENT**

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1. **ROLL CALL**
2. **ORAL COMMUNICATIONS** (*items not on the Agenda*)
3. **BUSINESS**
 - 3.1 Discuss Components of CustomerSelect Rate Model as Recommended by Raftelis
4. **ADJOURNMENT**

May 21, 2018

MEMO TO THE WATER RATES ADVISORY COMMITTEE

Subject: Item No. 3.1

Title: Discuss Components of CustomerSelect Rate Model as Recommended by Raftelis

Attachment(s):

1. CustomerSelect Rate Model Evaluation Report dated January 8, 2018

Background

Raftelis Financial Consultants met with the Water Rates Advisory Committee and the Board of Directors in 2017 to evaluate the CustomerSelect Rate Model and make recommendations for the possible implementation of this rate structure at Soquel Creek Water District. Their focus was to evaluate the legal framework surrounding Proposition 218, identify pricing and rate objectives, and provide preliminary recommendations on the framework of such a rate model specific to the District's rate objectives. Raftelis made the following recommendations:

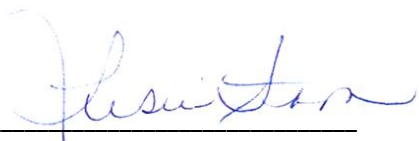
- Evaluate the CustomerSelect model for single-family and multi-family residential customers only at this time.
- To meet the objectives of fair and equitable, offer many plans with narrow plan widths so that a customer's actual capacity aligns more closely with plan capacity. This aids in legal defensibility as well.
- Include an open enrollment period for plan switching that would "lock" customers in for the next six to twelve months.
- Customers who use more than their plan allotment are automatically switched to the higher plan in which their usage occurred until the next open enrollment period.
- Allow a conservation credit at the end of the year that equates to the variable costs of pumping and treating the water.
- Adopt a formal policy for variances and an appeal process for situations such as leaks, health conditions, or other variance issues.
- Read meters and bill in gallons rather than cubic feet.

Discussion

Raftelis has been hired by the District to develop a finance plan and conduct a water rate study, evaluating both the inclining tier and CustomerSelect rate models in tandem. Raftelis plans to present preliminary rate recommendations to the Board on September 18, 2018. The Water Rates Advisory Committee has scheduled a series of meetings to discuss the initial recommendations made by Raftelis regarding the CustomerSelect Rate Model, and to further refine those recommendations to better reflect the intentions of the committee and the operating capabilities of the District before a final decision is made regarding the feasibility of the CustomerSelect Rate Model.

POSSIBLE COMMITTEE ACTIONS

1. Discuss the recommendations made by Raftelis in their initial evaluation and make suggestions as needed.
2. If necessary, propose possible alternatives to recommendations made by Raftelis that the committee would like the Board to consider.
3. Discuss customer options for variances and appeals.
4. Take no action.

By 

Leslie Strohm

Finance and Business Services Manager

SOQUEL CREEK WATER DISTRICT

CustomerSelect Rate Model Evaluation

Report / January 8, 2018





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January 8, 2018

Ron Duncan, General Manager
Soquel Creek Water District
5180 Soquel Dr.
Soquel, CA 95073

Subject: CustomerSelect Rate Structure Evaluation Report

Dear Mr. Duncan,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this CustomerSelect Rate Structure Evaluation Study Report (Study) for Soquel Creek Water District (District) to develop a framework methodology and recommendations for implementation of a CustomerSelect rate structure. In particular, this Study contains details on the following:

1. The legal framework surrounding Proposition 218, particularly with respect to water service.
2. Documentation of pricing and rate objective results of the District Board and Water Rates Advisory Committee.
3. Policies for consideration when evaluating a CustomerSelect rate structure.
4. Preliminary recommendations and Study outcomes for a CustomerSelect rate structure framework specific to the District.

The Study summarizes the key findings and results from the Study and provides guidance for next steps to develop a full rate model, the methodology, and details required to develop rates and charges for the CustomerSelect rate structure.

It has been a pleasure working with you and we thank you, Leslie Strohm, and District staff for the support provided during the course of this Study.

Sincerely,
Raftelis Financial Consultants, Inc.

A handwritten signature in black ink, appearing to read 'Sanjay Gaur'.

Sanjay Gaur
Vice President

A handwritten signature in black ink, appearing to read 'Kevin Kostiuik'.

Kevin Kostiuik
Senior Consultant

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1. STUDY BACKGROUND

1.1 BACKGROUND OF THE STUDY

In September 2017, Soquel Creek Water District (District) contracted with Raftelis Financial Consultants, Inc. (Raftelis) to conduct a Rate Structure Evaluation Study (Study) to assess the feasibility of a CustomerSelect style rate structure. Goals of the evaluation include examining an alternative rate structure that will balance conservation among customers and revenue stability to the agency. This report presents the Study work and resulting decisions and recommendations.

1.2 BACKGROUND OF THE AGENCY

The District was founded in 1961, to provide flood control and water conservation services. The District serves potable water to roughly 40,400 people through 15,800 connections in Santa Cruz County. The District relies solely on local groundwater to meet customer demand of approximately 3,100 acre feet per year. The District operates and maintains 15 production wells and a distribution network of 166 miles of mains.

1.3 STUDY OBJECTIVES

The major objectives of the Study include the following:

1. Facilitate Workshops with the District's Water Rates Advisory Committee and Board of Directors (Board) to examine an alternative rate structure, CustomerSelect.
2. Evaluate various pricing and policy objectives related to a CustomerSelect rate structure.
3. Prepare recommendations and a framework for implementing a CustomerSelect rate structure.

This Study was conducted with supporting literature from *Defining a Resilient Business Model for Water Utilities* by the Environmental Finance Center at the University of North Carolina School of Government, the Water Research Foundation, and their partners; as well as principles established by the American Water Works Association's *Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1* (sixth edition) (the "M1 Manual"). The M1 Manual general principles of cost of service and rate structure design are described below.

The American Water Works Association M1 Manual (M1) states, "the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." In addition to the M1, California's constitutional amendment known as Proposition 218 requires that utility rates be based upon the cost to serve a parcel. To develop utility rates that comply with California's Proposition 218 and industry standards while meeting other emerging goals and objectives of the utility, there are four major steps.

1) Calculate the Revenue Requirement

The rate-making process starts by determining the revenue required by an agency to sufficiently fund the utility's operations and maintenance expenses, debt service, capital expenses, and reserve funding.

2) Cost Of Service Analysis

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

1. Functionalize operating and capital costs.
2. Allocate functionalized costs to cost components.
3. Distribute the cost components to customer classes.

A cost of service 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 demands).¹ Capacity 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 customers whose water usage patterns generate additional costs for the utility. In other words, not all customer classes and not all customers share the same responsibility for peaking related costs. Capacity costs are further discussed in Section 3.2.

3) Rate Design and Calculations

Rates do more than simply recover costs. Within California’s 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

In the last step of the rate-making process, the Study analyses and results are documented in a Study report. The report demonstrates the basis upon which the rates were calculated, the rationale and justifications behind the proposed changes, and their anticipated financial impacts to ratepayers. In California, a notice of proposed rate changes is prepared and sent to an agency’s ratepayers no less than 45 days before a public hearing, at which rates are formally adopted (barring a majority protest to the proposed rates).

1.4 LEGAL REQUIREMENTS AND RATE SETTING METHODOLOGY

1.4.1 California Constitution - Article XIII D, Section 6 (Proposition 218)

Proposition 218 was enacted by voters in 1996 to ensure, in part, that fees and charges imposed for ongoing delivery of a service to a property (property-related fees and charges) are proportional to and do not exceed the cost of providing service. Water service fees and charges are property-related fees and charges subject to the provisions of California Constitution Article XIII D, Section 6. The principal requirements, as they relate to public water service fees and charges are as follows:

1. Revenues derived from the fee or charge shall not exceed the costs required to provide the property-related service.

¹ 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. Both the operating costs and capital asset related costs incurred to accommodate the peak are allocated to each customer class based upon the class’s relative demands during the peak month, day, and hour event.

2. Revenues derived by the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
3. The amount of the fee or charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No fee or charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. A written notice of the proposed fee or charge shall be mailed to the record owner of each parcel not less than 45 days prior to a public hearing, when the agency considers all written protests against the charge.

Raftelis follows industry standard rate setting methodologies set forth by the American Water Works Association *M1 Manual* to ensure this Study meets Proposition 218 requirements and creates rates that do not exceed the proportionate cost of providing water services on a parcel basis.

1.4.2 **California Constitution - Article X, Section 2**

Article X, Section 2 of the California Constitution 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.”

Article X, Section 2 of the State Constitution institutes the need to preserve the State’s water supplies and to discourage the waste 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 California 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 recent statewide drought and actions by the Governor’s office underscore that California’s water resources are finite and must be managed responsibly for sustainable future water supplies. The District relies on groundwater for all of its water supply. The local groundwater basin is in overdraft and reductions in extraction and changes in management are required to prevent long term adverse impacts. In light of recurring drought conditions, regulatory requirements including the Sustainable Groundwater Management Act of 2014 and limited storage, water conservation becomes a low-cost, feasible means of ensuring adequate future supplies.

2. EXISTING RATE STRUCTURE AND COST STRUCTURE

2.1 CURRENT RATE STRUCTURE AND RATES

The District has an inclining tier rate structure to indirectly incentivize conservation and water use efficiency for its customers. The current rates, last increased January 1, 2018, were developed in the 2016 Rate Study by Hawksley Consulting. This section refers specifically to single family residential customers which make up the overwhelming majority of the District’s customer base and water use.

The rate structure for the District’s water service charges have two components: a fixed monthly service charge component and a variable water quantity (commodity) charge component. The monthly service charge is determined on the basis of the customer class and the size of the water meter serving a property and increases with meter size. Larger meters are more expensive to maintain and replace and have the potential to demand more capacity or, said differently, exert greater 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 American Water Works Association hydraulic capacity ratios. As potential capacity to draw instantaneous demand is higher for larger meters, the costs to provide service to these customers are higher. A typical single family residential customer has a current monthly service charge of \$32.95.

The volumetric component of a customer’s water bill is calculated on the basis of the number of units of water delivered to a property, measured in one hundred cubic feet², multiplied by the rates that vary by customer class and tier. The current tier widths and Stage 3 Emergency rates are shown in Table 2-1. The rates in Table 2-1, multiplied by the amount of use in each respective tier, determine the volumetric component of a customer’s bill.

Table 2-1: Current Single Family Residential Rates for the Water Use Charges

Tier	Billing Units	Rate per Billing Unit
Tier 1	0-3.99	\$6.90
Tier 2	4-7.99	\$9.11
Tier 3	8-13.99	\$21.01
Tier 4	14+	\$44.01

2.2 CURRENT COST STRUCTURE

Water systems are capital intensive infrastructure with high fixed costs for capital outlay, asset maintenance, and personnel. These costs do not vary with water sales or water production and include salaries, debt service, and capital maintenance, among other costs. Often agency fixed costs are greater than 80 percent of total expenditures. Since the District relies on local groundwater with minimal treatment costs, the portion of fixed costs is even higher, estimated at 97 percent of all expenditures. The only variable costs to the District are hypochlorite for raw water treatment and the electrical costs associated with groundwater extraction.

² While commodity rates are expressed in hundred cubic feet, the District bills in increments of one cubic foot.

Conversely, the agency’s revenue recovery through rates includes fixed revenues and variable revenues. On average, only 33 percent of revenues are fixed (from monthly meter based service charges) while 67 percent are variable from water use charges. This disparity in fixed costs to fixed revenues can generate revenue volatility and, over the long term, the need to increase rates to cover shortfalls from reduced consumption during drought, water shortages, or passive conservation. Figure 2-1 and Figure 2-2 illustrate the imparity between costs and revenues.

Figure 2-1: Soquel Creek Water District Cost Structure

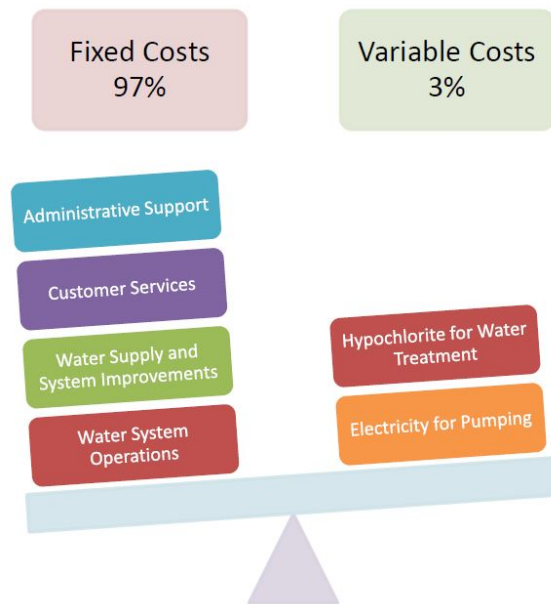
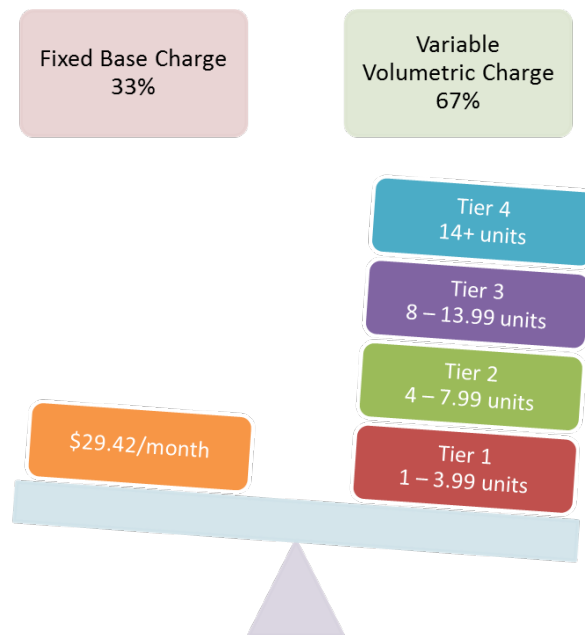


Figure 2-2: Soquel Creek Water District Revenue Recovery



3. CUSTOMER SELECT RATE STRUCTURE

3.1 CUSTOMER SELECT

The CustomerSelect model was put forth as an alternative rate structure by the Environmental Finance Center at the University of North Carolina Chapel Hill. The hypothetical model is detailed in *Defining a Resilient Business Model for Water Utilities* by Environmental Finance Center and funded by the Water Research Foundation and the United States Environmental Protection Agency.

The goal of the CustomerSelect model is to provide stable rate revenue for a utility by allowing customers to choose a water allotment that meets their specific household requirements. The model is most comparable to a data plan offered by mobile phone carriers whereby customers select a maximum data allotment per period and pay a fixed amount each month for service. In addition, much like cellular data plans, the model suggests “overage” charges for those that exceed their allotment as well as a potential dividend to customers under certain scenarios. Ultimately the CustomerSelect model “has the potential to stabilize utility rates by ‘locking’ customers into plans.”³ In addition, “customers would have an incentive to keep their consumption below the break-point of their plan and even to move down to a lower plan the next year.”⁴

The CustomerSelect model is similar to traditional conservation-based rate structures, including inclining tiers and budget-based rates, in the sense that each “plan” allots a certain amount of water and the larger the plan the more it costs. In this sense, there is an indirect conservation signal and an ability for customers to control their bill by choosing a smaller plan. However, the CustomerSelect model is structurally different than traditional conservation-based rate structures in several ways.

First, the width of a plan can stabilize revenues by locking customers in to a specific plan or “block.” Second, customers pay a flat charge for service each period. There is no variable charge for water use and no meter based charge. A customer pays one charge, known at the beginning of each billing period, and the charge still provides a conservation signal by charging higher plans progressively more. Lastly, the CustomerSelect model allocates capacity to a customer based on their highest use. The idea of allocating system capacity is discussed in detail in the following sub-section. The objective is to ensure that customers pay a set amount each period and pay for an equitable share of system capacity.

Water utilities across the nation are challenged with tradeoffs between important objectives. Affordability, revenue stability, and conservation are increasingly important, yet agencies may only achieve one or two of the three objectives with a traditional rate structure. CustomerSelect allows an agency to achieve all three without trading one or more for the other(s). An agency achieves revenue stability as revenues are known at the beginning of each billing period. The rate structure creates affordability as customers can choose their own plan and do not pay for peaking that they do not use on a fixed charge. Also, CustomerSelect prioritizes conservation in that the more a customer uses, the more they pay.

³ *Defining a Resilient Business Model for Water Utilities, Page 154*

⁴ *Defining a Resilient Business Model for Water Utilities, Page 154*

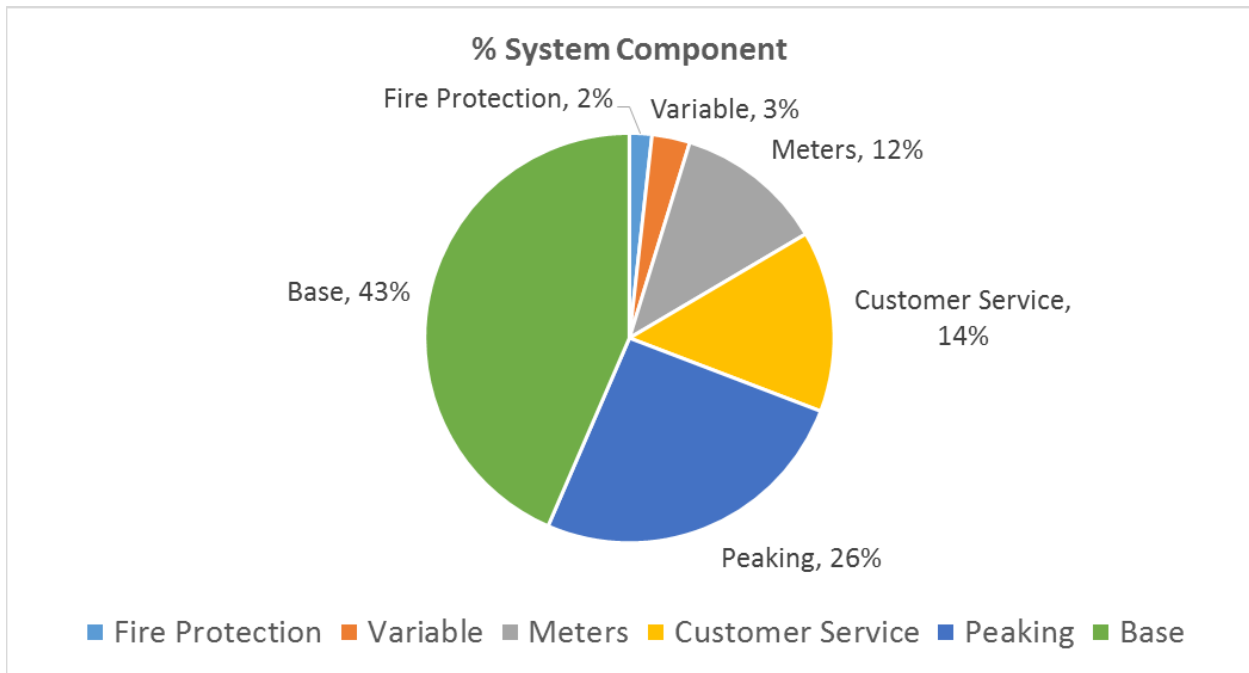
3.2 SYSTEM CAPACITY AND PEAKING CHARACTERISTICS

Understanding system capacity is key to validating the CustomerSelect model based on cost of service principles and defensibility with Proposition 218. A cost of service analysis distributes a utility’s revenue requirements (costs) to each customer class. After determining a utility’s revenue requirements, the next step in a cost of service analysis is to functionalize its costs and allocate the functionalized costs to system cost causation components.

Organizing the costs in terms of end function provides a direct correlation between the cost component and the rate, coupling the cost incurred by the utility and the benefit delivered to the customer and the demand and burden that the customer places on the utility’s system and/or water resources. The principal service requirements that drive costs include the annual volume of water consumed, the peak water demands incurred, and the number of customers and meters in the system.

Figure 3-1 shows the District’s existing share of each cost component from the most recent cost of service analysis⁵. Base costs relate to groundwater production and the costs associated with meeting the system’s average daily demand. Fire protection, meters, and customer service are fixed cost components that are almost always recovered from fixed charges (monthly meter service charges and private fireline charges). Variable costs are those that vary with the amount of water produced and/or demanded. Peaking costs are those incurred to meet peak demand under maximum day and maximum hour conditions. Per the most recent cost of service analysis, 26 percent of all costs are related to peaking.

Figure 3-1: Soquel Creek Water District Cost Components



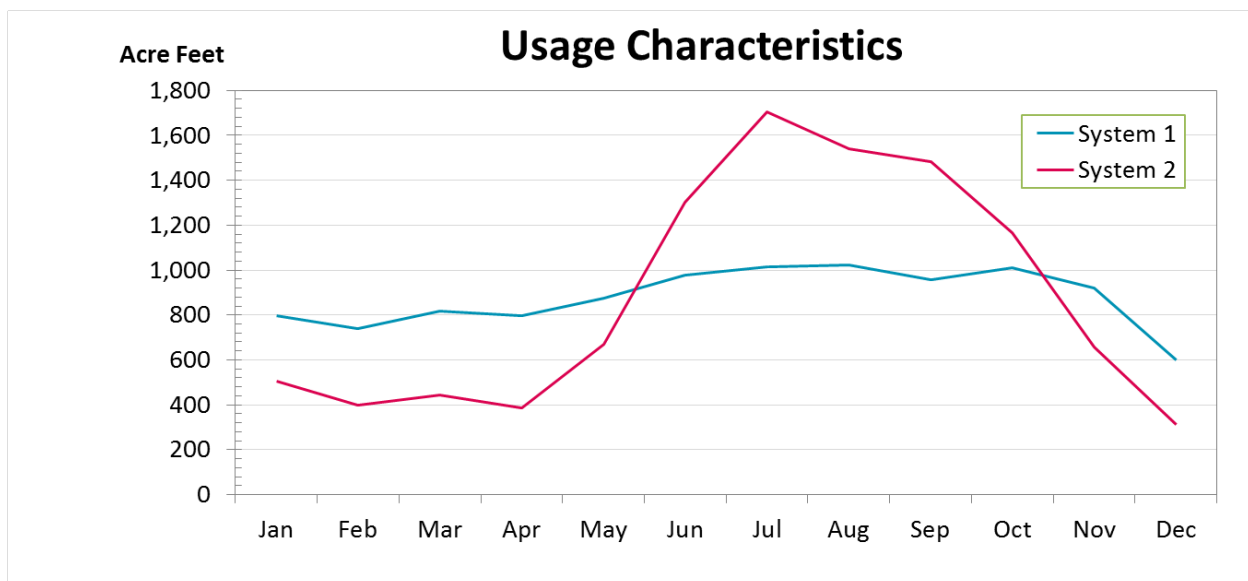
The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum usage in an hour on the maximum usage day. Different facilities, such as distribution and storage facilities, and the capital and operations and maintenance costs associated with

⁵ 2016 Water Rate Study Report by Hawksley Consulting

those facilities, are designed to meet the peak demands placed on the system by customers. Therefore, peak or extra capacity costs include the operating and maintenance and capital costs associated with meeting peak customer demand in excess of the average rate of use, or base use, requirements. The degree to which system peaking takes place is a major cost driver for water systems and is discussed in more detail below.

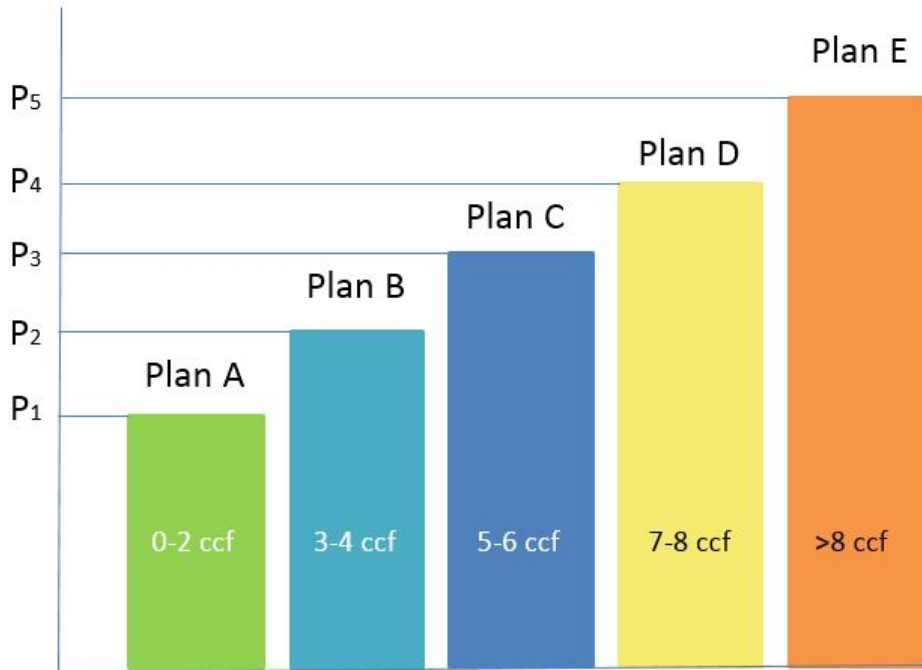
Figure 3-2 illustrates the influence of peaking on the design and costs of operating a water system. The figure shows two separate systems - System 1 and System 2 – which could also be viewed as the demand characteristics between two different customers (i.e. Customer 1 and Customer 2). Both System 1 and System 2 use the same volume of water on average in a given year (approximately 10,500 acre feet). However, System 1 uses roughly the same amount of water throughout the year where System 2 has very low use in the winter and very high use in the summer. This peaking requires facilities such as treatment plants, storage reservoirs, and distribution mains to be sized larger than those of System 1. Similarly, a customer whose demand patterns look more like System 1 require smaller (and therefore less expensive) facilities to meet their demands. A customer whose demand patterns are more like System 2 requires larger facilities to meet their demand. Therefore, they use more of the system capacity and cause the system to be built larger to accommodate their needs.

Figure 3-2: System Peaking and Capacity



The CustomerSelect model attempts to allocate water based on a customer’s capacity requirements and match the burden on the system by charging for each plan’s allotment considering system capacity. To help visualize the structure a hypothetical, five-plan, CustomerSelect structure is shown in Figure 3-3. Each plan represents an amount of capacity required which corresponds to the highest requirement through the year. To imagine this requirement revisit Figure 3-2 and the demand of System 2 in July. Customers will select a plan that allows them to meet their annual peak and will be charged accordingly.

Figure 3-3: Hypothetical CustomerSelect Plan Blocks



Water is traditionally viewed as a commodity where a customer’s bill is majority based upon the units of water used during the billing period. On average 67 percent of the District’s revenue is based on water sales while only 3 percent of costs are variable. However, long term water demand has declined from improved efficiency and conservation leading to reduced sales. Additionally, agencies are increasingly funding capital repair and replacement. Water service is increasingly being viewed as a service where costs are associated with the ability to use water, not water use per se. CustomerSelect attempts to capture these industry changes by relating the potential to use water (capacity) opposed to actual water use.

4. STUDY WORKSHOPS

On October 30, 2017 Raftelis held a kickoff meeting with District staff to agree to the project's goals, approach, work plan, schedule, and objectives. The kickoff meeting provided an opportunity for the Project Team and District staff to discuss data and documents provided prior to the meeting and to review the work plan and project schedule. At the meeting, Raftelis learned the major drivers for the Study, identified challenges and opportunities with the alternative CustomerSelect rate structure, and developed a framework and meeting agenda for the first workshop with the Water Rates Advisory Committee.

Raftelis facilitated two working sessions with the Water Rates Advisory Committee held on October 30 and November 13 of 2017. At the first workshop, Raftelis discussed the District's water system and characteristics as well as the legal environment surrounding rates in California including the implications of implementing a user-defined water allotment structure in the context of Proposition 218. Raftelis explained to the Committee the basics of a cost of service analysis and reviewed the District's existing cost of service and associated cost components. The meeting was then opened up to discuss and receive input on the CustomerSelect framework. At the end of the meeting, District staff distributed a rates pricing objectives exercise for members to complete and return. The pricing objectives exercise is discussed in more detail within this Study report.

In the second working session with the Water Rates Advisory Committee, Raftelis reviewed the results of the pricing objectives exercise and further developed the CustomerSelect framework specific to the District. Raftelis facilitated discussion on policy definitions, rate plan logic, and preliminary outcomes to be presented to the District Board. The preliminary outcomes include the logic for the number of plans and plan widths, plan overages, conservation credits, and the ability of a customer to switch plans.

Subsequent to the two policy workshops with the Water Rates Advisory Committee, Raftelis held a workshop with the District Board on December 5, 2017. At the working session, Raftelis presented the work of the Water Rates Advisory Committee and the various policy items and preliminary outcomes. Additionally, results of the rate objectives exercise of the Water Rates Advisory Committee and the Board were announced and compared. Ultimately, the workshop provided the Board an opportunity to refine the preliminary policy decisions of the Water Rates Advisory Committee and discuss the merits and necessary decisions required to move forward in implementing a CustomerSelect model.

5. RATE OBJECTIVES EXERCISE

A water agency has several policy options within a broad tool kit to meet their objectives and desired outcomes. The tools to achieve specific goals are many and can include ordinances, alternative sources of supply, messaging, financial rebates, and rate structures. In this Study, we focus solely on the CustomerSelect rate structure to achieve agency objectives. Objectives can include financial goals, water resource management goals, and customer related goals, among others.

Raftelis administered a rate objectives exercise to the Water Rates Advisory Committee and the Board to obtain the main goals and objectives that a rate structure should achieve. Members of each body were asked to rank the objectives from most important to least important.

5.1 WATER RATES ADVISORY COMMITTEE

Members were asked to rank the following five objectives from most important (1) to least important (5). Each objective is defined below.

Fairness & Equity: Apportions costs and presents rates that are perceived to be fair, reasonable, and equitable to all customers.

Simplicity & Administrative Ease: Straightforward for District staff to explain. Minimizes the financial and personnel impact to the agency.

Financial Sustainability: Generates adequate revenues year-over-year, produces stable cash flow to the District, and minimizes large rate fluctuations.

Strong Conservation: Reduction in peak summer use, outdoor water use, or discretionary use.

Defensibility: Likelihood of withstanding a legal challenge.

Eight members of the Water Rates Advisory Committee responded. The results for the rates objectives exercise administered to the Water Rates Advisory Committee are shown in Table 5-1. Fairness and equity was the most important objective followed closely by defensibility.

Table 5-1: Water Rates Advisory Committee Rates Objectives Exercise Results

Ranking	Classifications	Objectives	Score
1	Most Important	Fairness and Equity	18
2	Very Important	Defensibility	19
3	Important	Financial Sustainability	22
4	Somewhat Important	Strong Conservation	25
5	Least Important	Simplicity and Administrative Ease	28

5.2 BOARD OF DIRECTORS

Members of the Board were asked to rank the following objectives from most important (1) to least important (8). The Board was given an additional three objectives to rank, in addition to the five that were included in the exercise to the Water Rates Advisory Committee. The three additional objectives are:

Water Resources Management: Achievement of long term health and sustainability of the groundwater basin.

Affordability for Essential Use: Providing water at the lowest cost possible for efficient indoor needs related to health and sanitation.

Customer Understanding: Ability of a customer to understand the District’s proposed rates and charges.

All five members of the Board and the District General Manager responded to the rates objectives exercise. The rankings are shown in Table 5-2. Fairness and equity was the most important objective followed by defensibility.

Table 5-2: Board of Directors Rates Objectives Exercise Results

Ranking	Classifications	Objectives	Score
1	Most Important	Fairness and Equity	14
2	Very Important	Defensibility	17
3	Important	Water Resources Management	19
4	Somewhat Important	Financial Sustainability	26
5	Least Important	Strong Conservation	28

5.3 KEY OBJECTIVES (RESULTS)

The Water Rates Advisory Committee and Board exercises resulted in the same rankings. Both bodies ranked fairness and equity as most important and defensibility as very important. A table comparing the complete results from the rates objective exercise is shown in Table 5-3. The results provided Raftelis guidance for policy decisions and to develop the rate structure logic for a tailored CustomerSelect model.

Table 5-3: Rates Objectives Exercise Results Comparison

Ranking	Classifications	Objectives	Board Score	WRAC Score
1	Most Important	Fairness and Equity	14	18
2	Very Important	Defensibility	17	19
3	Important	Water Resources Management	19	N/A
4	Somewhat Important	Financial Sustainability	26	22
5	Least Important	Strong Conservation	28	25

6. CUSTOMER SELECT POLICY DEFINITIONS AND POLICY OPTIONS

Raftelis compiled policy recommendations based upon feedback and suggestions received from the Water Rates Advisory Committee workshops, discussions with District staff, direction from the Board, and results from the rate objectives exercise. This section discusses the policy definitions and options associated with each recommendation.

6.1 PLAN LOGIC

The plan logic is the series of policy decisions required to complete the rate structure framework. With a developed framework, Raftelis can build an electronic model and rates for a CustomerSelect structure. Five major policies are discussed below. Each policy will itself have several sub-policies and additional decisions to be made. These refinements or determinations will be made as part of rate design and implementation. For this evaluation, the policies are discussed at a high level.

6.1.1 *Customer Classes*

Residential customers tend to have homogenous patterns of use within the class, similar meter sizes, and well-defined water needs throughout the year. Non-residential customers, including commercial accounts and irrigation accounts, have varying demand patterns based on area, land use, and season. For example, the water needs of a light industrial user are very different from a restaurant which is very different from an office building. Additionally, non-residential customers tend to have larger meter sizes for potential, or stand-by, capacity needs.

6.1.2 *Number of Plans*

The CustomerSelect model requires a customer to select one of a number of plans. One question an agency must answer is how many plans to offer? Offering many plans means more choices for customers and presumably means smaller differences in allotments between one plan and the plan immediately preceding or after. Offering fewer plans means fewer choices for customers and presumably larger differences in the allotments between plans.

6.1.3 *Plan Size (Widths)*

Plan width is linked with the number of plans offered. Plan width refers to the range of units offered for a specific plan. For example, a narrow plan width may offer a range of only two units (e.g. 4-6 hundred cubic feet). Alternatively, a plan may be wide and offer a range of ten units (e.g. 10-20 hundred cubic feet). The plan widths an agency selects will depend on factors including the customer base's average use, the number of plans offered, and the regulatory environment surrounding rates. Plan width is important from a cost of service standpoint concerning capacity. A wide plan width implies a wider range in potential capacity where a narrow width links actual capacity to potential capacity. This is a particularly important point in California which has a rate setting regime based strictly on cost of service.

6.1.4 **Plan Switching**

As quoted in Section 3.1, the goal of the CustomerSelect model is to “lock” customers in to plans that they then pay for throughout the year. An agency must determine how frequently, and in which manner, a customer can change from one plan to another. At one extreme, allowing customers to switch on a monthly basis turns the structure into a variable structure and may create revenue instability as customers reduce their plan in the winter and increase their plan in the summer so as to avoid overage charges. At the other extreme is to not allow customers to change their plan except under a variance. This would deny customers the ability to make a change after modifying their landscape, having children move out of the home, or other lifestyle change and would prove politically untenable. Finding the right balance affords the agency revenue stability while allowing a degree of flexibility with customers.

6.1.5 **Plan Overages**

In order to dissuade customers from selecting a plan with too small an allotment to meet their household demands, an overage must be considered. The overage could be designed as a flat charge or rate (e.g. \$10/hundred cubic feet) similar to data overages by cellular providers. Or, alternatively, a customer could be subject to a plan change as an “overage” and remain there for some predesignated period of time. Lastly, an overage could be designated as a penalty; however, this option is potentially problematic in California given Proposition 218 and cost of service requirements.

6.1.6 **Conservation Credit**

The District expressed interest in evaluating a credit or rebate to incentivize conservation. In *Defining a Resilient Business Model for Water Utilities*, this is discussed under the “WaterWise Dividend Model.” Customers are thought of as system “owners” and receive a dividend at the end of the year if the agency is not in fact revenue neutral and has generated a “profit” (vaguely defined).

7. EVALUATION OUTCOMES (RESULTS)

Section 6 defines the policy decisions to be made and the corresponding options for each policy. This section documents the decisions made during the evaluation and agreed to by the District Board at the workshop on December 5, 2017. The results from this evaluation become the foundation of a full rate structure study whereby a rate model is constructed and rates are derived.

To aid decision making for the main policy decisions, Raftelis developed a decision analysis matrix that includes the rate objective exercise rankings. Table 7-1 lists the objectives by rank and the associated policy recommendation to achieve the objective. Our decision analysis prioritizes the top ranked objectives of fairness and equity and defensibility. For example, to achieve fairness and equity the plan size (plan width) should be narrow so a customer’s actual capacity used would be more closely aligned with the capacity available in the plan.

Table 7-1: Policy Decision Analysis

Score	Objective	Number of Plans	Plan Size	Overages	Credit	Plan Switching (Rolling Open Enrollment)
14	Fairness and Equity	Many	Narrow	Auto Adjust	Strong	Strong
17	Defensibility	Many	Narrow	-	Strong	-
19	Water Resources Management	Many	Narrow	Auto Adjust	Strong – Addtl. Credit?	-
26	Financial Sustainability	Fewer	Wide	Auto Adjust	-	Weak
28	Strong Conservation	-	-	Auto Adjust	Weak	Weak
30	Customer Understanding	Fewer	Wide	Incremental Cost	Weak	Strong
36	Affordability for Essential Use	Many	Narrow	Incremental Cost	-	Strong
39	Simplicity and Administrative Ease	Many	Narrow	Auto Adjust	Strong	Weak

7.1 RECOMMENDATIONS AND DECISION POINTS

Our recommendations are based on the top two rate objectives and subsequent discussion of the five main policy decisions for each objective. Table 7-2 shows only the two highest ranked objectives, fairness and equity and defensibility. The individual policy decisions are detailed after the table and were made with input from Raftelis, Water Rates Advisory Committee members, the Board, and District staff. The policy decisions are preliminary and may be amended and/or refined when the rate structure is designed.

Table 7-2: Policy Decision Analysis

Score	Objective	Number of Plans	Plan Size	Overages	Credit	Plan Switching (Rolling Open Enrollment)
14	Fairness and Equity	Many	Narrow	Auto Adjust	Strong	Strong
17	Defensibility	Many	Narrow	-	Strong	-

7.1.1 Customer Classes

Both the Water Rates Advisory Committee and the Board agreed to evaluate a CustomerSelect model for residential customers only at this time. If and when the rate structure is implemented for residential users, the District may evaluate a CustomerSelect model for its non-residential account holders. Non-residential customers add complexity to the evaluation that does not exist in the fairly homogeneous residential classes that have similarly sized meters and demand patterns.

7.1.2 Number of Plans and Plan Size (Widths)

To achieve a structure that is fair and equitable the District should offer many plan options to customers. The more plans available, the closer aligned a customer’s actual capacity is to the plan capacity (presuming that means the plans are therefore narrower). This holds true across the customer class so that actual capacity approximates plan capacity leading to equitable outcomes across users. Given the requirements of Proposition 218, offering many plans aids in legal defensibility by minimizing the difference between a customer’s actual capacity and the plan’s allotted capacity.

With respect to plan widths, to achieve a structure that is fair and equitable, as well as defensible, the District should have narrow plans. The plan width correlates with the number of plans offered and the rationale for narrow widths is the same as for why the District would want many plans. The narrower the plan, the more closely aligned a customer’s use is with the range of units available in the plan. From a cost of service standpoint, narrow plans more closely reflect capacity used relative to potential capacity. It is, therefore, more defensible with respect to Proposition 218’s requirement of proportionality (“The amount of the fee or charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel”).

7.1.3 Plan Switching

There is a need to balance the integrity of the CustomerSelect model with flexibility and political acceptance for customers. The recommendation that arose from the Board is to allow customers to change plans more frequently than once per year. Board members feel that it is not fair to charge a customer for peak month use over an entire year and would like to evaluate other options

The recommendation for plan switching will include an “open enrollment” style model where customers will have a window of time to make plan changes for the following six to twelve months. This may take the form of a rotating open enrollment so that all of the District’s residential customers would be spread across six billing periods, minimizing the burden on the District’s staff and ensuring quality customer service.

7.1.4 *Plan Overages*

In place of a monetary charge for exceeding the plan, it is recommended that customers who use greater than their plan allotment are automatically enrolled (“auto-adjust”) in the plan in which their usage occurred. This approach is beneficial in several regards. First, it removes the need for the agency to design a monetary overage charge, either variable (e.g. \$5 per hundred cubic feet) or fixed (e.g. \$20), which would require a logic and connection to the cost of service. Second, automatically adjusting to the plan corresponding to actual capacity used ensures that the overage – in this case auto-adjustment – reflects the actual cost to serve.

7.1.5 *Conservation Credit*

The Board desires a conservation credit to customers who meet specific criteria. The amount of the credit would be applied to a customers’ bill at the end of the fiscal or calendar year. The conservation credit would be tied to the variable costs of the District, groundwater treatment and groundwater production energy costs. These represent avoidable costs to the District. For example, if a customer is in a hypothetical plan which allots 10-15 hundred cubic feet per month and uses 11 hundred cubic feet for each billing period of the year, a credit would be applied for 48 hundred cubic feet $((15-11)*12)$.

7.2 **OTHER CONSIDERATIONS**

Variances and Appeals: In certain situations, it may be appropriate for the District to allow customers to make changes to their plan outside of the open enrollment period. The District should establish a formal policy for such situations. For example, if a customer exceeds their plan allotment due to health issues (home medical devices) the District would allow the customer to submit a variance request. Another likely situation will arise when a customer is auto-adjusted into a new plan for six months due to an undetected leak. The District should have a process in place for a customer to appeal the auto-adjustment and return to their original plan. The Board suggested the ability to roll-back to the original plan after a three-month period with an appeal. Other variance and appeal situations, such as customers wanting to move to a lower plan outside of open enrollment, should also be considered.

Units of measurement: Currently the District bills in increments of one cubic foot and conveys water use in terms of hundred cubic feet per billing period. The Board has suggested developing the CustomerSelect plans in increments based upon the State of California’s standard for efficient indoor use. 50 gallons per capita per day is considered efficient indoor use for an individual. Therefore, the plans would provide allotments in increments of 50 gallons per day. For instance, a three-person household would likely choose the plan that provides 150 gallons per day. However, if they were unsure of their efficiency they could opt for 200 gallons per day. In all cases the plans would be expressed in terms of efficient gallons per day.

Plan Selection: The District will have each individual customer select their own plan when the rate structure is established. It will be up to the account holder to make a selection at the initial open enrollment period. If a customer does not make a plan selection the account will default to the customer’s prior month use.

7.3 OUTCOME

Given the results of the pricing exercise and the decisions by the Board, the District's CustomerSelect model will have the following characteristics. CustomerSelect rates will be developed, and apply to, residential customers only. The rate structure will have many discrete individualized plans that are based upon a customer's actual use. The plans will have widths of 50 gallons per day, converted to billing units of cubic feet within the District's billing system⁶. If a customer exceeds their plan, they will automatically be enrolled in the plan corresponding to that level of use. The customer will remain in the higher plan for a specific time period to be determined, or until the new open enrollment. The customers can file an appeal with the District to return to their lower plan. A customer cannot select a smaller plan outside of open enrollment except by appeal. A conservation credit will be calculated for each customer at the end of the fiscal year and credited to the account. Customers will select their own plan at time of initial enrollment with a suggested plan provided by the District.

7.4 NEXT STEPS

The District is interested in developing rates associated with the CustomerSelect framework and to understand associated customer impacts. Policy factors that need further refinement are:

- Defining peak use - Highest water use in a month or an average of the highest use over a certain period? Should a rolling average be considered? Or should it be discrete?
- Plan switching - When should a customer be able to roll off their peak use? The Board expressed concerns about a customer paying for peak use for one year and is interested in exploring an approach where a customer can roll off sooner.

Raftelis recommends that the District develop a rate model that can analyze the questions above using the CustomerSelect framework and assist the District in developing rates and appropriate policies.

⁶ For example, 100 gallons per day over 30 days equals 3,000 gallons per billing period. There are 7.48 gallons per cubic foot. 3,000 divided by 7.48 equals 401 cubic feet. Therefore, a 100 gallons per day plan would allot 401 cubic feet, or 4.01 hundred cubic feet, per billing period.