Attachment 2

City Council Joint Workshop with the Board of Public Utilities
January 18, 2018

Tiered and Seasonal Water Rates

Why Tiered and Seasonal Water Rates?

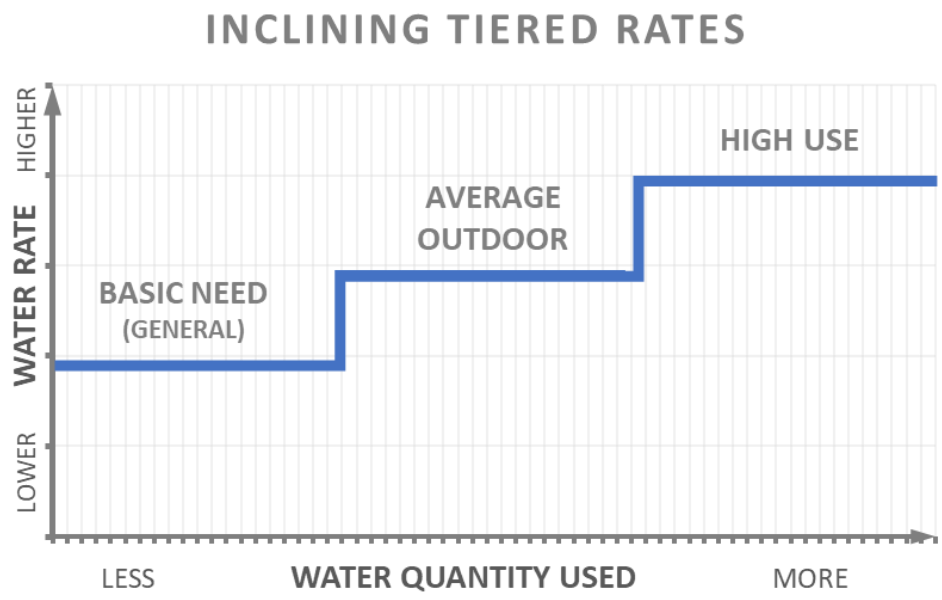
Tiered and seasonal water rates are neither prohibited nor required under California law. These rates are used by water providers to allocate costs for reliable water service in a fair and equitable way. Water service that is less expensive and meets basic health and safety needs for all customers is priced at the lower tiers, and water service that is more expensive and requires additional infrastructure is priced at the higher tiers or summer rates.

Approximately 67% of California water providers use some form of tiered and/or summer rate. RPU first adopted seasonally priced tiered water rates in 1990. RPU's current rate proposal makes modifications to the existing seasonally priced tiered rates to meet cost of service requirements and facilitate a transition to budget-based tiered rates, if desired.

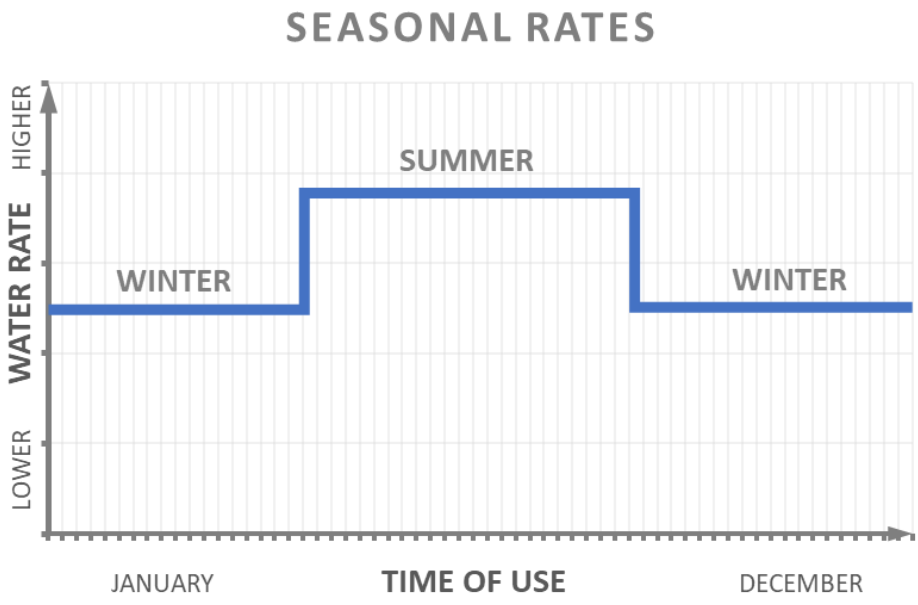
What Are Tiered and Seasonal Water Rates?

Tiered and seasonal rates are types of variable (usage-based) rates where the rate changes when the amount or time of use changes. Tiered and/or seasonal rates can be applied to all customers or to a customer category (e.g., all single-family residential customers). The following are the most common types of these rates adopted by water agencies:

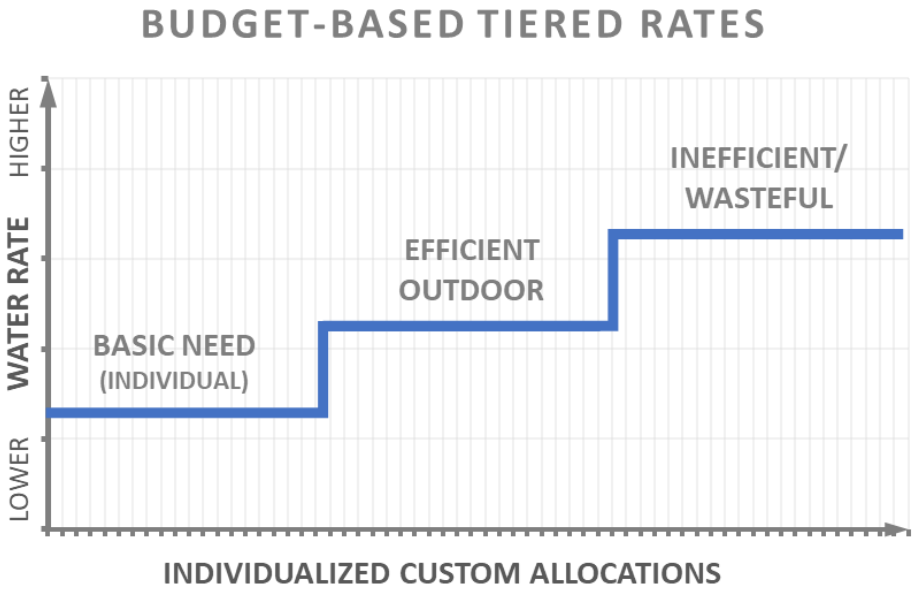
- **Inclining Tiered Rates**: Rates based on levels of use and the costs associated with serving the next unit of water.



- **Seasonal Rates**: Rates based on seasonal use and the costs associated with meeting seasonal demands.



- **Budget-Based (or Allocation-Based) Tiered Rates**: Rates based on efficient levels of use for individual customers and their specific needs, such as the number of persons living in a household, size of yard, and type of landscape or home agricultural water use needs.



How Does Riverside Allocate the Costs for Tiered Water Rates Fairly and Equitably?

Tiered water rates are a methodology for providing a fair and equitable allocation of the costs for reliable water service. The methodology is based on the following key principles:

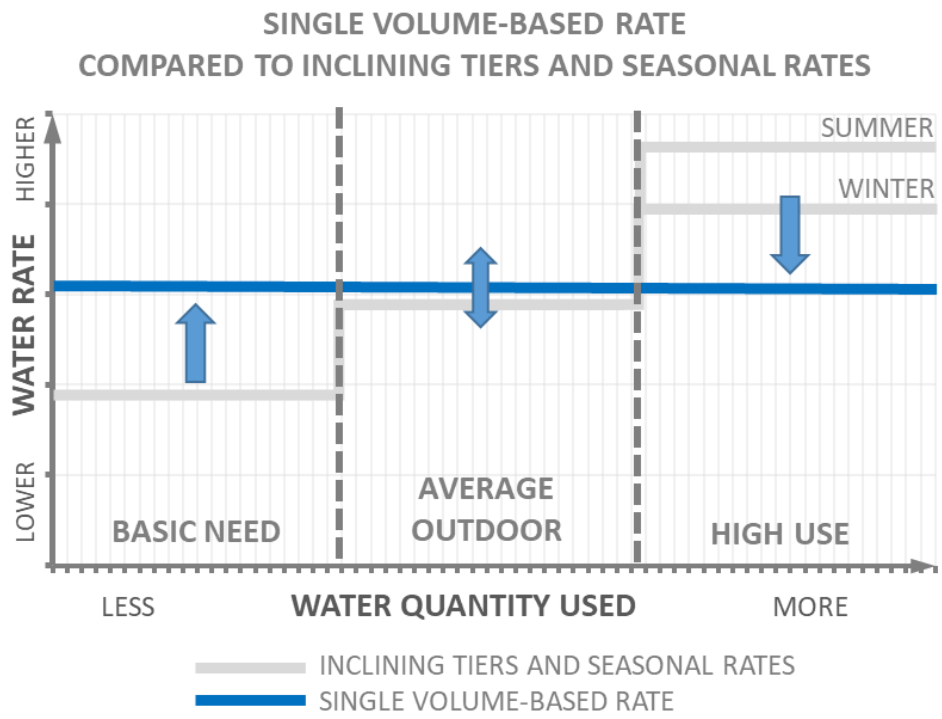
- The lowest cost water service should be dedicated to basic health and safety customer needs (drinking, bathing, sanitation), followed by efficient irrigation and other beneficial uses.
- Peak summer demands for landscape irrigation increase overall costs for the utility. The water utility must build, operate, and maintain water supply and distribution infrastructure sufficient to deliver the maximum amount of water required during the summer months.
- The costs of building and maintaining infrastructure sufficient to deliver greater quantities of water during the summer should be paid by customers who use greater quantities of water during the summer. Likewise, low-use customers should not be required to cover the costs to deliver greater quantities of water that they do not use.

Through a cost of service study, water supply and distribution infrastructure costs are determined to meet base (year-round) and peak (summer) water demands. The residential portion of these costs are then allocated to different tiers based on levels of use and seasonally for the highest tier. The lowest-cost water supplies are allocated to the lowest tiers to serve basic needs, the next lowest-cost water supplies are allocated to the middle tiers to serve average year-round needs, and the highest cost water supplies and peak infrastructure costs are allocated to the highest tiers to serve peak summer water needs. The result is a rate structure that fairly allocates water utility costs to all customer classes and levels of use.

Elimination of water rate tiers by transitioning to a uniform volumetric rate simply means that costs are lumped together with no prioritization for how water is used. This methodology will have the impact of increasing the costs of customers who use less water overall, including the increased cost of the first 9 hundred cubic feet (ccf) of water each month for single family homes and the first 7 ccf for multi-family homes. The lowest cost tier, which every residential customer receives, would increase if water costs were simply averaged to create a uniform volumetric rate. As a result, the 36% of RPU customers who currently do not use water outside the lowest cost tier would see a large increase to their water bills. Low-income and fixed income customers would be the most significantly impacted. They would now be incurring the costs associated with peak system infrastructure requirements even though they are most typically not the customers causing the need. The residential customers who will benefit from this approach will only be high water use customers.

Similarly, if seasonal water rates are eliminated in favor of the same pricing year round, costs will need to be recovered throughout the year. While summer rates will go down to some extent, winter rates will need to be increased in order to cover the costs incurred during the summer. Again, low water use customers, including low-income and fixed income customers, will face higher rates to cover the costs of associated with the peak system infrastructure requirements, while customers who use greater amounts of water will receive lower rates.

It is important to note that any methodology proposed by RPU is simply an approach to allocate the costs to serve water. Whether tiered and seasonal rates are used or a single flat rate, the costs to provide water from all of the various resources does not decrease.



What Are RPU's Proposed Tiered Rates for Single-Family Residential Customers?

RPU is proposing to modify its existing tiered water rate structure for single-family residential customers, incorporating both inclining tiered rates and seasonal rates based on the key principles discussed above.

The following changes are being proposed:

- **Eliminate Tier 4** – RPU proposes to remove Tier 4, which will increase revenue stability while remaining consistent with the water utility's cost of service.
- **Align Tier 1 with State Water Use Efficiency Standard –** State legislation has established an indoor water use efficiency standard of 55 gallons per person per day. RPU proposes to align its Tier 1 allocation with this State standard to maintain consistency with basic water needs.

The following is a general description of the proposed tiers for single-family residential customers:

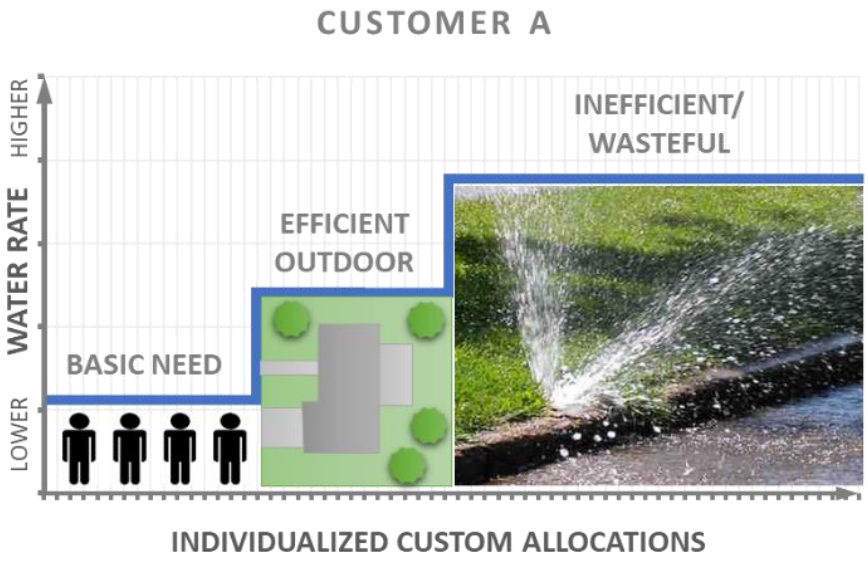
- **Tier 1 – Indoor Usage:** Monthly allocation of 9 ccf consistent with State indoor efficiency standard of 55 gallons per person per day assuming four (4) people per household.
- **Tier 2 – Average Outdoor Usage:** Monthly allocation of 26 ccf above Tier 1 consistent with the average maximum monthly consumption of single-family residential customers.
- **Tier 3 – High Usage (Winter & Summer):** Any usage above Tier 2. The Tier 3 rate is increased in the summer months (June-October) consistent with costs associated with peak summer usage.

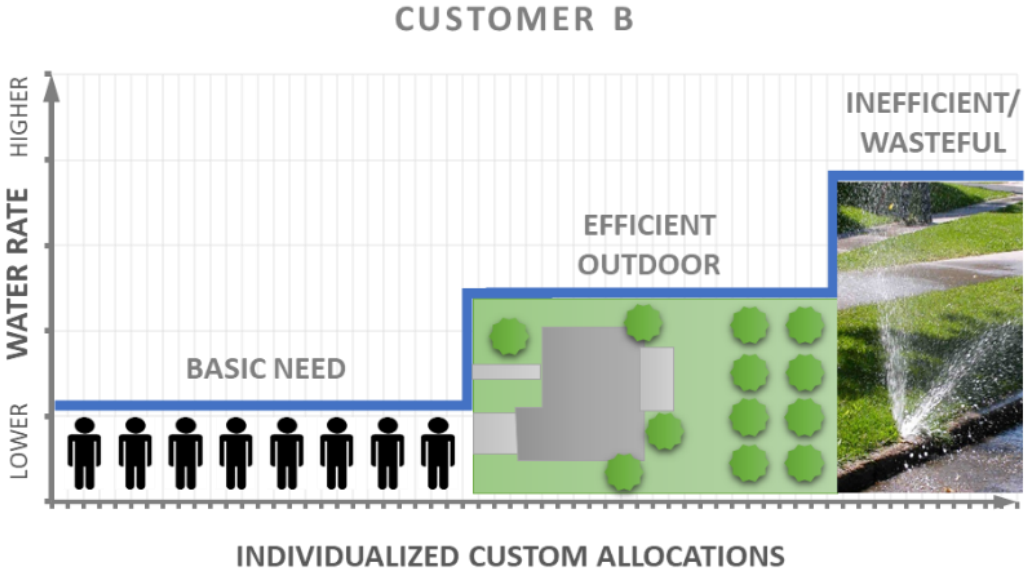
For more details on RPU's proposed tiered rate structure for single-family residential customers, please see RPU's Water Cost of Service Study, especially pages 63-67.

Should RPU Move to a Budget-Based Tiered Rate Structure?

RPU's proposed rates were developed to facilitate a transition in the future to budget-based tiered rates should it be the direction of the Board and City Council. Budget-based tiered rates (also known as "allocation-based rates") distribute water utility costs based on each customer's unique efficient water needs, such as the number of persons living in the household and square footage of landscape areas. In other words, customers who use water efficiently based on their unique customer characteristics pay lower rates, and those who use water inefficiently or wastefully pay higher rates.

Water use efficiency is based on water needs. Each customer's water needs are different. A family of four with 1,500 square feet of landscaping needs less water than a family of eight with 15,000 square feet of landscaping. Both families can use water efficiently while using a different amount of water.





Budget-based tiered rates calculate the amount of water each customer needs and then allocate that amount of water – an amount that is different for each customer – to the first two tiers. Basic water needs are priced at the lowest tier, similar to the inclining tiered rates, but the quantity allocated to the tier is adjusted to the size of each household. Water needs for the efficient irrigation of outdoor greenscapes – lawns, trees, non-commercial agriculture – are priced at the next lowest tier, based on the size of irrigated landscape areas and real-time environmental conditions impacting the water needs of plants (precipitation, evaporation, plant transpiration). These two tiers together form each customer's "water budget." Customers using water above their individual budgets are charged higher rates for using water inefficiently or wastefully.

Before transitioning to budget-based tiered rates, an analysis of the administrative costs and system needs as well as the changes to the rate structure for each customer class should be undertaken. In order to establish budget-based tiered rates, a new cost of service study would need to be developed and each customer's water budget and tier allocations must be calculated individually. The water utility must gather and analyze a significant amount of data about each customer's water needs. The utility must also change its billing system and, most importantly, communicate with customers about water budgets and how to become efficient water users in order to control their bills. Based on the experience of other water agencies, conversion to budget-based tiered rates typically requires 2-3 years to develop, communicate, adopt, and implement, and the cost can range anywhere from $300,000 to $800,000.

If directed to do so, RPU staff will prepare an analysis of budget-based tiered rates for Board and City Council consideration. After consideration of the analysis, RPU could then develop a plan for a revenue-neutral conversion to budget-based tiered water rates for Board and City Council consideration.