A ORIGINAL DEVELOPED RATES

This appendix provides the water service rate design LADWP originally developed based on long-standing LADWP and industry rate design principles that were followed prior to the recent Fourth Appellate District of the California Court of Appeal decision in Capistrano Taxpayers Association v. City of San Juan Capistrano. The Department's final proposed rate design, as presented in Chapter 5, Water Rate Design, is based on a revised approach developed in light of this court decision. While there are differences between the two rate designs, the resulting rates from the new approach are fairly similar to those rates that would have been developed with the prior methodology. Both designs provide incentives for increased conservation.

The main differences between the original approach and final proposed approach to the water rate design are summarized in Figure 1.

Figure 1: Main Differences Between Originally Developed and Final Proposed Rate Design Approaches

Originally Developed Approach	Final Proposed Approach
Tier differential for all customer classes set based on the Water Procurement Adjustment (WPA) factor that recovers the cost of purchased water, demand side management and water reclamation	• WPA factor eliminated. • Tier differential set based on a new Water Supply Cost Adjustment (WSCA) factor that recovers the cost of all sources of water supply[1] and the peak pumping and storage component of base rates[2] as discussed below
Base Rate Revenue Target Adjustment (BRRTA) factor applies to tiers 1, 2 and 3 for Schedule A and tier 1 for Schedule B, unless resulting tier 3 (Schedule A) or tier 1 (Schedule B) rate was above tier 4 (Schedule A) or tier 2 (Schedule B)	BRRTA factor applies to all tiers for all customer classes
All adjustment factors, except WPA set the same across all tiers and customer classes	WSCA varies by tier but not customer class
Base rates set the same across all tiers for a specific customer class	Peak pumping and storage component of base rates applied to only Schedule A tiers 3 and 4, Schedule B tier 2 and Schedule C tier 2
Schedule A Rate Design:	Tier levels differentiated by water supply and peak

[1] For information about the WSCA, refer to Section 5.4.7 of Chapter 5, Water Rate Design.

[2] For information about the peak pumping and storage component of base rates, refer to Section 5.4.13 of Chapter 5, Rate Design.

Originally Developed Approach	Final Proposed Approach
Tier levels differentiated by water supply costs defined by the WPA as follows: • Tier 2 – customer class average • Tier 1 – less than class average • Tier 3 – Above class average • Tier 4 – marginal cost of water supply	pumping and storage costs: • Water supply assigned to tiers, starting with the least expensive source of supply and with the same tier treated equally for all major customer classes • Peak pumping and storage costs applied to tiers 3 and 4 only to reflect the added cost associated with high levels of water usage
Schedule B Rate Design: Tier levels differentiated by water supply costs defined by the WPA as follows: • Tier 1 – average supply cost • Tier 2 - closer to the marginal cost of water (recycled water)	Tier levels differentiated by water supply and peak pumping and storage costs: • Water supply assigned to tiers, starting with the least expensive source of supply and with the same tier treated equally for all major customer classes • Peak pumping and storage costs applied to tier 2 only to reflect the added cost associated with high levels of water usage
Schedule C Rate Design: Tier levels differentiated by water supply costs defined by the WPA as follows: • Tier 1 – average supply cost • Tier 2 - closer to the marginal cost of water (recycled water)	Tier levels differentiated by water supply and peak pumping and storage costs: • Water supply assigned to tiers, starting with the least expensive source of supply and with the same tier treated equally for all major customer classes • Peak pumping and storage costs applied to tier 2 only to reflect the added cost associated with high levels of water usage
Schedule A Water Budget: • Tier 1 - 8 HCF • Tier 2 and 3 allotments based on lot size, temperature zone and season	No change

Originally Developed Approach	Final Proposed Approach
Schedule B Water Budget: • Tier 1 (base year) – allotment set at the highest of 105% of the current recorded allotment established upon the effective date of the new ordinance or 105% of the average winter (December 2014-March 2015) usage • Tier 1 (FY 2015-16) – allotment set at the highest of 93% of the recorded allotment established upon the effective date of the new ordinance or 93% of the average (December 2014-March 2015) usage • Tier 1 (FY 2016-17) – allotment set at the highest of 88% of the recorded allotment established upon the effective date of the new ordinance or 88% of the preceding average (December 2014-March 2015) usage; FY 2016-17 allotment applies for FY 2017-18 through FY 2019-20	Schedule B Water Budget: • Tier 1 (base year) – allotment set at the highest of 100% of the current recorded allotment established upon the effective date of the new ordinance or 100% of the average winter (December 2014-March 2015) usage • Tier 1 (FY 2015-16) – no change • Tier 1 (FY 2016-17) – no change
Schedule C Water Budget: • Tier 1 (year 1) low season – allotment set at the highest of 105% of actual preceding winter (December – March) usage or 105% of the current recorded tier 1 allotment upon the effective date of the ordinance. • Tier 1 (year 1) high season - allotment set at the highest of either 115% of actual preceding winter (December – March) usage or 115% of current recorded tier 1 allotment upon the effective date of the ordinance.	Schedule C Water Budget: • Tier 1 (year 1) low season – allotment set at the highest of actual preceding winter (December – March) usage or the current recorded tier 1 allotment upon the effective date of the ordinance. Tier 1 (year 1) high season - allotment set at the highest of either 105% of actual preceding winter (December – March) usage or 105% of current recorded tier 1 allotment upon the effective date of the ordinance.

The following sections of this appendix provide the originally developed rate design and the process followed to develop the original rate design.

1.1 SINGLE-DWELLING UNIT RESIDENTIAL (SCHEDULE A)

LADWP's original design utilized a four-tier rate structure for Single-Dwelling Unit Residential customers that included the same adjustment factors and base rate components and associated rates for each tier, an exception being the WPA factor. The WPA was designed to increase for each higher tier to reflect the higher incremental costs of water supply needed to meet increasing levels of demand. The original rate structure included decoupling in the form of a symmetrical BRRTA factor, designed to ensure recovery of base rate revenues as defined by the financial plan, and also to protect customers from over-recovery by automatically returning excess revenues to customers.

1.1.1 Single-Dwelling Unit Residential Customer Water Budgets

Changes to water budget allotments for Single-Dwelling Unit Residential customers were designed to further incentivize conservation. The major changes, which included the following items, have not been changed in the final proposed rate design.

- Eliminate household size variation as an element in determining water budgets. Currently, a base allotment of six HCF per month (150 gallons per day) is provided for a household of up to six people with increased amounts for additional people. Historically, this process has been confusing to customers and administratively complex. Many customers have not even reported actual household size.
- Establish a fixed tier 1 allotment based on eight HCF per month (200 gallons per day), which is an increase for many customers.
- Decrease the number of lot sizes from five to four with lot size a factor in setting water budgets for tiers 2 and 3. Outdoor usage is typically the largest use of water. With today's irrigation technology and the options for drought-resistant landscape, customers should have alternatives to help manage the cost of outdoor water use.
- Modify the high season to be consistent with power rates (June – September). Aligning the seasons for water and power rates will reduce the number of changes customers see on their bills and make the billing and customer service processes more efficient over time.
- Eliminate shortage year rates. The new allotments are based on the shortage year concepts in light of the continued drought.

Figure 2 provides a comparison of the originally developed water budget structure compared to the current approach. The changes were designed to tighten allotments, especially for higher usage levels and also make the structure easier for customers to understand and for LADWP's customer service representatives to communicate.

Figure 2: Single-Dwelling Unit Residential Customer Originally Developed Water Budget Proposal

	Current Approach (Two Tiers)	Originally Developed Approach (Four Tiers)
Household Size – First Tier Usage	• Minimum household size – Six people • Additional two HCF per person – next three persons • Additional one HCF per person - next four persons • For 24 specified ZIP codes, minimum household size - eight	All customers receive eight HCF per month for tier 1 usage throughout the year
Tier Allotment Determination	Tier 1 allotment based on lot size, temperature zone, season and household size	• Tier 1 based on 8 HCF • Tier 2 and 3 allotments based on lot size, temperature zone and season
Lot Size Groups	• Five lot size groups • Tier 1 allotments vary by lot size in high and low seasons	• Four lot size groups • Tier 2 and 3 allotments vary by lot size in high and low seasons
Temperature Zones	Three temperature zones	Three temperature zones
Seasonal Allotments	Different tier 1 allotments set for low and high seasons	Different tier 2 and 3 allotments for low and high seasons
Seasons	High season: June 1 to October 31	High season: June 1 to September 30, to be consistent with power*
Shortage Years	Provides for a reduction in tier 1 allotments in shortage years ("shortage year rates")	• Eliminate shortage year rates • Decoupling ensures financial stability during drought periods

*Based on months when usage occurs; may be billed in later months depending on billing and meter read cycles.

The resulting allotments for the originally developed rate structure are shown in Figure 3. All customers would receive eight HCF for tier 1 usage. Additional water budget allotments would be applied to tiers 2 and 3 to recognize higher water use needs for larger lots, in higher temperature zones and during the summer. Usage above tier 3 allotments would be charged at tier 4 rates to all customers.

Figure 3: Originally Developed Single-Dwelling Unit Residential Customer Allotments (HCF)

Tier 1					
Indoor Use	8				
Tier 2 (Added to Tier 1 Water Allotment)					
Lot sizes (square feet)	7,500	11,000	17,500	43,559	43,559 +
Winter (Oct-May)	3	4	8	10	

Summer (June-Sep)					
Low temp	6	9	17	21	21
Mid temp	7	10	19	24	24
High temp	9	12	25	31	31
Tier 3 (Added to Tier 2 Water Allotment)					
Lot sizes (square feet)	7,500	11,000	17,500	43,559	43,559 +
Winter (Oct-May)	6	8	16	20	20
Summer (June-Sep)					
Low temp	12	18	34	42	42
Mid temp	14	20	38	48	48
High temp	18	24	50	62	62
Tier 4 (All Usage Above Tier 3)					

As shown in Figure 4, over 90% of customer bills would have usage in only tiers 1-3. The relatively higher tier 4 rates would incentivize reduced usage where the most opportunity for conservation exists.

Figure 4: Originally Developed Tier Distribution for Single-Dwelling Unit Residential Customers

Lot Size (Square Feet)	Total Customers	Tier 1 Customers	Tier 2 Customers	Tier 3 Customers	Tier 4 Customers	% of Customers in Tier 4
Temperature Zone 1						
Up to 7,499	36,653	13,543	10,418	10,245	2,447	**6.7%**
7,500-10,999	8,375	1,232	2,041	3,725	1,377	**16.4%**
11,000-17,499	5,406	465	1,597	2,522	822	**15.2%**
Above 17,500	5,461	302	1,002	2,143	2,014	**36.9%**
Temperature Zone 2						
Up to 7,499	176,318	68,476	49,874	46,267	11,701	**6.6%**
7,500-10,999	36,567	7,635	10,134	13,779	5,019	**13.7%**
11,000-17,499	11,717	1,492	3,609	5,147	1,469	**12.5%**
Above 17,500	7,325	733	1,882	2,614	2,096	**28.6%**

Lot Size (Square Feet)	Total Customers	Tier 1 Customers	Tier 2 Customers	Tier 3 Customers	Tier 4 Customers	% of Customers in Tier 4
Temperature Zone 3						
Up to 7,499	79,817	18,192	24,997	30,991	5,637	**7.1%**
7,500-10,999	66,667	8,411	21,037	31,693	5,526	**8.3%**
11,000-17,499	29,335	1,930	10,384	15,364	1,657	**5.6%**
Above 17,500	20,565	1,523	6,658	9,893	2,491	**12.1%**
Total	**484,206**	**123,934**	**143,633**	**174,383**	**42,256**	
% by Tier		**25.6%**	**29.7%**	**36.0%**	**8.7%**	

Combined with tier rates, which lowers initial rates for low usage customers, modifications to the Department's water budget structure were designed to help facilitate additional conservation to meet the Mayor's directive to reduce per capita usage by 20% by 2017. None of these aspects of the Schedule A water budget approach from the originally developed rate design have changed in the final proposed rate design.

1.1.2 Single-Dwelling Unit Residential Customer Tier Structure and Rates

LADWP had originally developed a four-tier structure for Single-Dwelling Unit Residential rates which is consistent with the final proposed structure. Tier thresholds generally were set based on indoor and outdoor water use requirements and water supply costs, which should encourage water conservation; the major differentiating amount between tier rates was water supply costs.

1.1.3 Use of Evapotranspiration Factors

LADWP's originally developed tier thresholds were guided by evapotranspiration adjustment factors (ETAFs), which are measures used to adjust the maximum calculated water use based on plants, turf, and irrigation efficiency. This approach, developed by the California Department of Water Resources as part of a "Model Water Efficient Landscape Ordinance" in 2008, has not changed in developing the final proposed rates.

According to a Department of Water Resource White Paper entitled "Evapotranspiration Adjustment Factor:"

> "The evapotranspiration adjustment factor (ETAF) is a coefficient that adjusts reference evapotranspiration (ETo) values based on a plant factor (PF) and irrigation efficiency (IE) and is used to calculate the maximum amount of water that can be applied to a landscape. ETo is a combination of evaporation and transpiration from standardized grass surfaces on which weather parameters are measured and ETo is then calculated. The plant factor includes effects of plant type, plant density, and microclimate on the water demand of a landscape.

> Irrigation efficiency is the amount of water that is beneficially used divided by the total amount of water applied.[3]"

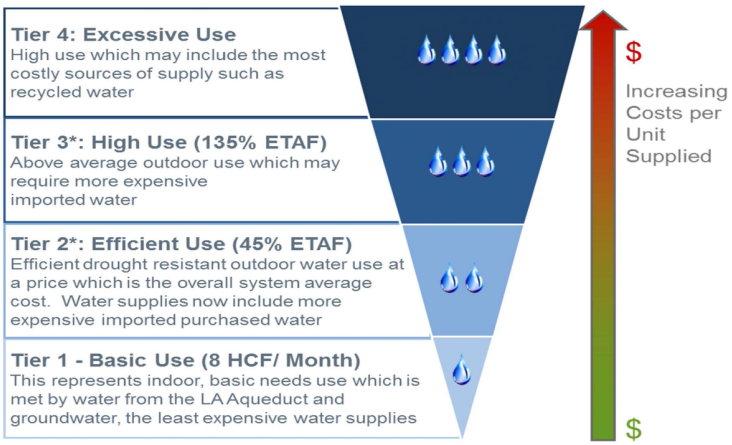
The ETAF is calculated by dividing the plant factor by IE (PF / IE = ETAF).

According to the Department of Water Resources study, in 2008, the Model Ordinance utilized a Statewide plant factor of 0.5, representing a mix of 1/3 high, 1/3 moderate, and 1/3 low water using plants. The irrigation efficiency for purposes of the ETAF in the ordinance was 0.625 (or 62.5%). The ETAF was obtained by dividing the average plant factor of 0.5 by the average irrigation efficiency of 62.5%, resulting in an ETAF of 0.8.

Since 2008, advances in irrigation technology and the availability of drought tolerant landscape have reduced ETAFs. The San Diego County Water Agency proposed an ETAF factor of 0.7. The Coachella Valley Water District adopted a more aggressive ETAF of 0.5.

To address the current drought, LADWP originally developed its tier 2 rate using an ETAF of 45% to represent the most efficient landscape; to offset the strict ETAF and provide time for customers to adapt to the drought reduction programs, the initial tier 2 rates were set lower than existing tier 1 rates. Tier 3 rates were set using an ETAF of 135% to represent much less efficient irrigation and non-drought tolerant landscaping in an effort to encourage customers to transition to a more efficient combination. Figure 5 outlines the four tiers and assumptions regarding the type of landscape on which tier rates are based. These aspects of the originally developed rate design have not changed in the final proposed rate design.

Figure 5: Originally Developed Single-Dwelling Unit Residential Customers Proposed Tier Water Usage Structure

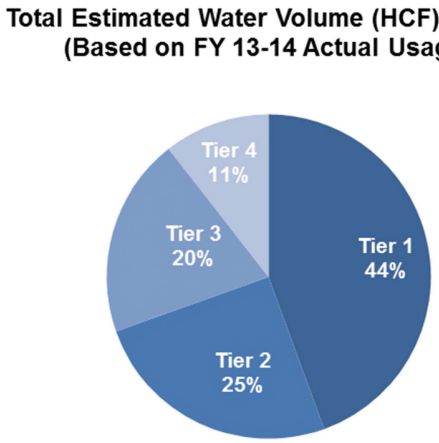


* Tier 2 and 3 allotments would also vary based on temperature zone and lot size.

[3] White Paper: Evapotranspiration Adjustment Factor, January 25, 2008, prepared by the Department of Water Resources staff in support of the updated Model Water Efficient Landscape Ordinance (http://www.water.ca.gov/wateruseefficiency/docs/etWhitePaper.pdf)

Based on FY 2013-14 actual usage, following this proposed approach would result in almost 70% of overall water usage being in tiers 1 and 2, as shown in Figure 6.

Figure 6: Distribution of Single-Dwelling Unit Residential Customer Water Usage Among Tiers for Originally Developed Rate Design



The originally developed rate structure and rates were established to incentivize customers to eliminate their tier 4 usage.

1.1.4 Rate Development Process

Consistent with the final proposed rate design, rates for each tier would represent the total of the base rate and all adjustment factors; the calculations of the adjustment factors would be based on accounting records. Amongst the four tiers, the base rate component and all adjustment factors (except the WPA and the BRRTA) were originally developed to be the same on a volumetric basis using the following process.

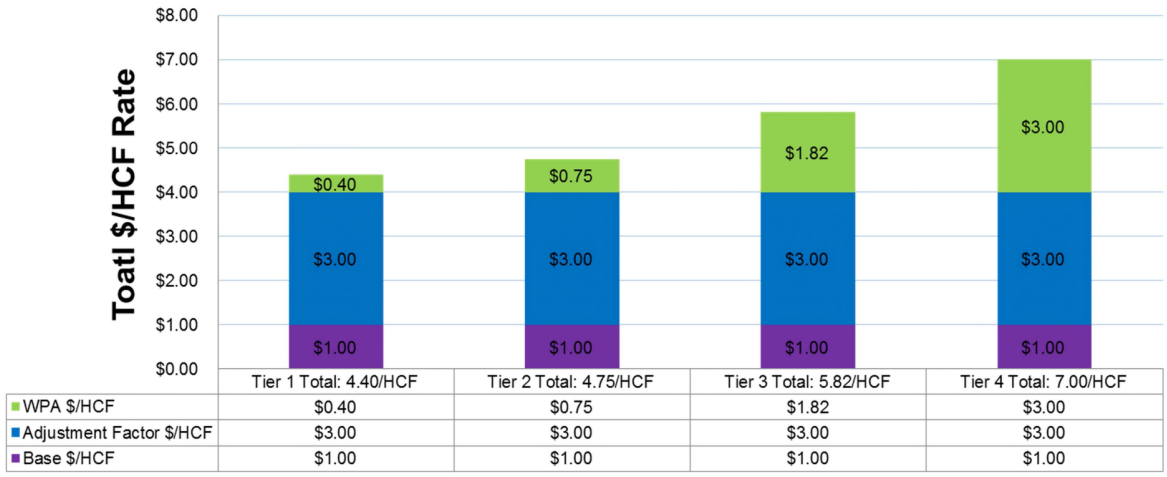
- Determine the total customer class rate per HCF (total class revenue requirement divided by total class usage).
- Deconstruct the total class HCF amount into the following components:
  - Total of the following adjustment factors: Water Quality Improvement Adjustment (WQIA), Owens Valley Regulatory Adjustment (OVRA), Low Income Subsidy Adjustment (LISA), Water Infrastructure Reliability Adjustment (WIRA) and Water Expense Stabilization Adjustment (WESA).
  - Base rates; and
  - Water Procurement Adjustment (WPA) to reflect water supply costs.

Starting with the total class $ per HCF rate, subtract the per HCF amount of all the adjustment factors except the WPA to get a base plus WPA rate for each tier.

- The base plus WPA per HCF rate was then further deconstructed by removing the total class base HCF rate to determine the total customer class WPA.
- The base rate and all adjustment factors (except the WPA) per HCF rates were set the same for all class usage.
- WPA rates by tier were then set by spreading the remaining revenue requirement representing the WPA based on the different water supply costs and ETAF guidelines.

This methodology sets rates for each tier based on water supply costs with tier 1 rates generally based on the lowest supply cost over time, LA aqueduct supply, and tier 4 rates based on the highest reasonable supply cost, recycled water. The components of the tiers, with rates representing the originally developed FY 2015-16 rates for each tier, are provided in Figure 7.

Figure 7: FY 2015-16 Originally Developed Single-Dwelling Unit Residential Customer Tier Rate Components



	Tier 1 Total: 4.40/HCF	Tier 2 Total: 4.75/HCF	Tier 3 Total: 5.82/HCF	Tier 4 Total: 7.00/HCF
WPA $/HCF	$0.40	$0.75	$1.82	$3.00
Adjustment Factor $/HCF	$3.00	$3.00	$3.00	$3.00
Base $/HCF	$1.00	$1.00	$1.00	$1.00

1.1.5 Single-Dwelling Unit Residential Customer Proposed Rates

Single-Dwelling Unit Residential rates for the five-year rate action were originally developed through the process outlined above to recover the revenue requirement while recognizing the increasing cost of water supply at higher levels of usage. The original resulting rates for FY 2015-16 aligned to the following cost principles.

- Tier 1 rates were below the average overall customer class rates to recognize the most efficient use of water and recognize the necessity of basic (largely indoor) water use.
- Tier 2 rates approximated the average customer class rate, reflecting the average customer class cost of service (generally based on lower costs of water sources such as LA Aqueduct supply).
- Tier 3 rates were above the average overall customer class cost recognizing the increasing cost of supply, which encourages conservation.

- Tier 4 rates were close to the marginal cost of water supply (recycled water).

The difference between the tier 2 rate and the tier 4 rate was approximately equal to the difference between the average water supply cost and the long run marginal cost of recycled water. In total, the proposed rates were set to ensure recovery of the total revenue requirement. The originally developed rates for the five-year rate action based on the then current financial plan are shown in Figure 8.

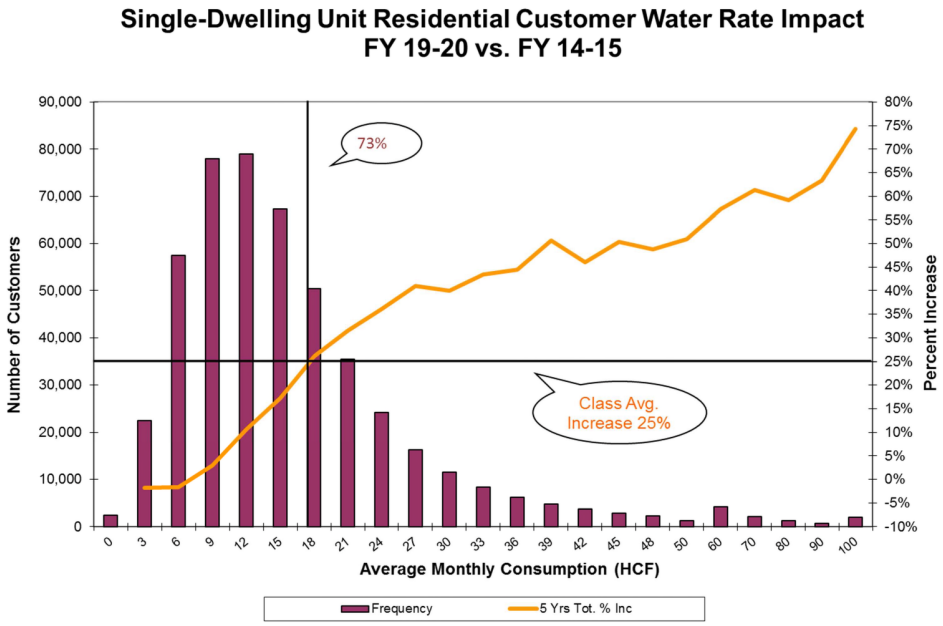
Figure 8: Originally Developed Single-Dwelling Unit Residential Rates

	Current	Originally Developed				
Fiscal Year	**FY 14-15**	**FY 15-16**	**FY 16-17**	**FY 17-18**	**FY 18-19**	**FY 19-20**
Tier 1	$ 4.96	$ 4.40	$ 4.60	$ 4.85	$ 4.98	$ 5.12
Tier 2	$ 5.90	$ 4.75	$ 5.15	$ 5.67	$ 6.09	$ 6.49
Tier 3		$ 5.82	$ 6.54	$ 7.70	$ 8.14	$ 8.49
Tier 4		$ 7.00	$ 10.00	$ 10.00	$ 10.00	$ 10.00

By following this process and the ETAF guidelines, the originally developed rates for tiers 1 and 2 were set at or below the current tier 1 rate; therefore, the majority (almost 70%) of customers saw no increase as a result of the restructuring in FY 2015-16. Most of the rate increase was focused on the higher levels of usage (tiers 3 and 4), where the most opportunity for conservation exists. These characteristics of the originally developed rates remain largely the same with the final proposed rates.

By assigning significant portions of the revenue requirement to heavy users, 73% of customers would see an increase below the class average over the next five years, as shown in Figure 9.

Figure 9: Originally Developed Single-Dwelling Unit Residential Customer Water Rate Impact[4]

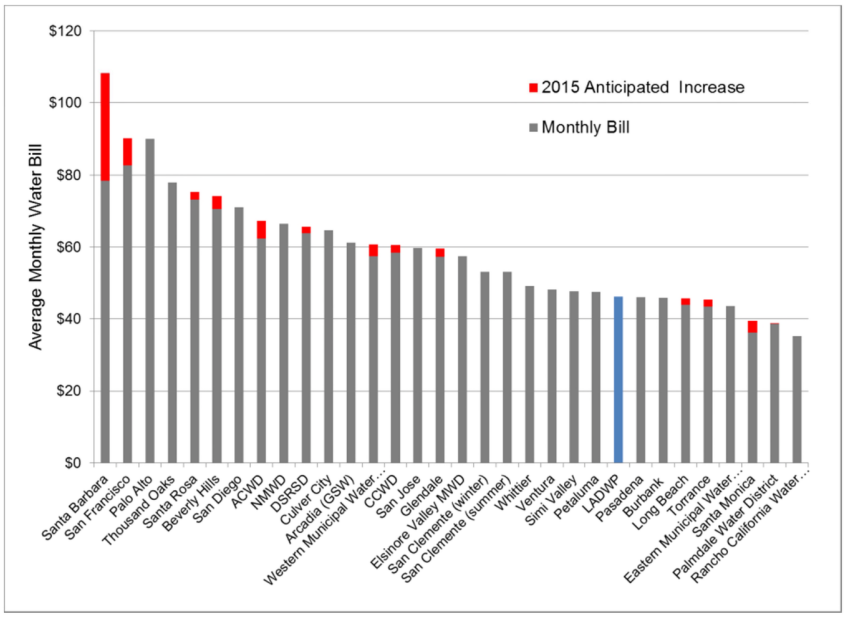


1.1.6 Single-Dwelling Unit Residential Customer Comparative Rate Analysis

LADWP's typical Single-Dwelling Unit Residential bills (based on 12 HCF of monthly usage) for proposed FY 2015-16 were originally developed to remain competitive with estimated bills of other California water utilities, as reflected in Figure 10.

[4] "Average Monthly Consumption" on x-axis changes scale past 50 HCF.

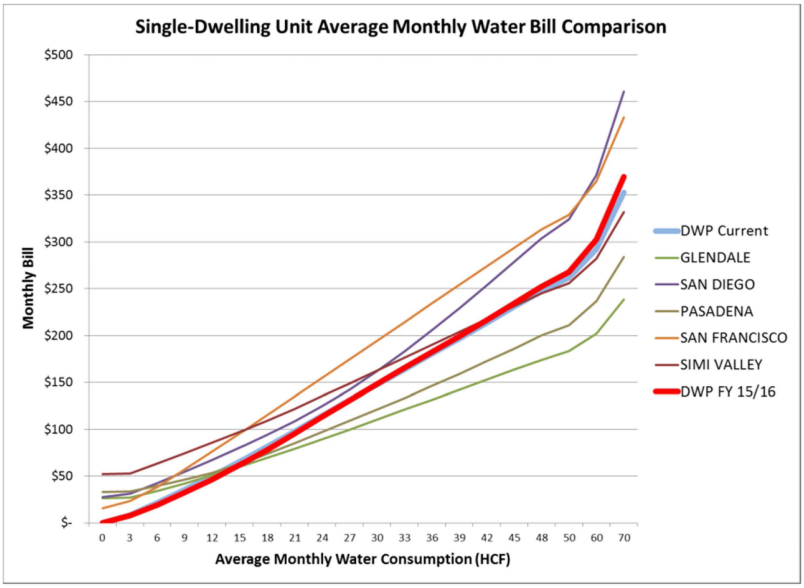
Figure 10: Single-Dwelling Unit Residential Customer Typical Bill Comparison Analysis (Estimated)[5]



LADWP's originally developed rates and customer bills for FY 2015-16 compared favorably to other major California utilities, especially at low usage levels that represent 50% or more of the Department's customers. Increasing rates for higher levels of usage incentivizes conservation where the most opportunity exists; however, LADWP rates would remain less than the rates of other large California cities based on rate increases announced for these cities, as shown in Figure 11. LADWP's proposed rates would also result in typical bills lower than other major California cities.

[5] Bill comparisons for utilities with water budgets were based on medium temperature zone, low season, lot size < 7,500 sqft, three people per household, January month, 1,500 sqft irrigable land and lowest pumping zone charge where applicable.

Figure 11: Single-Dwelling Unit Residential Customer Bill Comparisons for Major California Cities at Different Usage Levels Based on Originally Developed Rates[6]



In summary, the Department's originally developed Single-Dwelling Unit Residential rates for the next five years were designed to achieve the following objectives:

- Maintain competitiveness with other major California water utilities for low usage customers;
- Reduce consumption, especially from high usage customers, consistent with LADWP's conservation goals;
- Reduce the number of water budget determining factors;
- Provide a reasonable transition from two to four tiers;
- Align tier rates with water supply costs;
- Recover costs using adjustment factors tied to actual costs incurred; and
- Ensure full recovery of revenue requirement while protecting customers from over or under-recovery through decoupling.

These objectives continue to be met by the final proposed rates.

1.2 MULTI-DWELLING UNIT RESIDENTIAL (SCHEDULE B)

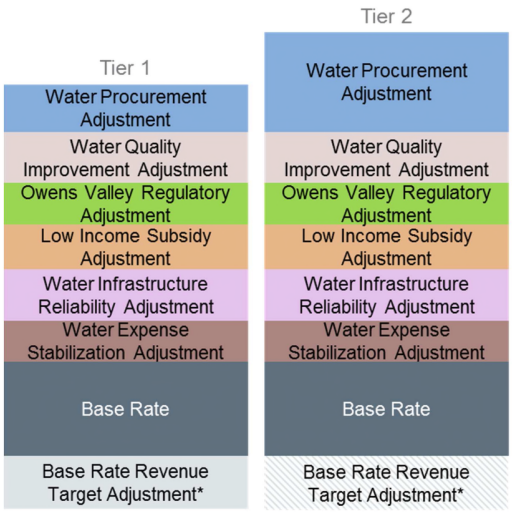
To meet the Mayor's 20% conservation objective, Multi-Dwelling Unit Residential customers must also reduce consumption. Therefore, the originally developed rates for Schedule B were

[6] "Average Monthly Water Consumption" on x-axis changes scale past 50 HCF.

established to provide incentives for customers, especially higher users, to significantly reduce consumption.

The originally developed Schedule B rate structure was similar to Schedule A with the same adjustment factors and amounts as for Single-Dwelling Unit Residential customers with the exception of the WPA and BRRTA. However, a two-tier structure was maintained. The originally developed overall rate structure for the Multi-Dwelling Unit Residential customer class is shown in Figure 12.

Figure 12: Originally Developed Multi-Dwelling Unit Residential Rate Structure



* Base Rate Revenue Target Adjustment (BRRTA) could be positive (under-collection) or negative (over-collection); to encourage conservation; this adjustment would be applied only to tier 1 unless the resulting tier 1 rate equaled or exceeded the tier 2 rate, in which case the BRRTA would also apply to tier 2.

Note: For simplification the Water Security Adjustment is consolidated with the Water Quality Improvement Adjustment (or base rates depending on the cost component).

The Multi-Dwelling Unit Residential customer class rate structure included the same BRRTA decoupling mechanism as for Single-Dwelling Unit Residential customers to ensure recovery of base rate revenues as defined by the financial plan but also protect customers from over-recovery by returning excess revenues to customers. Similarly, to send the strongest conservation signals, the BRRTA was applied only to tier 1 unless the resulting tier 1 rate equaled or exceeded the tier 2 rate, in which case the BRRTA would also apply to tier 2.

1.2.1 Multi-Dwelling Unit Residential Water Budgets

Water budgets were designed based on the characteristics of a multifamily environment while still providing incentives for additional conservation. The major changes for the originally developed rate design included the following items designed to help relieve the pressure of shortage year allotments on customers.

- Set the base period (FY 2014-15) allotment for the high season (summer) usage at the highest of 105% of actual prior winter (December – March) usage or 105% of the current recorded tier 1 allotment upon the effective date of the new ordinance.
- For FY 2015-16, reduce usage to the highest of 93% of the base period (FY 2014-15) usage or 93% of the current recorded tier 1 allotment upon the effective date of the new ordinance.
- For FY 2016-17, reduce usage to the highest of 88% of the base period (FY 2014-15) usage or 88% of the current recorded tier 1 allotment upon the effective date of the new ordinance.
- Establish a 24 HCF per month minimum allotment in line with the current shortage year minimum allotment level.
- Eliminate shortage year rates. As aforementioned, the new allotments are based on the shortage year concepts in light of the continued drought.
- Modify the high season to be consistent with power rates (June – September). Aligning the seasons for water and power rates will reduce the number of changes customers see on their bills and make the billing and customer service processes more efficient over time.

Figure 13 outlines the originally developed water budget structure compared to the current approach. The changes were designed to tighten allotments, especially for higher usage levels.

Figure 13: Originally Developed Multi-Dwelling Unit Residential Water Budget Proposal

	Current Approach	Originally Developed Approach
Tier 1 Allotment	• 97.75% of the highest average winter water use (Dec-Mar) for the three years prior to the shortage year (2007-09) • Applies year-round (no high/low season) • 28 HCF per month minimum allotment	• Highest of 105% of the current recorded allotment established upon the effective date of the new ordinance or 105% of the average winter (December 2014-March 2015) usage • Reduced to highest of 93% of the recorded allotment established upon the effective date of the new ordinance or 93% of the average winter (December 2014-March 2015) usage in FY 2015-16 • Highest of 88% of the recorded allotment established upon the effective date of the new ordinance or 88% of the preceding average winter (December 2014-March 2015) usage in FY 2016-17 through FY 2019-20 • 24 HCF per month minimum allotment • Applies year-round (no high/low season)
Seasons	High season: June 1 to October 31	High season: June 1 to September 30 (consistent with power)[7]
Shortage	Provides for a reduction in tier 1 allotments in shortage years	• Eliminate shortage year rates

[7] Based on months when usage occurs; may be billed in later months depending on billing and meter read cycles.

	Current Approach	Originally Developed Approach
Years	("shortage year rates")	• Decoupling ensures financial stability during drought periods

LADWP recognizes that some Schedule B customers have been successful in conserving water usage and therefore have fewer opportunities to further reduce usage compared to other Schedule B customers. If a Schedule B customer can demonstrate with verification by the Department that all possible water conservation measures have been implemented[8], the customer's first tier allotment shall remain fixed at the allocation level established upon the date of verification.

1.2.2 Multi-Dwelling Unit Residential Tier Structure and Rates

Proposed tier thresholds were generally set based on water use requirements and water supply costs to encourage water conservation; the major differentiating amount between tier rates were water supply costs.

1.2.3 Rate Development Process

Similar to Single-Dwelling Unit Residential customer rates, originally developed Multi-Dwelling Unit Residential customer rates for each tier represented the total of base rates and all adjustment factors. The base rate component and all adjustment factors (except the WPA and BRRTA) are set the same for both of the tiers on a volumetric basis using the following process.

- Starting with the total class HCF rate, subtract the per HCF amount of all the adjustment factors except the WPA to get a base plus WPA rate for each tier.
- The base plus WPA HCF rate was then further deconstructed by removing the total class base HCF rate to determine the total customer class WPA.
- The base rate and all adjustment factors (except the WPA) per HCF rates were set the same for all class usage regardless of tier.
- The WPA was higher for tier 2 to reflect the higher cost of water supply as usage increases.

This methodology set rates for each tier based on water supply costs. Tier 1 rates were generally based on the average supply cost and tier 2 rates were set closer to the marginal cost of water (recycled water). Therefore, the originally developed rate structure provided consistency across both tiers with the main difference between tier prices being the incremental cost of supply reflected in the WPA factor.

The decoupling mechanism, BRRTA factor, for the multi-dwelling unit residential customer class was calculated following the same process as for Single-Dwelling Unit Residential customers.

[8] Specific requirements for verification will be developed by LADWP and approved by the Board.

However, the Multi-Dwelling Unit Residential BRRTA reflected the over/under-collection for this specific customer class. In addition, to encourage conservation within this customer class, the BRRTA was applied only to tier 1, unless the resulting tier 1 rate exceeds the tier 2 rate, in which case the BRRTA will be applied to both tiers 1 and 2.

1.2.4 Multi-Dwelling Unit Residential Proposed Rates

The originally developed Multi-Dwelling Unit Residential rates for the five-year rate action were established through the process outlined above to recover the revenue requirement while recognizing the increasing cost of water supply at higher levels of usage. The resulting rates for FY 2015-16 aligned to the following cost principles.

- To help provide incentives for conservation, while minimizing the impact on low usage customers, tier 1 rates were set close to the Schedule B customer class average.
- Tier 2 rates were set approximately 30% above tier 1 rates to reflect supply marginal cost differences and balance conservation incentives with recognition that not all tier 2 usage is always inefficient for this customer class.

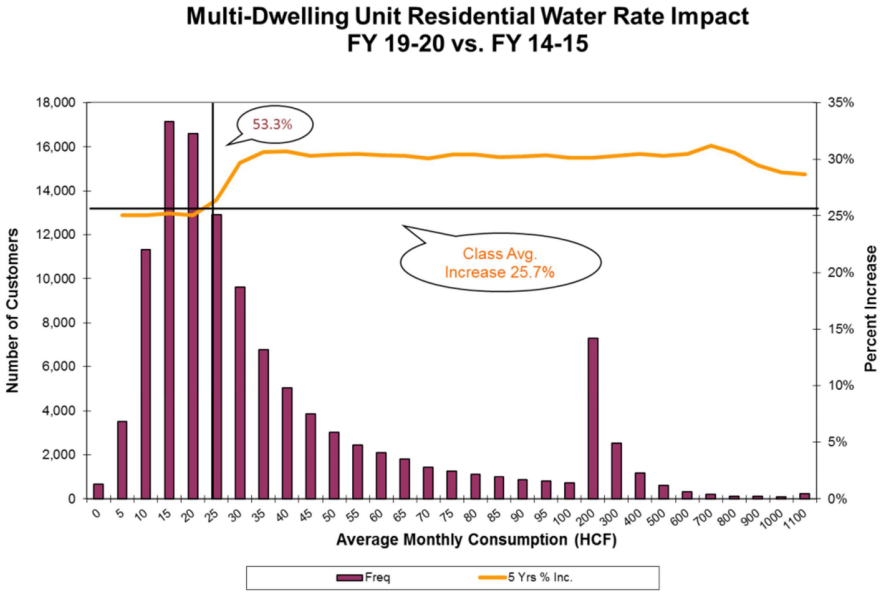
The difference between the originally developed tier 1 and tier 2 rates was approximately the difference between the average water supply cost and the long run marginal cost of recycled water. In total, the originally developed rates were set to ensure recovery of the total revenue requirement. The originally developed rates for the five-year rate action based on the then current financial plan are shown in Figure 14.

Figure 14: Originally Developed Multi-Dwelling Unit Residential Rates

	Current	Originally Developed				
Fiscal Year	**FY 14-15**	**FY 15-16**	**FY 16-17**	**FY 17-18**	**FY 18-19**	**FY 19-20**
Tier 1	$4.97	$4.93	$5.22	$5.64	$5.93	$6.22
Tier 2	$5.90	$6.44	$6.80	$7.31	$7.71	$8.07

By assigning significant portions of the higher revenue requirement to heavy users, over 50% of customers would have seen an increase below the class average over the next five years, as shown in Figure 15.

Figure 15: Originally Developed Multi-Dwelling Unit Residential Customer Water Rate Impact[9]



Similar to Schedule A rates, Schedule B rates encourage conservation by assigning significant portions of the higher revenue requirement to heavy users commensurate with the above-average burden they place on the system.

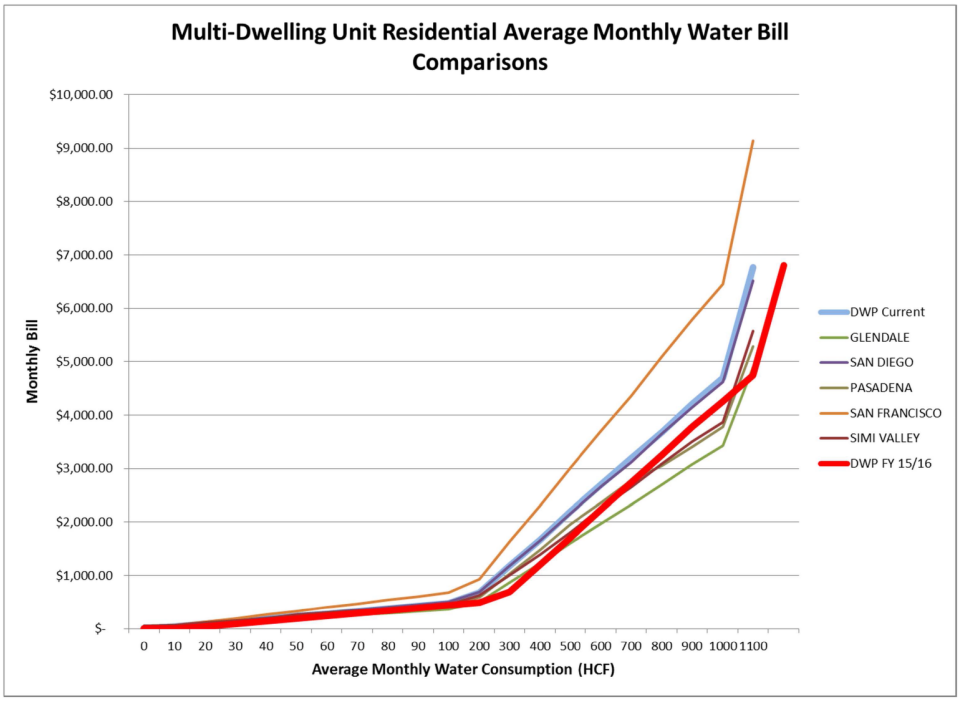
Given the nature of Multi-Dwelling Unit Residential customers, rate impacts were much flatter than Single-Dwelling Unit Residential customers. The highest average annual percentage increase over the next five years for any customer in this class was less than 6.3%.

1.2.5 Multi-Dwelling Unit Residential Comparative Rate Analysis

LADWP's originally developed rates for FY 2015-16 compared favorably with other utilities' rates, especially at usage levels up to 100 HCF (representing almost 90% of customers). Increasing rates for higher levels of usage incentivizes conservation where the most opportunity exists. However, LADWP's originally developed rates were still comparable to other large California cities based on rate increases announced for these cities, as shown in Figure 16.

[9] "Average Monthly Consumption" on x-axis changes scale past 100 HCF.

Figure 16: Multi-Dwelling Unit Residential Bill Comparisons for Major California Cities at Different Usage Levels Based on Originally Developed Rates[10]



The Department's originally developed Multi-Dwelling Unit Residential rates for the next five years were designed to achieve the following objectives:

- Maintain competitiveness with other major California water utilities for low usage customers;
- Reduce consumption, especially from high usage customers, consistent with LADWP's conservation goals;
- Align tier rates with water supply costs;
- Recover costs using adjustment factors tied to actual costs incurred; and
- Ensure full recovery of revenue requirement while protecting customers from over- (or under-) recovery through decoupling.

These objectives continue to be met by the final proposed rates.

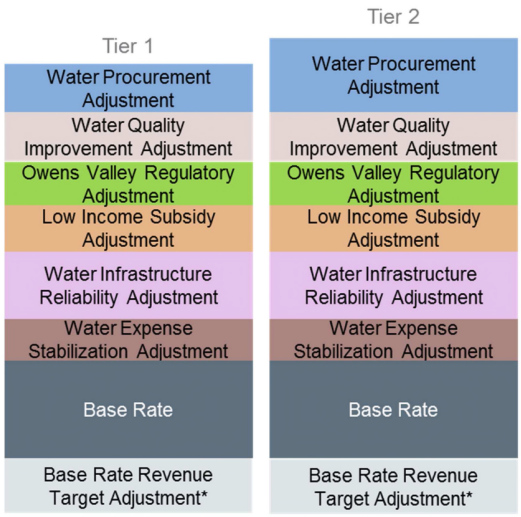
[10] "Average Monthly Water Consumption" on x-axis changes scale past 100 HCF.

1.3 COMMERICAL, INDUSTRIAL, GOVERNMENTAL AND TEMPORARY CONSTRUCTION CUSTOMERS (SCHEDULE C)

LADWP originally developed rates for Schedule C customers that were based on the premise that Commercial, Industrial, Governmental and Temporary Construction customers have less discretionary water uses than residential customers and are, therefore, inherently more efficient water users and have fewer opportunities to conserve. Moreover, Schedule C customers are an important economic development engine for the Los Angeles region. Therefore, rates for this class must not be designed in a manner that discourages expansion by using price signals that are more appropriate for other customer classes.

LADWP originally developed a Schedule C rate structure similar to Schedule B with the same adjustment factors. Rate amounts for base rates and adjustment factors were also the same, with the exception of the WPA. In addition, a two-tier structure was maintained. The originally developed overall rate structure for the Commercial, Industrial, Governmental and Temporary Construction customer class is shown in Figure 17. The rate structure was changed to be consistent for both tiers with the main difference between tier prices being the incremental cost of supply reflected in the WPA.

Figure 17: Originally Proposed Commercial, Industrial Governmental and Temporary Construction Customer Proposed Rate Structure



* Base Rate Revenue Target Adjustment (BRRTA) could be positive (under-collection) or negative (over-collection).

Note: For simplification, the Water Security Adjustment is consolidated with the Water Quality Improvement Adjustment (or base rates depending on the cost component).

The Commercial, Industrial, Governmental and Temporary Construction customer class rate structure would also include the same decoupling mechanism as the Multi-Dwelling Unit Residential rate structure, the BRRTA. The BRRTA would ensure recovery of base rate revenues as defined by the financial plan and also protect customers from over-recovery by returning excess revenues to customers. However, for Schedule C, the BRRTA rate would always apply to both tiers 1 and 2.

1.3.1 Commercial, Industrial, Governmental and Temporary Construction Customer Water Budgets

The originally developed tier 1 allotments for the low season would increase to offset the impact of recent shortage year rates and recognize the characteristics of this customer class, including its limited ability to contribute to conservation. Allotments would regularly be higher in the summer. These steps were designed to avoid penalizing seasonal fluctuations in business activity, which were not a discretionary form of less efficient water use.

The major originally developed changes included the following items.

- Adjusted the low and high season water budgets to relieve the pressure imposed on customers by the shortage year allotments. Currently, year-round tier 1 allotments are based on 97.75% of the highest average winter water use (December-March) for the three years prior to the shortage year (2007-09).
  - The low season allotment in the first year (FY 2015-16) was set at the highest of either 105% of actual preceding winter (December – March) usage or 105% of the current recorded tier 1 allotment upon the effective date of the ordinance.
  - The high season allotment was set at the highest of either 115% of actual preceding winter (December – March) usage or 115% of current recorded tier 1 allotment upon the effective date of the ordinance.

  The allotment benchmark was based on each customer's actual usage, so the customer would have more control.
- Eliminated shortage year rates. As discussed above, the new allotments were based on the shortage year concepts in light of the continued drought.
- Modified the high season to be consistent with power rates (June – September). Aligning the seasons for water and power rates would reduce the number of changes customers see on their bills and make the billing and customer service processes more efficient over time.

Figure 18 outlines the originally developed water budget structure compared to the current approach. The changes should relieve customers from the burden imposed by the shortage year allotments and facilitate expansion of jobs and facilities to help the local economy.

Figure 18: Originally Developed Commercial, Industrial, Governmental and Temporary Construction Customer Water Budget Proposal

	Current Approach	Originally Developed Approach
Tier 1 Allotment	• 97.75% of the highest average winter water use (Dec-Mar) for the three years prior to the shortage year (2007-09) • Applies year-round	• Low season: Highest of 105% of the current recorded tier 1 allotment established upon the effective date of the ordinance or 105% of the actual preceding year winter (December 2014–March 2015) usage • High season: Highest of 115% of the current recorded tier 1 allotment established upon the effective date of the ordinance or 115% of actual preceding year winter (December 2014–March 2015) usage
Seasons	High season: June 1 to October 31	High season: June 1 to September 30, to be consistent with power[11]
Shortage Years	Provides for a reduction in tier 1 allotments in shortage years ("shortage year rates")	• Eliminate shortage year rates • Decoupling ensures financial stability during drought periods

1.3.2 Commercial, Industrial, Governmental and Temporary Construction Customer Tier Structure and Rates

Similar to other customer classes, the originally developed tier thresholds were generally set based on water use requirements and water supply costs to encourage water conservation; the major differentiating amount between tier rates was water supply costs.

1.3.3 Rate Development Process

Proposed Commercial, Industrial, Governmental and Temporary Construction customer rates for each tier represented the total of base rates and all adjustment factors. Customers would see only the final tier rates on the bill; the calculations of the adjustment factors were based on accounting records.

The originally developed structure and rates for the base and all adjustment factors, except the WPA, were the same for both tiers on a volumetric basis using the following process, which was similar to the approach used for setting Multi-Dwelling Unit Residential rates.

- Starting with the total class HCF rate, subtract the per HCF amount of all the adjustment factors except the WPA to get a base plus WPA rate for each tier.
- The base plus WPA HCF rate was then further deconstructed by removing the total class base HCF rate to determine the total customer class WPA.
- The base rate and all adjustment factors (except the WPA) per HCF rates were set the same for all class usage regardless of tier.

[11] Based on months when usage occurs; may be billed in later months depending on billing and meter read cycles.

- The WPA was higher for tier 2 to reflect the higher cost of water supply as usage increases.

This methodology set rates for each tier based largely on water supply costs. Therefore, the rate structure was changed to be largely consistent for both tiers with the main difference between tier prices being the incremental cost of supply reflected in the WPA factor.

The decoupling mechanism, BRRTA factor, for the Commercial, Industrial, Governmental and Temporary Construction customer class was calculated following the same process as for residential customers. However, the same BRRTA was applied to both tiers 1 and 2.

1.3.4 Commercial, Industrial, Governmental and Temporary Construction Customer Proposed Rates

Commercial, Industrial, Governmental and Temporary Construction customer rates for the five-year rate action were originally developed through the process outlined above to recover the revenue requirement while recognizing the increasing cost of water supply at higher levels of usage. The resulting rates for FY 2015-16 aligned to the following cost principles.

- Tier 1 rates were set at approximately 95% of the average cost ($/HCF) to balance conservation-pricing and economic development and stability.
- Tier 2 rates were set approximately 30% above tier 1 to reflect supply cost differences and balance conservation incentives with recognition that not all tier 2 usage is always inefficient.

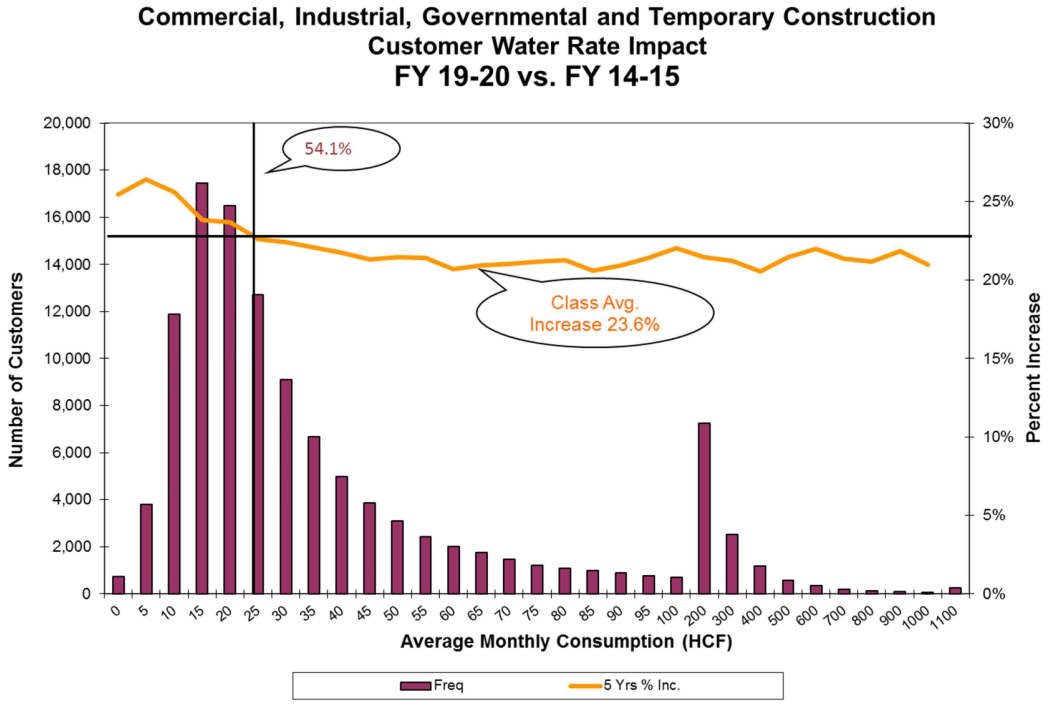
The difference between the tier 1 rate and the tier 2 rate was approximately the difference between the average water supply cost and the long run marginal cost of recycled water. However, unlike residential customers, rate increases were balanced between tiers 1 and 2 to encourage business development and continue conservation incentives. In total, the proposed rates were set to ensure recovery of the total revenue requirement. The originally developed rates for the next five years based on the then current financial plan are shown in Figure 19.

Figure 19: Originally Developed Commercial, Industrial Governmental and Temporary Construction Customer Rates

	Current	Originally Developed				
Fiscal Year	**FY 14-15**	**FY 15-16**	**FY 16-17**	**FY 17-18**	**FY 18-19**	**FY 19-20**
Tier 1	$5.06	$4.76	$5.06	$5.46	$5.74	$6.03
Tier 2	$5.90	$6.20	$6.58	$7.11	$7.46	$7.83

Rates were still higher for tier 2, but the difference between the highest and lowest tier was less than for residential customers. The increase for approximately half of customers was less than the class average, as shown in Figure 20.

Figure 20: Originally Developed Commercial, Industrial, Governmental and Temporary Construction Customer Water Rate Impact[12]

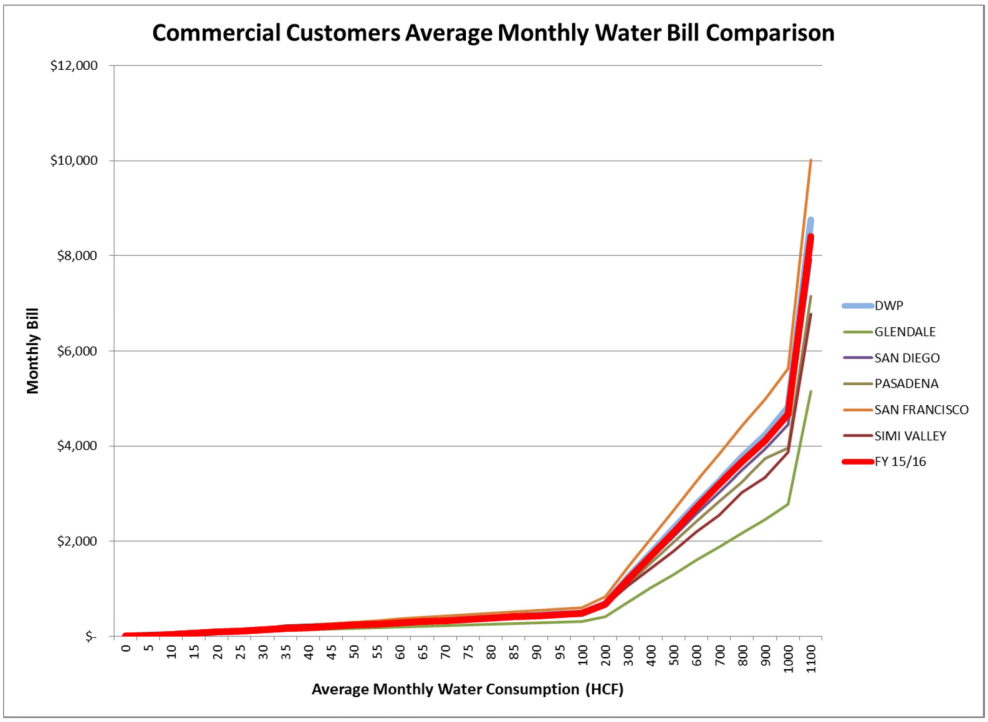


1.3.5 Commercial, Industrial, Governmental and Temporary Construction Customer Comparative Rate Analysis

LADWP's originally developed rates and customer bills for FY 2015-16 compared favorably, especially at usage levels up to around 200 HCF that represented over 95% of customers. However, even at the highest levels of usage, LADWP rates were still comparable to other large California cities based on rate increases currently announced for these cities, as shown in Figure 21.

[12] "Average Monthly Consumption" on x-axis changes scale past 100 HCF.

Figure 21: Commercial, Industrial, Governmental and Temporary Construction Customer Bill Comparisons for Major California Cities at Different Usage Levels Based on Originally Developed Rates[13]



In summary, the Department's proposed Commercial, Industrial, Governmental and Temporary Construction customer rates for the next five years were designed to achieve the following objectives:

- Maintain competitiveness with other major California water utilities for most Schedule C customers;
- Balance conservation and business development;
- Align tier rates with water supply costs;
- Recover costs from adjustment factors tied to actual costs; and
- Ensure full recovery of revenue requirement while protecting customers from over or under-recovery through decoupling.

These objectives continue to be met by the final proposed rates.

[13] "Average Monthly Water Consumption" on x-axis changes scale past 100 HCF.

B WATER RATE STRUCTURE PROPOSED ADJUSTMENT FACTORS

This appendix outlines the new proposed adjustment factors as compared to the current approach.

	Current Approach	Proposed Approach
Water Procurement Adjustment (WPA) – Purchased Water (PW), Conservation, Water reclamation (WR)	• 5% adder for financial stability • Adjusted quarterly • $0.06 quarterly cap for conservation /water reclamation (WR) • Conservation/WR capital can be 100% cash or debt funded	• Recovery of costs associated with costs of supply will be replaced by the Water Supply Cost Adjustment factor
Water Supply Cost Adjustment Factor (WSCA)	• Costs associated with purchased water, demand side management and water reclamation portion of supply costs are collected through WPA • No current adjustment factor that specifically aligns budget, supply costs and tier differentials	• Costs for all sources of water supply will be recovered through the WSCA • Tier price differentials for all customer classes to be based on supply costs, according to the amount of supply required to meet the consumption of each tier, starting with the least expensive source • Adjust semiannually • Include bad debt and conservation costs • Include uncollectible expense in balancing account
Water Quality Improvement Adjustment (WQIA)	• 5% adder for financial stability • Adjusted quarterly • $0.85 quarterly cap for WQIA, conservation, WR and supply	• Remove 5% adder • Remove $0.85 quarterly cap • Remove the transfer of 95% over-collection from OVRA • Include uncollectible expense in balancing account • Adjust semiannually
Water Security Adjustment (WSA)	• 5% adder for financial stability • Adjusted quarterly	• Eliminate factor and move 80% of the costs into the WQIA, with the remainder added to base rates (approximately 80% of the WSA costs are associated with water quality projects)

	Current Approach	Proposed Approach
Owens Valley Regulatory Adjustment (OVRA)	• 5% adder for financial stability • Adjusted quarterly • $0.015 quarterly cap	• Remove 5% adder • Adjust semiannually • Remove $0.015 quarterly cap • Include uncollectible expense in balancing account • Include Owens Valley Master Plan and dust mitigation capital • Amortize $34M remaining over-collection balance into the factor over one year to lower the factor initially
Low Income Subsidy Adjustment (LISA)	• 5% adder for financial stability • Adjusted quarterly • $0.015 quarterly cap	• Remove 5% adder • Adjust semiannually • Increase cap to $0.030 to reflect semiannual adjustment
Base Rate Revenue Target Adjustment (BRRTA)	• Decoupling mechanism (Water Revenue Adjustment factor) to recover under-collection of base rate revenue in total for all customer classes • Water Revenue Adjustment (WRA) factor adjusted annually, when invoked	• Recover under-collection and credit over-collection back to customers • Three separate balancing accounts – Single-Dwelling Unit Residential, Multi-Dwelling Unit Residential and Other customer groups • Adjust annually (January) • Include uncollectible expense in balancing account
Water Infrastructure Reliability Adjustment (WIRA)	No current adjustment factor to specifically recover cost of infrastructure reliability investment (program cost included in base rates)	• Cash funded/debt service of water infrastructure capital programs • Adjust annually (July) • Include uncollectible expense in balancing account
Water Expense Stabilization Adjustment (WESA)	No current factor (expense stabilization included in OVRA)	• Include current $33M Water System Expense Stabilization Fund balance • Factor established to build anticipated $50M balance by end of first year (FY 2015-16) and maintain balance • Provides cash to meet the 150 days of cash on hand metric • Adjust annually (July) • Include uncollectible expense in balancing account

C WATER SUPPLY COST BY SOURCE DETAIL

This appendix provides the data and calculations for the Water Supply Cost Adjustment (WSCA) factor for each year of the rate action period.

Figure 1 outlines the unit cost of each element of the WSCA and the amount and percentage for each source of water supply for the five-year rate action period based on Financial Plan Case No. 33 used to develop the revenue requirement presented in Chapter 3, Rate Drivers. Separately identifying all water supply costs for the WSCA for rate design purposes required minor modifications to the classification of revenue from the original Financial Plan Case No. 33 revenue requirement as some of the costs captured in the WSCA were previously part of base rates.[1] However, since the impact of the new WSCA on the revenue requirement is immaterial, LADWP has not restated the revenue requirement at this time. The WSCA includes the cost of the source water supply plus a proportionate[2] amount of the costs of conservation and bad debt and the over or under-recovery based on the volume for the specific source and the initial over or under-recovery accounts for the Water Procurement Adjustment from prior fiscal years.

[1] FY 2015-16 revenue is reduced by $3.4 million due to certain water reclamation projects that will no longer be securitized as a result of including these projects in the WSCA. Over the five-year period, the cumulative reduction in revenue is $2 million, which is very immaterial when compared to cumulative revenue of over $5 billion over the five-year period. These changes are reflected in Financial Plan Case Number 77a.

[2] The proportion is determined by the percentage of total water supply budgeted to be obtained from each source.

Figure 1: Unit Costs for Water Supply Components and Volumes for Each Source of Water Supply

		Current	Forecast				
		FY 2014-15	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Unit Cost ($/HCF)	Groundwater Pumping	$1.541	$3.777	$3.907	$4.026	$3.620	$1.315
	LA Aqueduct	$1.468	$0.553	$0.499	$0.489	$0.488	$0.515
	MWD	$1.823	$2.005	$2.115	$2.264	$2.392	$2.787
	Recycled Water[3]	$19.021	$1.846	$2.320	$2.474	$4.066	$4.787
	Conservation	$0.162	$0.096	$0.102	$0.106	$0.061	$0.061
	Bad Debt Expense		$0.018	$0.016	$0.016	$0.016	$0.016
	(Over)Under Recovery		$0.245	$0.069	$0.028	$0.017	$0.036
Supply (AF)	Groundwater Pumping	67,200	28,708	28,708	28,708	32,711	92,109
	LA Aqueduct	91,070	249,689	256,369	263,049	269,730	261,077
	MWD	374,478	238,942	215,014	191,354	179,356	135,150
	Conservation & Recycled Water	10,368	10,505	10,643	15,311	18,713	19,063
	Total Supply	**543,116**	**527,844**	**510,733**	**498,421**	**500,510**	**507,398**
Volume (%)	Groundwater Pumping	12%	5%	6%	6%	7%	18%
	LA Aqueduct	17%	47%	50%	53%	54%	51%
	MWD	69%	45%	42%	38%	36%	27%
	Conservation & Recycled Water	2%	2%	2%	3%	4%	4%
	Total Supply	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

[3] For the purposed of the WSCA, Stormwater costs are included in Recycled Water

Figure 2, Figure 3, Figure 4, Figure 5, and Figure 6 provide the applicable O&M, capital depreciation, debt cost and other budgeted costs associated with each source of water supply.

Figure 2: Cost of In-City Groundwater Pumping

	Current	Forecast				
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Pumping[4]						
O&M	$39,323,000	$41,443,000	$43,061,400	$44,551,500	$45,780,100	$46,964,900
Depreciation	$2,704,353	$2,704,353	$2,704,353	$2,704,353	$2,704,353	$2,704,353
Return on Investment	$3,089,716	$3,089,716	$3,089,716	$3,089,716	$3,089,716	$3,089,716
Total In-City Pumping	$45,117,069	$47,237,069	$48,855,469	$50,345,569	$51,574,169	$52,758,969
Total Local Groundwater Production (AF)	70,000	29,904	29,904	29,904	34,074	95,947
Less: Loss (AF)	2,800	1,196	1,196	1,196	1,363	3,838
Net Local Ground Water Production (AF)	67,200	28,708	28,708	28,708	32,711	92,109
Pumping Unit Cost per HCF (Cost per AF / 435.6)	**$ 1.541**	**$ 3.777**	**$ 3.907**	**$ 4.026**	**$ 3.620**	**$ 1.315**

[4] Pumping costs included for groundwater are the pumping costs directly associated with the groundwater source of supply. Pumping costs required for the distribution system are not included.

Figure 3: Cost of Los Angeles Aqueduct

	Current	Forecast				
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Los Angeles Aqueduct						
LAA Total O&M*	$33,137,000	$39,803,200	$38,804,600	$39,617,900	$41,821,000	$43,843,200
Depreciation	12,180,941	12,180,941	12,180,941	12,180,941	12,180,941	12,180,941
Property Taxes	12,413,602	12,413,602	12,413,602	12,413,602	12,413,602	12,413,602
Total Operating Expense	$57,731,542	$64,397,742	$63,399,142	$64,212,442	$66,415,542	$68,437,742
Less: Other Income (Negative) & Expense (Positive), Net	($3,602,048)	($4,102,048)	($4,602,048)	($5,102,048)	($5,602,048)	($6,102,048)
Less: Water for Hydraulic Plant (G/L 7341000)	($5,630,000)	($9,882,000)	($12,741,000)	($12,854,000)	($13,151,000)	($13,476,000)
Less: Revenue from Owens Valley	($21,949)	($21,949)	($21,949)	($21,949)	($21,949)	($21,949)
Add: Return on Investment	$9,744,614	$9,744,614	$9,744,614	$9,744,614	$9,744,614	$9,744,614
Total Cost of Production	$58,222,160	$60,136,360	$55,778,760	$55,979,060	$57,385,160	$58,582,360
Total Aqueduct Production (AF)	94,865	260,093	267,051	274,009	280,968	271,955
Less: Loss (AF)	3,795	10,404	10,682	10,960	11,239	10,878
Net Acre Feet - Aqueduct	91,070	249,689	256,369	263,049	269,730	261,077
Cost per AF ($ per AF)	$639.31	$240.85	$217.57	$212.81	$212.75	$224.39
Cost per HCF (Cost per AF / 435.6)	**$ 1.468**	**$ 0.553**	**$ 0.499**	**$ 0.489**	**$ 0.488**	**$ 0.515**

* LAA Total O&M Expense includes functional items for both source of supply and pumping for the LAA. Those functional items include: Source of Supply – 302-2001 LA Aqueduct Operation North, 302-2005 LA Aqueduct Operation South, 302-2015 LA Aqueduct Maintenance South, 302-2025 LA Aqueduct Maintenance North, 302-2035 Resource Management O&M, 322-2507 Hazardous Substance Mgmt Prgm - Aqueduct (Job 53004 only), 335-3200 Dam Stability Analysis (75% is for Northern Aqueducts), 401-3005 East Sierra Environmental, 409-2023 Southern District Eng & Oper, and Pumping – 311-2009 Groundwater Pump O&M North

Figure 4: Cost of Metropolitan Water District Water

	Current	Forecast				
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
MWD						
Purchased Water Cost	$297,449,641	$208,680,247	$198,097,990	$188,737,998	$186,867,757	$164,052,020
Total Water Volume Purchased from MWD	390,081	248,898	223,973	199,327	186,829	140,781
Less: Loss (AF)	15,603	9,956	8,959	7,973	7,473	5,631
Net Water Purchased from MWD	374,478	238,942	215,014	191,354	179,356	135,150
MWD Unit Cost per AF	$794.306	$873.351	$921.327	$986.331	$1,041.883	$1,213.853
MWD Unit Cost per HCF (Cost per AF / 435.6)	**$1.823**	**$2.005**	**$2.115**	**$2.264**	**$2.392**	**$2.787**

Figure 5: Cost of Conservation

	Current	Forecast				
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Conservation						
Conservation O&M	$16,535,300	$21,363,900	$21,818,800	$22,271,400	$12,830,300	$13,083,800
100% of the Conservation Capital (Actual Only)	$20,510,500					
Total Conservation	$37,045,800	$21,363,900	$21,818,800	$22,271,400	$12,830,300	$13,083,800
Sales (Excluding D&F)	$228,460,958	$222,036,886	$214,838,989	$209,660,206	$210,538,763	$213,436,432
Conservation Unit Cost per HCF (Cost per AF / 435.6)	**$0.162**	**$0.096**	**$0.102**	**$0.106**	**$0.061**	**$0.061**

Figure 6: Cost of Recycled Water[5]

	Current	Forecast				
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Recycled Water						
RW O&M	$9,229,100	$7,843,600	$8,673,200	$8,712,400	$9,091,200	$8,752,400
West Basin Rec. Water Purchases	$582,680	$605,987	$630,226	$655,435	$11,155,700	$11,601,928
100% of the RW Capital (Actual Only)	$76,093,400					
Debt Service of 100% of the RW Capital			$1,450,925	$7,135,739	$12,893,093	$19,398,789
Total Recycled Water	$85,905,180	$8,449,587	$10,754,352	$16,503,574	$33,139,993	$39,753,117
Recycled Water Production (AF)	10,800	10,943	11,086	15,949	19,493	19,857
Less: Loss (AF)	432	438	443	638	780	794
Recycled Water Production (AF)	10,368	10,505	10,643	15,311	18,713	19,063
RW Unit Cost per AF	$8,285.608	$804.318	$1,010.504	$1,077.887	$1,770.935	$2,085.385
RW Unit Cost per HCF (Cost per AF / 435.6)	**$19.021**	**$1.846**	**$2.320**	**$2.474**	**$4.066**	**$4.787**

[5] For the purposed of the WSCA, Stormwater costs are included in Recycled Water