



PROPOSED WA-12 AGRICULTURAL SERVICE RATE SCHEDULE

Public Utilities Department

Board of Public Utilities
August 26, 2019

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BACKGROUND

1. Board appointed Agricultural Water Rates Task Force to provide rate alternatives to WA-3 and WA-9
2. Council froze WA-3 (Irrigation Metered Service) and WA-9 (Grove Preservation Service) for one year
3. Task Force developed rate alternative proposal but no fiscal impact
 - a. Was supported by Board and Council
 - b. Board requested fiscal impact of rate freeze and the rate structure
 - c. City Council directed staff to return with rate proposal, use UCR crop factors, allow adjoining properties to qualify, and create a Task Force to further explore other opportunities

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EVOLUTION OF WA-12 RATE SCHEDULE

1. Task Force recommendations of Water Allocation methodology retained
2. Prop 218 considerations
3. Allocation formula, formula elements, and clarifying language added

WA-12 RATE SCHEDULE – STAFF MODIFICATIONS

1. City of Riverside and contiguous area
2. Added formal tiered rate structure
 - a. Qualifying properties with residences, the Water Allocation is set after the Tier 1 CCF allocation
3. Added language and multiplier for the Surcharge Area Outside of the City

WA-12 RATE SCHEDULE – STAFF MODIFICATIONS

4. Added requirement that customer complete a WA-12 Agricultural Service Application Form
5. Added a requirement for physical, onsite inspections to verify information in the application form
6. Excluded ornamental turf from the definition of pasture.
7. Defined qualifying vines as grape vines and other vining plants included as row crops
8. Defined “livestock” as “animals kept or raised for use other than pleasure”

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WA-12 RATE SCHEDULE – STAFF MODIFICATIONS

9. Allowed parcels smaller than ½ acre to participate in this rate if multiple contiguous parcels have a combined area of one-half acre with Qualifying Agriculture and each contiguous parcel has its own water service
10. Added definitions for:
 - a. Agricultural Water Allocation (AWA)
 - b. Irrigated Area Allocation (IA)
 - c. Crop Factors (Kc)
 - d. Reference Evapotranspiration (ET_o)

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WA-12 RATE SCHEDULE – STAFF MODIFICATIONS

11. Reduced agricultural water allocation for customers with residences that own Gage Canal Company shares or receive non-potable water deliveries from the Gage Canal Company via WA-8 Greenbelt Irrigation Service
 - a. Reduced allocation up to 156 CCF/planted acre/month for planted areas irrigated by Company for those months the Company can provide delivery
12. Added a limit to the rate of \$684,000 of undercollection of costs to comply with Prop 218
13. Required that customers used a forced sprinkler irrigation system instead of a gravity-fed irrigation system.



WA-12 RATE SCHEDULE TIER STRUCTURES

WA-12 (with residence)

Tier 1 – 0 to 9 CCF	Charged equivalent to WA-1A Tier 1
Tier 2 – Water Allocation	Calculated based on ETo, Kc, IA factors
Tier 3 – up to next 26 CCF; > (Tier 1 + Tier 2)	Charged equivalent to WA-1A Tier 2
Tier 4 – All CCF usage; > (Tier 1 + Tier 2 + Tier 3)	Charged equivalent to WA-1A Tier 3

WA-12 (without residence)

Tier 1 – Water Allocation	Calculated based on ETo, Kc, IA factors
Tier 2 – All CCF usage; > Tier 1	Charged equivalent to WA-6



AGRICULTURAL WATER ALLOCATION (AWA) FORMULA

$$AWA = ET_o \times K_c \times IA \times 36.3$$

1. ET_o = Reference Evapotranspiration
2. K_c = Crop Factors
3. IA = Irrigated Area Allocation
4. 36.3 converts inches/month into CCF/month

REFERENCE EVAPOTRANSPIRATION RATE (ET_o)

1. The amount of water required to maintain cool season grass of 4" – 7" tall (reference crop)
2. Varies due to location, wind, humidity and temperature
3. Higher in summer, lower in winter
4. Rolling 15 year monthly average of ET_o
 - a. Using CIMIS station #44 located at UCR
 - b. Average updated annually
 - c. Riverside in CIMIS Zone 6

CROP FACTORS (K_c)

1. Used existing database from Irrigation Training & Research Center (ITRC) at Cal Poly SLO <http://www.itrc.org/etdata/index.html>
2. Four initial K_c factors developed
 - a. 0.45 for immature trees
 - b. 0.53 for row crops and grape vines
 - c. 0.69 for citrus, avocado, fruit/nut, nursery stock
 - d. 0.89 for pasture
3. Staff verified against published data
 - a. UC Co-op Extension; USDA; Food & Agricultural Organization of the United Nations; Mission Resource Conservation District

IRRIGATED AREA (IA)

1. Two approaches of area allocation for qualifying crops:
 - a. Measured planted area allocation for Orchards, row crops, nursery stock, vineyards, pasture
 - b. Fixed area allocation for individually planted trees or grape vines; 400 square feet per tree; 100 square feet per grape vine
2. Verified by physical onsite inspection, parcel map, aerial photos
3. Irrigated Area Allocation (IA) is lesser of the two
4. Excludes buildings, roads, pathways, hardscapes, landscaping, ornamental turf, and fallow areas

EXAMPLE WA-3 CUSTOMER PROPERTY IRRIGATED AREA ALLOCATION



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EXAMPLE WA-3 CUSTOMER WATER ALLOCATION

1. Existing WA-3 customer on 1.32 acre parcel (w/residence)
 - a. Includes 159 avocado, 17 citrus trees, and ornamental landscaping
 - b. Planted area of qualifying agriculture = 0.76 acres, or 33,106 sq ft
 - c. Fixed area for 176 trees at 400 sq ft/tree = 70,400 sq ft, or 1.62 acres
 - d. Lesser area allocation of 0.76 acres used

	CIMIS Station #44 Reference 15 year average ET _n (2004-2018) in inches / month												Annual Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
	2.61	2.92	4.66	5.68	6.42	7.02	7.47	7.17	5.7	4.07	2.89	2.29	
K _c for citrus, avocado, fruit and nut trees, and nursery stock	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
ET _{crop} (CCF/acre/mo)	65.37	73.14	116.72	142.27	160.80	175.83	187.10	179.59	142.77	101.94	72.39	57.36	
Irrigated Area in acres (IA)	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Monthly CCF allocation	50	56	89	108	122	134	142	136	109	77	55	44	1122



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EXAMPLE WA-3 CUSTOMER BILL

1. Existing WA-3 customer on 1.32 acre parcel (w/residence)
 - a. Based on 0.76 acres of irrigated area and July usage of 233 CCF

July Example - 233 Total CCF usage			
WA-12 Tier	Rate	CCF	Charge
Tier 1 – 0 to 9 CCF	\$ 1.19	9	\$ 10.71
Tier 2 – Water Allocation of 142 CCF	\$ 1.19	142	\$ 168.98
Tier 3 – up to next 26 CCF > (Tier 1 + Tier 2)	\$ 1.50	26	\$ 39.00
Tier 4 – All CCF usage > (Tier 1 + Tier 2 + Tier 3)	\$ 3.37	56	\$ 188.72
Customer Charge- 1-inch Meter	\$ 28.69		\$ 28.69
Total prior to taxes and surcharges			\$ 436.10

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WA-3 AND WA-9 CUSTOMER TRANSITION

1. WA-3 closed to new customers May 31, 2003
2. WA-9 will be closed to new customers with Board and City Council approval of WA-12
3. WA-3 and WA-9 transition to WA-12 on January 1, 2020
4. Submit Agricultural Service Application Form
 - a. Must be received before customer can receive a Water Allocation

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WA-3 AND WA-9 CUSTOMER TRANSITION

5. Physical onsite inspection to verify Water Allocation
 - a. Performed within days of receipt of application
6. Six months to comply with WA-12 or transition to WA-1A or WA-6

WA-12 APPLICATION FORM INFORMATION

1. Name, address, APN, parcel size, residence
2. Estimated acreage of planted areas, row crop, pasture, nursery
3. Is there livestock
4. Estimated number and types of trees
5. Does property receive Gage Canal water
6. Are multiple contiguous parcels being farmed

PROP 218 AND PROGRAM LIMIT

1. Current water rate plan established \$684,000 undercollection for current WA-3 and WA-9 customers
 - a. To comply with Prop 218, undercollection was offset with non-rate revenue including interest income
2. Undercollection will decrease for WA-3 and WA-9 customers transitioning to WA-12
3. New customers may apply and be accepted on rate
 - a. Will result in additional undercollection

PROP 218 AND PROGRAM LIMIT

4. Total Program Limit of \$684,000 undercollection for current WA-3, WA-9, and new customers
5. RPU will immediately close rate subject to Board and City Council approval
6. The City Council and the Board may increase the program limit by identifying additional non-rate revenues to subsidize the cost to provide this rate to new customers

RECOMMENDATIONS

That the Board of Public Utilities:

1. Receive the presentation on the proposed WA-12 Agricultural Service water rate schedule;
2. Conceptually approve the proposed WA-12 Agricultural Service water rate schedule, closing WA-9 Grove Preservation Service upon approval of WA-12 Agricultural Service water rate and transitioning existing WA-3 Irrigation Metered Service and WA-9 Grove Preservation Service Customers to the WA-12 Agricultural Service water rate schedule upon the effective date of the WA-12 Agricultural Service water rate schedule; and

RECOMMENDATIONS

3. Direct staff to prepare all documents necessary for public noticing of the proposed WA-12 Agricultural Service water rate schedule, and schedule a public hearing to be held at the October 15, 2019 Board of Public Utilities meeting, followed by final rate recommendations to the City Council.