



JOINT PUBLIC HEARING FOR THE PROPOSED WA-12 AGRICULTURAL SERVICE WATER RATE SCHEDULE

Public Utilities Department

City Council and Board of Public Utilities
October 15, 2019

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BACKGROUND

1. August 26, 2019 - Board conceptually approved the proposed WA-12 Agricultural Service water rate with an irrigation efficiency factor of 85%
2. Board directed staff to issue public noticing for a public hearing on October 15, 2019

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REVISIONS TO WA-12 RATE SCHEDULE SINCE AUGUST 26, 2019 RPU BOARD MEETING

1. Revised allocation formula to include specific irrigation efficiency factor of $(1/.85)$, or 85%
2. Added definition for Irrigation Efficiency (IE)
3. Added clarifying language to Definitions 1. b for properties receiving Gage Canal water

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 tree or crop needs
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 tree or crop needs
Tier 2 – All CCF usage; > Tier 1	Charged equivalent to WA-6

REVISED AGRICULTURAL WATER ALLOCATION (AWA) FORMULA

$$AWA = ET_o \times K_c \times IA \times 36.3 \times (1/IE)$$

1. ET_o = Reference Evapotranspiration
2. K_c = Crop Factors
3. IA = Irrigated Area Allocation
4. 36.3 converts inches/month into CCF/month
5. IE = Irrigation Efficiency factor set at 85%

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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

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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

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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

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IRRIGATION EFFICIENCY FACTOR (IE)

1. Accounts for inefficiencies of different irrigation methods
2. Made up of distribution uniformity, irrigation runoff, deep percolation, water management, evaporative losses
3. 85% suggested to be used in water allocation formula

EXAMPLE WA-3 CUSTOMER PROPERTY IRRIGATED AREA ALLOCATION



EXAMPLE WA-3 CUSTOMER WATER ALLOCATION

Existing WA-3 customer on 1.32 acre parcel (w/residence)

1. Includes 159 avocado, 17 citrus trees, and ornamental landscaping
2. Planted area of qualifying agriculture = 0.76 acres, or 33,106 sq ft
3. Fixed area for 176 trees at 400 sq ft/tree = 70,400 sq ft, or 1.62

	CIMIS Station #44 Reference 15 year average ET _e (2004-2018) in inches / month											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
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
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
Irrigation Efficiency (IE)	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
ET _{crop} (CCF/acre/mo) with IE	77.00	86.00	137.00	167.00	189.00	207.00	220.00	211.00	168.00	120.00	85.00	67.00
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
Monthly CCF allocation	59	65	104	127	144	157	167	160	128	91	65	51

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EXAMPLE WA-3 CUSTOMER BILL

Existing WA-3 customer on 1.32 acre parcel (w/residence)

Based on 0.76 acres of irrigated area and July usage of 233 CCF

July Example - 233 Total CCF usage		With 85% IE	
WA-12 Tier	Rate	CCF	Charge
Tier 1 – 0 to 9 CCF	\$ 1.19	9	\$ 10.71
Tier 2 – Water Allocation in CCF	\$ 1.19	167	\$ 198.73
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	31	\$ 104.47
Customer Charge- 1-inch Meter	\$ 28.69		\$ 28.69
Total prior to taxes and surcharges			\$ 381.60

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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

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

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WA-12 WATER ALLOCATION

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

1. Reduced allocation up to 156 CCF/planted acre/month for planted areas irrigated by Company for those months the Company can provide delivery
2. Reduction based on actual deliveries of Gage water and verified by RPU

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WA-12 APPEAL PROCESS

Follows Section B of Water Rules General Provisions

1. Customer submits appeal to General Manager.
2. GM's decision can be appealed to Water Committee.
3. Committee's decision can be appealed to full RPU Board.

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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

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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 City Council and Board of Public Utilities:

1. Conduct a public hearing to receive public input related to the proposed WA-12 Agricultural Service water rate schedule, close the existing WA-9 Grove Preservation Service water rate schedule, and transition the existing WA-3 Irrigation Metered Service and WA-9 Grove Preservation Service customers to the WA-12 Agricultural Service water rate schedule; and consider and tabulate all written protests to the proposed action; and

RECOMMENDATIONS

2. Adopt resolutions recording receipt of written protests to the proposed WA-12 Agricultural Service water rate schedule, closing the existing WA-9 Grove Preservation Service water rate schedule effective October 15, 2019, transitioning the existing WA-3 Irrigation Metered Service and WA-9 Grove Preservation Service customers to the WA-12 Agricultural Service water rate schedule, and, if no majority protest is received to the water rate, establishing and approving the WA-12 Agricultural Service water rate schedule effective January 1, 2020, all as further described in the resolutions.