

COMPARISON OF WATER USE CHARGES AMONG DESERT COMMUNITIES IN SO. CALIFORNIA

(BASED ON RATES IN EFFECT AS OF JULY 1, 2011 FOR A STANDARD 3/4" RESIDENTIAL METER SIZE AND A RESIDENTIAL MONTHLY USAGE OF 34.4874 UNITS/MONTH<sup>1</sup>)

COMMUNITY	WATER SYSTEM	MONTHLY CHARGE
YUCCA VALLEY	HI-DESERT W.D.	\$252.23 <sup>2</sup>
APPLE VALLEY	APPLE VALLEY RANCHOS W.C.	\$102.54 <sup>3</sup>
COACHELLA	COACHELLA VALLEY W.D.	\$84.25 <sup>4</sup>
BORREGO SPRINGS	BORREGO W.D.	\$75.80 <sup>5</sup>
DESERT HOT SPRINGS	MISSION SPRINGS W.D.	\$68.08 <sup>6</sup>

<sup>1</sup> One unit = 100 cubic feet/month (ccf/mo. or HCF/mo.); San Diego County standard average annual consumption of residential customer (EDU) in Borrego Springs = 0.95AF/y = 0.95/12 = 0.079167 AF/mo = 0.079167 AF/mo x 325,851.4 U.S. gallons/AF = 25,796.57 gallons/mo = 859.886 gal/EDU/day = 859.886 gal/da/748 gal/ccf = 1.14958 ccf/da x 30 da/mo = 34.4874 ccf/mo.

<sup>2</sup> Hi-Desert Water District: Tier 1: 4 ccf x \$3.59 = \$14.36 + Tier 2: 6 ccf x \$5.69 = \$34.14 + Tier 3: 18 ccf x \$6.89 = \$124.02 + Tier 4: 6.4874 ccf x \$9.08 = \$58.91 + \$11.80 fixed charge + \$5.00 capital replacement charge + \$4.00 pipeline charge = \$ 252.23 monthly charge for same amount of water Borregans would pay \$75.80/mo. under new rates. See: <http://www.hdwd.com/Customercare/RatesandFees.aspx>.

<sup>3</sup> Apple Valley Ranchos Water Company has tiered rate structure: Tier 1 <14 ccf = 14 ccf x \$2.157 = \$30.20 + Tier 2-14 thru 29 ccf = 15 ccf x \$2.277 = \$34.16 + Tier 3 >29 ccf = (34.4874 - 29 ccf) = 5.4874 x \$2.397 = \$13.15 + surcharge of \$0.124/ccf x 34.4874 ccf = \$4.28 + monthly fixed charge of \$20.75 = \$102.54 monthly charge. See <http://www.avrwater.com/pdf/AL162SCH1>.

<sup>4</sup> Coachella Valley Water District (CVWD) has a budget-based tiered rate structure: assume rate area 1 household with budget of 14 ccf/mo. = 34.4874 ccf/14 ccf) = 242% of water budget or Tier 4 pricing = 34.4874 ccf x \$2.24) = \$77.25 + base rate of \$7.00/mo. = \$84.25 monthly charge. See: [http://www.cvwd.org/service/rates/RateSheet\\_Domestic\\_2010.pdf](http://www.cvwd.org/service/rates/RateSheet_Domestic_2010.pdf).

<sup>5</sup> Average consumption of 34.4874 ccf/mo x \$1.12/ccf <45ccf[ID-4] + \$19.58 = \$58.21/mo old rates; 2012 new rates = (34.4874 ccf/mo x \$1.46/ccf <45ccf[all IDs]) = \$50.35 + \$25.45 = \$75.80/mo new rates = 30.22% change from FY2011 to FY 2012 rates. See: [http://www.borregowd.org/uploads/Notice\\_of\\_Public\\_Hearing\\_050411\\_12\\_52pm.pdf](http://www.borregowd.org/uploads/Notice_of_Public_Hearing_050411_12_52pm.pdf).

<sup>6</sup> Mission Springs Water District (MSWD) has tiered water rates: Tier 1 < 4 ccf = 4 ccf x \$0.99 - \$3.96 + Tier 2 for 5-15 ccf = 11 ccf x \$1.74 = \$19.14 + Tier 3 for > 15 ccf = (34.4874 - 15 ccf) = 19.4874 ccf x \$1.83 = \$35.66 + base rate of \$9.32 = \$68.08 monthly charge. See: <https://www.mswd.org/documents/costofwaterservice.pdf>.

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Rates are established for each water and wastewater utility based on the revenue requirements for that utility. Each utility has specific operating costs, capital costs and “contributions to special replacement, improvement, expansion, rate stabilization, and self-insurance funds” that are required “to provide for adequate facilities, to allow for proper asset replacement and maintenance, to address debt service and coverage requirements, and to ensure that the utility is operated on a self-sustaining basis.”<sup>7</sup>

“Most water and wastewater utilities are capital intensive. In some cases, capital-related revenue requirements (debt service, pay-as-you-go capital, reserve fund requirements, etc.) can be as high as 50 to 75% of annual revenue requirements.”<sup>8</sup> Under the cash-needs approach to setting rates used by many governmental water districts in California, capital costs are typically recovered through user charges that consist of: (a) principal and interest that must be repaid on bonds issued by the utility; (b) capital items financed through user charges, referred to as pay-as-you-go capital items; and (c) cash reserve fund contributions. Cash reserve funds might include the following funds:

- *operating reserve* to provide for working capital needs necessary for cash flow purposes;
- *capital replacement reserve* to provide for the normal repair and replacement of the infrastructure of the utility, often referred to as a Capital Improvements Program (CIP) reserve;
- *capital expansion reserve* that is often funded by system development charges and contributions for new development so that new development pays for itself and existing ratepayers are not asked to subsidize new development in the rates;
- *self-insurance reserve* to provide necessary cash should an emergency occur to protect the utility and its ratepayers against uncertainties and catastrophic events;
- *debt service reserve* that is often required by bondholders to provide additional protection to the bondholder.<sup>9</sup>

Rates for specific category of customer (e.g. residential, commercial, etc.) and for the amount of water used on a monthly basis (e.g. tiered rates) are further refined through a cost of service study. The cost of service study allocates the net revenue requirements to customer classes based on category of customer, an allocation of costs to each service type (e.g. water or wastewater by meter size), and the assignment of the costs allocated to each service type to each category of customer.<sup>10</sup>

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<sup>7</sup> See: George A. Raftelis, *Water and Wastewater Finance and Pricing: A Comprehensive Guide, 3rd Edition* (Boca Raton, FL: Taylor & Francis, 2005), 181, 185.

<sup>8</sup> Raftelis, 194.

<sup>9</sup> Raftelis, 196-7.

<sup>10</sup> Raftelis, 207.