

CITY OF NAPA CITY COUNCIL
AGENDA REPORT

ADMIN CALENDAR
AGENDA ITEM 14.B.
Date: July 19, 2011

To: Honorable Mayor and Members of City Council
From: Jacques R. LaRochelle, Public Works Director
Prepared by: Joy Eldredge, Water General Manager
Subject: Council Workshop and Recommendations from Cost of Service Water Rate Analysis

ISSUE STATEMENT:

Administrative report and Council input on the recommendations of the Cost of Service Water Rate Analysis.

DISCUSSION:

Water rates were last analyzed in 2004 primarily to insure revenue was available to cover the debt service associated with selling Water Revenue Bonds to fund improvements to the Edward Barwick Jamieson Canyon Water Treatment Plant (EBJCWTP). The EBJCWTP Improvements Project, a \$44-million investment in our primary water treatment plant and the last of the major projects identified in the 1997 Master Plan has been completed.

In addition to recently completed investments including treatment system improvements to the Edward Barwick Jamieson Canyon Water Treatment Plant (EBJCWTP), the City is investing in water quality through the Alternate Intake Project (AIP) and Delta Habitat Conservation and Conveyance Program (DHCCP) in conjunction with Solano County Water Agency. These are large joint projects that will be supplemented with state and/or federal funding, and are instrumental in preserving the quality and reliability of our long term supplies. Over the past 10 years the City has invested \$61 million in the treatment, transmission, and storage components of the water system thereby increasing its reliability.

In 2011 the Water Division has prioritized its 20-Year Capital Improvement Master Plan to determine the most efficient means to preserve and maintain our water system. The focus of this Plan is the distribution system which has received minimal investment over the last 20 years and includes sections that are greater than 100 years old. Much effort has been put forth to coordinate necessary underground water distribution system improvements so they occur prior to the high profile street paving program as laid out in the 5-Year Public Works Master Plan.

There are two major new regulations that are contributing to the required investments in our system to insure compliance including:

- Stage II Disinfection Byproduct Rule (DBPR-II) – single point location within the distribution system must not exceed 80 ug/L Total Trihalomethanes (TTHMs) and 60 ug/L 5 HaloAcetic Acids (HAA5,)
- Senate Bill (SB7x-7) - must show 20% reduction in consumption by 2020.

Recent investments in the EBJCWTP, specifically the addition of ozone treatment is helpful in moving towards meeting the DBPR-II, however additional investment in our network of distribution pipelines is necessary to bring us towards full compliance with DBPR-II. Due to our consistent conservation program the City of Napa is making good progress towards SB7x-7 requirements and the first compliance requirement to show reductions of 10% (from 165 to 148 gallons per capital per day (gpcpd)) by 2015. However, a change to the rate structure can provide incentive for customers to help us insure we meet this mandate.

To support Master Plan implementation and meet new regulations the Water Division has performed a cost of service rate analysis to analyze current revenue requirements based on historical and projected revenue, operating costs, debt service, and pay as you go capital needs to continue to invest in system improvements. Conducting the cost of service study is important to insure the City remains in compliance with Prop 218 by allocating costs based on service provided. This study analyzed other rate structures including the widely used service charge and tiered rate structures that the City used for many years and moved away from in 1997.

Recognizing that operating costs are a major portion of the costs to provide water services, the Water Division has made significant efforts to streamline operating costs by eliminating 1 full time equivalent employee (FTE) since FY 2010 and holding 5 vacancies through FY11. Our staffing levels are significantly lower than Bay Area water districts, allowing us to keep operating costs down and invest in capital assets. With the exception of significant increases in costs of chemicals, energy and water supply – necessities to run the operation that are subject to outside market forces, operating costs have remained relatively flat. At this time it is imperative to invest in protection systems as well as renewal and replacement of our aging distribution pipelines to meet new DBPR-II requirements throughout our distribution system. Investment now is necessary to avoid increased operating costs to repair leaking pipes on an emergency basis instead of in a planned, cost-efficient manner. As a result, the major factor in the cost of service analysis was to determine the amount of rate revenue to be applied to capital improvements.

Through the Master Planning process, staff is taking great care to increase the life of existing distribution system assets and defer replacements until such time that the ongoing cost to maintain the asset exceeds the cost of replacement. The Master Plan recommends capital investment of \$4.5 M in the system each year to maintain a sustainable lifespan of underground pipe assets and prevent further degradation of existing pipes. Recognizing that the revenue increase to accommodate this level of investment would be very difficult to implement in the current economic climate, staff has reduced the recommended level of investment at this time to \$3M per year.

In contrast to other agencies that have seen increases greater than 50% and multi-year increases greater than 15%, our revenue requirements show an overall increase of 8% for each of the first three years and 4% for each of the following two years. Under the proposed change in the structure of the rates, some customers will see proportionately higher changes to their bills and some customers will see proportionately lower changes to their bill. Some customers will see variations in increases between their winter and summer bills. Attachment 2 shows a comparison of existing and proposed rates for typical customers.

Staff is recommending a change in the structure of residential rates from the existing quantity charge only to a fixed charge with tiered quantity charges. Single family residences make up approximately 87% of the total water system customers. Water consumption in the summer time is nearly three times winter consumption, pointing to irrigation as the major reason for the increased system demands. The proposed change in structure will provide incentive for customers to reduce their water use for landscape irrigation during the summer months. Based on historical consumption data, 90% of all residential customer bills consume less than 35 units (1 unit = 1,000 gallons) of water per billing cycle. For this reason, staff recommends that an increase in the unit rate of water be implemented for consumption above 35 units. This rate design is recommended to encourage conservation and reduce discretionary use during the summer months when high system demands drive the need to increase the size of treatment, transmission, and storage facilities. In addition, when compared to the structure that charges for quantity only, the fixed element will help to stabilize water fund revenue due to annual variations in climate and consumption.

Attachment 1 details the recommended water fees proposed by staff. Highlights of the changes include a minimum service charge, tiered rates for residential services, and adjustments to pumped zone charges, fire service charges and interruptible agriculture irrigation services.

Staff recommends a minimum service charge that includes 3 units of water. This value will be charged to cover the cost of system availability, meter reading, billing, and ongoing services that are provided each month regardless of the quantity of water consumed. Under this recommendation, for example, the minimum bill for a $\frac{3}{4}$ -inch meter would be \$6.62 per month. A customer under the existing structure that consumes 3 units would be charged \$6.13 per month or \$0.49 per month.

The average customer consuming 9 units of water during the winter will see an increase of \$1.40 per month. The average city customer during the summer who consumes 25 units of water will see an increase of \$3.88 per month. However, a customer that consumes 40 units of water during the summer will see an increase of \$16.10 per month.

The cost of service analysis has reviewed and revised the actual costs for customers living in pumped zones. The true cost of service including energy costs, operation, maintenance, and capital replacement costs of pump stations shared among this class of customers is slated to increase. As proposed, to meet revenue requirements in year one, all pumped zone customers would pay \$0.82 per unit, increasing to \$0.99 in year 2.

One other significant change is recommended to the cost of service provided for fire services. Fire services are charged according to the size of the meter available and are a major factor in the overall size of the infrastructure that must be available in the system. Fire services are proposed to be revised according to Attachment 1 with the biggest adjustment required for services provided through 6" and 8" meters increasing by \$3.25 and \$12.40 per month respectively. In year 2 the additional increase for this size of meter is \$21.17 and \$37.58 respectively.

Finally, interruptible agricultural irrigation services will be charged outside rates during the summer when peak demands are at their highest. Currently, these irrigation services are charged inside city rates even though they are located outside the city and therefore the cost to provide this service is commensurate with that outside city limits.

Staff requests council feedback on the aforementioned recommendations and the proposed rate structure as laid out in Attachment 1.

The schedule for the water rate adjustment will be:

August 2011 – Public Notice and Hearing; Issue Prop 218 Notification

September 20, 2011 – Public Hearing for Prop 218 Confirmation and to approve water use fees and structure.

October 2011 – Implement modifications to water use fees and structure.

FINANCIAL IMPACTS:

There is no direct impact associated with the discussions and recommendations taking place today. However, future associated actions will have profound impacts to the level of investment that is available for the water system.

In March of 2010, Standard and Poor's rating agency upgraded Water Revenue Bonds (used to implement improvements to the EBJCWTP) from AA- to AA. The status and balance available in the Water Fund is specifically called out in the bond reporting documents. Presenting a revenue base that allows continued investment in infrastructure and maintains solid reserve levels is an integral part of maintaining a favorable bond rating and insuring a safe, reliable, water supply system for the City of Napa into the future.

As an enterprise fund with some highly variable conditions (e.g., weather, consumer habits, price of chemicals, availability of the resource), it is important to periodically review and confirm or adjust rates to insure the integrity of the system is maintained, it is operated efficiently, and regulations are met.

CEQA:

The Public Works Director has determined that the Recommended Action described in this Agenda Report is not subject to the California Environmental Quality Act pursuant to Public Resources Code Section 21080(b)(8).

DOCUMENTS ATTACHED:

1. Attachment 1: Proposed Water Fee Schedule
2. Attachment 2: Comparison of Average Customer Bill Under Current and Proposed Rate Structures

NOTIFICATION:

None.

RECOMMENDED ACTION:

No formal action necessary.

City staff recommends that the City Council provide input regarding the rate structure and proposed rate modifications.

Current and Proposed Water Rates

Single Family Residential: Inside City (unit = 1,000 gallons)

Rate Category	Current Rate	Proposed Rate				
		2012	2013	2014	2015	2016
Minimum Bimonthly Service Charge (0-3 units included)	4.09 per unit <i>No service charge</i>	\$13.25	\$14.31	\$15.45	\$16.07	\$16.72
Quantity Charge 4-34 units (\$/unit)		\$4.42	\$4.77	\$5.16	\$5.36	\$5.58
Quantity Charge 35+ units (\$/unit)		\$7.70	\$8.32	\$8.98	\$9.34	\$9.71

Single Family Residential: Outside City (unit = 1,000 gallons)

Rate Category	Current Rate	Proposed Rate				
		2012	2013	2014	2015	2016
Minimum Bimonthly Service Charge (0-3 units included)	5.78 per unit <i>No service charge</i>	\$19.21	\$20.75	\$22.40	\$23.30	\$24.24
Quantity Charge 4-34 units (\$/unit)		\$6.41	\$6.92	\$7.48	\$7.77	\$8.09
Quantity Charge 35+ units (\$/unit)		\$11.17	\$12.06	\$13.02	\$13.54	\$14.08

Multi-Family Residential, Commercial, Irrigation Customers (unit = 1,000 gallons)

Rate Category	Current Rate	Proposed Rate				
		2012	2013	2014	2015	2016
Inside City Quantity Charge (\$/unit)	4.09	\$4.42	\$4.77	\$5.16	\$5.36	\$5.58
Outside City Quantity Charge (\$/unit)	5.78	\$6.41	\$6.92	\$7.48	\$7.77	\$8.09

Pumped Zone Surcharge

Rate Category	Current Rate	Proposed Rate				
		2012	2013	2014	2015	2016
Quantity Charge (\$/unit)	\$0.42	\$0.82	\$0.99	\$1.15	\$1.24	\$1.34

Fire Service Bimonthly Charge

Service Size	Current Rate	Proposed Rate				
		2012	2013	2014	2015	2016
1 1/2 inch	\$7.50	\$8.10	\$10.11	\$15.17	\$19.47	\$24.34
2 inch	\$10.00	\$10.80	\$14.69	\$22.04	\$28.30	\$35.37
2 1/2 inch	\$12.50	\$13.50	\$14.69	\$22.04	\$28.30	\$35.37
3 inch	\$15.00	\$16.20	\$26.93	\$40.39	\$51.86	\$64.82
4 inch	\$20.00	\$21.60	\$40.67	\$61.01	\$78.34	\$97.92
6 inch	\$30.00	\$36.50	\$78.84	\$118.27	\$151.85	\$189.91
8 inch	\$40.00	\$64.79	\$139.95	\$209.92	\$269.53	\$336.92
10 inch	\$50.00	\$103.69	\$223.97	\$335.95	\$431.34	\$539.18
12 inch	\$60.00	\$153.18	\$330.87	\$496.31	\$637.24	\$796.54

**Comparison of Average Customer Bill
Current and Proposed Water Rates**

Customer Class	Meter Size	Units Consumed Bimonthly	Current		Proposed - 2012			Proposed - 2016		
			Total Bimonthly Bill	Price Per Gallon	Total Bimonthly Bill	Price Per Gallon	Monthly Increase from Current	Total Bimonthly Bill	Price Per Gallon	Monthly Increase from Current
SFR INSIDE CITY										
Customer A	3/4"	3	\$12.27	\$0.0041	\$13.25	\$0.0044	\$0.49	\$16.72	\$0.0056	\$2.23
Customer B (typical winter)		9	\$36.81	\$0.0041	\$39.78	\$0.0044	\$1.49	\$50.19	\$0.0056	\$6.69
Customer C (typical summer)		27	\$110.43	\$0.0041	\$119.34	\$0.0044	\$3.88	\$150.56	\$0.0056	\$20.07
Customer D		40	\$163.60	\$0.0041	\$196.48	\$0.0049	\$16.44	\$247.87	\$0.0062	\$42.14
SFR INSIDE CITY - PUMPED ZONE 4										
Customer E	3/4"	3	\$13.53	\$0.0045	\$15.71	\$0.0052	\$1.09	\$20.74	\$0.0069	\$3.61
Customer F (typical winter)		9	\$40.59	\$0.0045	\$47.16	\$0.0052	\$3.29	\$62.26	\$0.0069	\$10.84
Customer G (typical summer)		27	\$121.77	\$0.0045	\$141.48	\$0.0052	\$9.86	\$186.77	\$0.0069	\$32.50
Customer H		40	\$180.40	\$0.0045	\$229.28	\$0.0057	\$24.44	\$301.53	\$0.0075	\$60.57
SFR OUTSIDE CITY										
Customer I	3/4"	3	\$17.34	\$0.0058	\$19.21	\$0.0064	\$0.94	\$24.24	\$0.0081	\$3.45
Customer J (typical winter)		9	\$52.02	\$0.0058	\$57.68	\$0.0064	\$2.83	\$72.78	\$0.0081	\$10.38
Customer K (typical summer)		27	\$156.06	\$0.0058	\$173.04	\$0.0064	\$8.49	\$218.31	\$0.0081	\$31.13
Customer L		40	\$231.20	\$0.0058	\$284.90	\$0.0071	\$26.85	\$359.42	\$0.0090	\$64.11
COMMERCIAL INSIDE CITY										
Customer M	2"	25	\$102.25	\$0.0041	\$110.50	\$0.0044	\$4.13	\$139.40	\$0.0056	\$18.58
Customer N		120	\$490.80	\$0.0041	\$530.40	\$0.0044	\$19.80	\$669.14	\$0.0056	\$89.17
Customer O		200	\$818.00	\$0.0041	\$884.00	\$0.0044	\$33.00	\$1,115.24	\$0.0056	\$148.62

Rate Structure

1. Minimum Service Charge for SFR that includes 3 units
2. 2 Tiers