

**City of Benicia**  
**Water and Sewer Rate Questions and Answers**  
**September 5, 2017**

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The following are a list of questions that were asked at the August 15, 2017 City Council meeting and the answers.

1. **Why were the water meters replaced?** The most important reason was to replace water meters that were not accurately reading the actual water used. In 2015, the Solano County Grand Jury prepared a report about water losses in each water agency in Solano County and noted that non-revenue water in Benicia was the highest at 25%. Most other agencies had non-revenue water near 10% except Suisun City that had 22%. It was determined through a sample of 70 water meters that the average underreporting was 16%. When the water meters are replaced, all customers will pay for their actual water use and water leaks are found more quickly.
2. **What percentage of non-revenue water is from water losses versus inaccurate water meters?** For the past few years, non-revenue water has been approximately 25%, which means that the City treats 25% more water than it “sells” through water meter readings. It was estimated that leaks account for 10% of the 25% or 2/5 and inaccurate meters accounted for the other 15% or 3/5.
3. **How much more accurate are the new water meters?** The study we completed for the business case analysis for the Water Meter Replacement Project in 2015 showed that the water meters were 84% accurate, so they were under-reading by 16%. Recent calculations of non-revenue water show that it has decreased 10% so far (26% in 2015 and down to 16% in 2016). Only a portion of the water meters had been replaced in 2016 and some of the reduction is due to water leak repairs, so the best information will be available after all of the water meters have been installed for at least one year. It is anticipated that non-revenue water will be reduced to less than 10% in 2018. A loss of 10% is considered standard in the water industry.
4. **What is the actual cost of a water meter?** Actual cost per installed meter is \$971, which includes the meter, installation, communication system, software upgrades, financing and profit for Siemens.
5. **Why are the water meters being paid for over 15 years?** The total amount for the meter project is \$8 million. The City financed the project over 15 years to reduce the monthly charge when compared to the charge for 10 year financing.
6. **How is the volume (variable) charge calculated on the sewer bill?** The volume is based on actual water meter readings up to a cap of 18 units per billing period, which is the industry standard for winter and indoor water use. (Winter water use is considered a good approximation for sewer use.) The 18 units is close to the U. S. Environmental Protection Agency’s recommendation for calculating “Equivalent Dwelling Units” at 70 gallons per person times three

people per household. The less water a customer uses, the lower the volume charge will be on the sewer and water bill.

7. **Why were there three tiers with the old rates and now there is one tier?** There was a lawsuit that involved the City of San Juan Capistrano where the legality of tiered charges was challenged. The group that brought suit prevailed and that result now affects other agencies with water and sewer operations; many are restructuring the rates to move away from tiers. The new rates only charge a one tiered cost because most of the City's expenses are fixed no matter how much water is treated.
8. **What can be done to reduce the amount charged?** A customer can reduce their bill by conserving water, because 70% of the revenue is designed to come from water usage and 30% is designed to come from the fixed charge on the bills. There are several rebates and much water conservation information available to customers.

The City also tries to keep rates as low as possible. The City purchases chemicals at a reduced price through cooperative purchases with other agencies and purchases vehicles through state bid process to obtain a significant savings. Staff is using new technology and automation to reduce costs such as the advanced metering infrastructure, remote monitoring, and the new closed circuit television van for assessing the sewer system instead of using a contractor. For example, automation at the Wastewater Treatment Plant (WWTP) has eliminated the need to have 24 hour operators on site, which has reduced the number of employees required to operate the WWTP. Instead alarms have been set up to inform the on-call operator when there is a problem, so that appropriate action can be taken.

9. **Is the accuracy of the water meters tested?** Yes, each new meter is calibrated based on the American Water Works Association Manual of Water Supply Practice M6 and tested before it is shipped. The guarantee with the water meter supplier, Neptune, includes a provision for the water meters to be 98% accurate over 20 years. This will be validated by testing a random sample of meters over time.

A few meters, where the measurements were questioned after installation, have been removed and tested at independent laboratories to confirm the accuracy; the test results showed 99.5% to 100% accuracy for low, medium and high flows.

10. **What happens if too much revenue is being collected, and when will we know?** In early 2018, it is anticipated that there will be enough information on revenue after the meters have been installed for 6 months to estimate future revenues. The actual revenue will be compared to the forecast in the rate study versus actual expenses to evaluate if future rate increases need to be as high as

recommended in the rate study. If revenues exceed the forecast, then the City Council can stop or reduce the amount of future rate increases.

- 11. What capital improvement projects are planned and are they on track?** In general, sewer projects are on schedule and water projects are slightly behind schedule.

There are \$3.6 million in water projects, including replacing pipes that are over 70 years old in the Lower Arsenal, installing a new 24" pipeline in Park Road, installing a 12" pipeline at the west end of Military to improve fire flow, recoating the inside of the 1.8 million gallon Water Storage Reservoir 2, constructing a magnetic ion exchange system at the Water Treatment Plant (WTP) to allow the operators to treat North Bay Aqueduct water more months of the year, and upgrading the electrical control system in the Chemical Building at the WTP.

There are \$7 million in wastewater projects, including rehabilitating the 36" gravity sewer main under Bayshore Road, replacing the sewer pipeline under West 7<sup>th</sup>, replacing the sewer pipeline under East Channel Road, repairing the Wastewater Treatment Plant (WWTP) effluent pipeline that was installed in 1958, and modernizing the WWTP electrical system.

At the end of 2017, the status of projects will be reviewed. Staff is also concerned that construction costs are increasingly faster than anticipated in the rate study, so more revenue may be needed or projects may need to be deferred to future years when funding is available. We don't know the actual cost until the projects go out for bid.

- 12. Why are the rate increases front-loaded into the first few years?** If the water and sewer rates were not increased by a significant amount, then reserves would have been spent and the funds would be running a deficit. The City has several loan payments for previous water and sewer projects, and as part of the loan conditions, is required to maintain a 25% reserve. Revenue and expenditures are being checked every 6 months to see how they are tracking against projections from the rate study.

- 13. Can the City put the sewer bill on the property tax bill, and is this tax deductible?** It is possible to put the fixed sewer charges on the property tax bill but payment of a sewer bill is not tax-deductible. It is not possible to have variable costs on the property tax bill, and 30% of the Wastewater fund revenue is designed to be variable based on water use.

- 14. Can someone pay for their water meter upfront and not pay finance charges?** Perhaps but only under certain conditions. The entire \$8 million project was financed with the assumption that people would pay the meter charge over the 15-year term of the financing. The total cost of each meter installation without interest is approximately \$800 and the cost with interest is approximately \$970. Staff is still researching if the Utility Billing System can remove the meter charge

from individual rate payer bills and if so, how the process would work. As an additional complication, customers have been paying the water meter fee so the amount of principal left to pay and credit for past meter fee payments will need to be calculated. The City can begin paying off the principal in May 2018.

15. **Why was the senior citizen discount eliminated?** Previous senior discounts were actually paid for from the general fund and not from the water and wastewater enterprise funds. Utility costs must be based on uniform criteria and can't take into consideration a ratepayer's age. The City does provide a utility discount tied to PG&E's CARE Program. A copy of PG&E's documentation is all that is needed to qualify.
16. **What can the City do to prevent such large bill increases from happening in the future?** There are several things that City staff are considering. One example is to set up a reserve fund or "savings account" for future droughts that could help cover the increased expenses to purchase water and reduced revenue from conservation. The City is also involved in associations that try to minimize the impact of new regulations on water and sewer rates. The City has prepared a master plan for the utilities to identify cost-effective projects that will save money over the long run. City staff are investigating new technology to reduce the cost of operating the utilities for the ratepayers.
17. **Does the Water Fund and Wastewater Fund pay the pension cost for employees who charge their time to those funds?** Yes, all staffing costs, including pension costs, associated with operating the utilities are included in the rates.
18. **Can the water and sewer rates be established for 15 years to pay for capital projects and the meter replacement program?** No, Proposition 218 will only allow rates to be set for five years. The City does a 10-year financial forecast and is preparing a 10-year Capital Improvement Program to try and anticipate future cost. Near the end of the 5 year period, the operating, capital improvement, debt service, and other expenses and forecasts will be used to establish the rates for the next five years.
19. **Has the City figured out how to adjust the last bill to include prorated rates? When will we see the adjustment on our bill?** Yes, we have corrected the July 1 rate increase for only water use after July 1, so a credit (the word "adjustment" will be used because our billing software is so limited) will be shown on the October water bill. The credit will be based on the May and June portion of the bill. We have corrected the September utility bills already and the amount shown will be prorated to only charge the new rate for water use after July 1.
20. **How do people get more information about the water and sewer rates and their bill?** There is information on the City's web page (<http://www.ci.benicia.ca.us/watersewerrates>) and people can call Public Works staff at 746-4240 or Finance staff at 746-4225.

- 21. Are the revenues on track based on the forecast in the rate study?** As of August 11, 2017, the water fund revenue is 5% above projected revenues of \$7.2 million and the sewer fund revenue is 14% below projected revenues of \$9.2 million.
- 22. How did the water and sewer rates in Benicia compare to other agencies?** The City of Benicia was just one of many agencies that have faced significant utility increases recently. Our current water rates are in the middle of the rates charged by other comparable agencies. The sewer bills are near the higher end of the rates charged by comparable agencies.
- 23. Is the water and sewer bill a tax or a user fee?** Utility costs are not a tax; they are a user fee for fixed and variable costs to build, operate and maintain each utility.
- 24. Are there other ways to pay for infrastructure improvements?** Not really; there are few grants for water and sewer projects other than recycled water projects (which we are exploring). In the past, the City has obtained low interest loans from the State to finance large capital improvement projects at the treatment plants, which were required to meet regulatory mandates. However, loans must be repaid and the most appropriate way is by ratepayers.
- 25. Why does the City need the rate increases?** The rate increases are needed to pay for operating, capital improvement, and debt service costs. There are approximately 50 people directly involved in treating and supplying 1.5 billion gallons of drinking water per year and collecting and treating 2 million gallons per day of wastewater. The State requires the City to have certified staff to operate the treatment plants, 150 miles of water pipes, and 150 miles of sewer pipes in compliance with several regulatory permits. The cost of salaries, benefits, chemicals, electricity and other operating costs increases over time. The revenue is also used to pay off loans for past capital improvement projects and to pay for the design and construction of proposed projects identified in the master plans. The revenue is also paying for preventive maintenance, which involves maintaining and replacing pipes, vehicles, pumps and motors at the most cost effective time.
- 26. Why not freeze or roll back the rate increases?** If the rates are frozen, then capital improvement projects and preventive maintenance will be delayed, so overtime and emergency repair costs will increase. It is more cost effective to replace a water pipe that has several leak repairs than continuing to dig up a road, turn off water to customers, and fix the leak, especially when leaks must be repaired in the middle of the night when staff are being paid overtime. The infrastructure work is also important in terms of conserving water.

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