



# City of Sacramento City Council

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**Meeting Date:** 11/8/2011

**Report Type:** Staff/Discussion

**Title:** Department of Utilities Water and Wastewater Program Workshop

**Report ID:** 2011-00828

**Location:** Citywide

**Recommendation:** Conceptual Approval of the Department of Utilities Water and Wastewater Program

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**Department:** Department Of Utilities

**Division:** Fiscal and Administration Svcs

**Dept ID:** 14001611

**Attachments:**

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- 1- Description/Analysis
- 2 - Background
- 3 - Community Engagement Program
- 4 - Capital Financing Approach
- 5 - FY2011-12 Regional Rate Comparison

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**City Attorney Review**

Approved as to Form  
Joe Robinson  
11/3/2011 8:53:44 AM

**City Treasurer Review**

Reviewed for Impact on Cash and Debt  
Russell Fehr  
11/2/2011 11:36:18 AM

**Approvals/Acknowledgements**

Department Director or Designee: Dave Brent - 11/2/2011 3:41:02 PM



## Description/Analysis

**Issue:** The 2010 Citywide Financial and Operational Review conducted by Management Partners, Inc., and the 2011 City Auditor's Sacramento Department of Utilities Operational Efficiency and Cost Savings Audit both found that the City's current financial resources are inadequate to maintain its water and wastewater systems. The Management Partners review stated:

“The City of Sacramento's utility funds are in a weak financial position. Unless actions are taken to bolster the financial condition of the utilities, there is a real threat they will begin to require General Fund subsidies for operations and be unable to fund the infrastructure maintenance necessary for continued reliable service.”

At current rates of infrastructure investment, the City will replace its entire water system every 400 years and its wastewater system every 650 years. According to the United States Environmental Protection Agency and the American Society of Civil Engineers' utility industry best practices, water and wastewater systems should be replaced every 70-100 years in order to sustain them in a condition that can reliably deliver service.

The Operational Efficiency and Cost Savings Audit also identified areas of improvement which DOU is actively pursuing. Over the past few years, DOU has implemented numerous efficiencies and received non-rate payer dollars that have reduced costs to ratepayers, and will continue to incorporate more improvements into the future. DOU obtained over \$20 million in federal grants and loans for the water meter program, reduced its operating budgets for water and wastewater from FY2010/11 to FY2011/12 by just under \$3 million for each fund, and continued delivering high quality services without a rate increase in FY2012.

In response to the audit findings, DOU is proposing a proactive approach for the City to invest in its utility infrastructure systems and address ever increasing regulatory requirements. DOU contracted with the FCS Group, a consulting firm specializing in the utility rate setting process, to develop a comprehensive financial plan to achieve a proactive infrastructure investment program and also launched a comprehensive community engagement process to inform the plan. (Details on the Community Engagement process can be found in Attachment 1.)

One component of the financial plan, and the primary focus of this report, is the water and wastewater program that invests in the City's water and wastewater capital and regulatory programs at levels that sustain the health of the systems and guarantee continued reliable and high quality service the citizens of Sacramento have come to expect.

The water and wastewater program includes the following:

- A 30-year Water and Wastewater Infrastructure Investment Program based on industry best practices for system replacement
- A 5-year Capital Improvement Program for FY2012/13 through FY2016/17
- Compliance with new regulatory requirements
- Continuity of existing production, maintenance and regulatory activities

As the first step towards implementing the Department of Utilities long-term financial plan, DOU is proposing a water and wastewater program and a rate proposal to implement the program. A final rate proposal will be brought to City Council for consideration in early 2012 following review of the proposal and recommendation by the Utilities Rate Advisory Commission (URAC), consistent with the Proposition 218 notification and public hearing process.

The Department's financial plan also addresses the needs of the solid waste and storm drainage funds as well as future development. Consistent with recommendations from the most recent audits, the Solid Waste Division is in the process of developing a business plan to guide its future operations. Once the business plan is complete, recommendations for solid waste services and operations will be brought forward for City Council consideration. Regarding storm drainage, under Proposition 218, rate adjustments for this service require voter approval. DOU is in the process of developing a storm drainage program, similar to that of water and wastewater. As part of this process, DOU has retained consultant services to conduct a storm drainage rate study and make recommendations for a future storm drain rate design and structure. DOU will present the consultant's findings and recommendations to the City Council for its consideration at a future date.

The final component of the financial plan addresses impact fees and the ability of the City to fund improvements necessary to serve new growth. In order to meet this need, impact fees must reflect the current cost of constructing facilities needed to serve new development. At a future date, DOU will present an impact fee adjustment proposal to City Council that reflects current development costs and better positions the City for growth.

**Policy Considerations:** Mindful of the various goals at play in developing a comprehensive utility plan and rate proposal to support such a program, DOU sought input from the community regarding what they believe should be the priorities. The customer feedback indicated that the water and wastewater program and funding strategy should focus on the following:

- Continued high-level customer service
- Environmental stewardship
- Regulatory compliance
- Investment in infrastructure
- Cost efficiencies
- Plan for competitive credit rating/borrowing costs
- Competitive user rates, at-cost customer charges

Consequently, DOU developed a water and wastewater program that concentrates on infrastructure, meets existing and addresses new regulatory requirements, minimizes operating and maintenance cost increases, and proactively establishes a phase-in schedule to achieve a best-practices replacement cycle. The Water and Wastewater Infrastructure Investment Program and 5-year Capital Improvement Program can be found in the background section of this report.

The proposed rate adjustment to fund the program will provide the revenue necessary to:

- Invest in and responsibly manage the City’s existing water and wastewater utility infrastructure at sustainable levels and improve it to meet future needs
- Continue to meet ever-increasing regulatory requirements and plan for future regulatory mandates in order to protect and enhance the environment
- Focus on economic development, investment, and sustainability
- Enhance legislative advocacy, regional participation, and community outreach efforts
- Provide the levels of service DOU customers want and have come to expect
- Provide predictable rates and financial stability for the water and wastewater funds
- Keep rates as low as possible, especially in today’s economic environment

The City Council, through its policy decisions and rate setting authority, ultimately determines the levels of utility services to be provided. Charging rates that generate revenue sufficient to invest in utility infrastructure and regulatory compliance at sustainable levels and deliver core services helps achieve the City’s goals of improving and expanding public safety, achieving sustainability and livability, and supporting economic development throughout the City.

**Environmental Considerations:** The establishment and modification of utility service rates is exempt from the California Environmental Quality Act (CEQA) (Public Resources Code § 21080(b)(8)).

**Sustainability:** The proposed Water and Wastewater Program is consistent with the City’s sustainability targets to:

- Protect the ecological integrity of the City’s primary drinking water source
- Implement the Statewide Urban Water Conservation Council’s water conservation best management practices.
- Reduce sanitary sewer overflows.

**Commission/Committee Action:** The City Council formed a Utilities Rate Advisory Commission (URAC) in 2008 to provide recommendations to the Mayor and City Council on the City’s utility service rates. The Commission is also charged with holding public hearings required by Proposition 218 when the City proposes to impose or increase utility rates. DOU will work through the URAC to shape the finance plan and hold the Proposition 218 hearing on the rate proposal prior to bringing the rate proposal to the City Council for its consideration.

**Rationale for Recommendation:** As has been mentioned, two recent audits found that the City’s investment in its water and wastewater infrastructure system is insufficient, and that without appropriate investment, the system is in danger of not being able to deliver reliable water and wastewater services to its customers. To ensure system reliability and sustainability as well as meet industry best practices, the City needs to invest in its utility infrastructure. In addition to capital investments, the City must also invest in operational and maintenance practices necessary to maintain compliance with federal, state, and local regulatory mandates.

The Department’s water and wastewater program moves the City in a proactive direction toward achieving system reliability and sustainability and meeting best practices. Moreover, input from the

community support these objectives. DOU used surveys, community meetings, websites and social networking sites to educate the community about the City’s capital and regulatory challenges and sought input on the fiscal strategy and rate setting priorities that should be considered. DOU will continue to meet with the community, share information about the program and funding plan, and seek input throughout the rate setting process.

The benefits of investing in the City’s water and wastewater infrastructure systems at sustainable levels and the potential consequences of failing to make the necessary investment are outlined in the following table:

Benefits	Consequences
Continuity of high quality and reliable services	Service interruption and delays in corrective action
Continued regulatory compliance	Regulatory non-compliance including fines, moratoriums and/or consent decrees
Maintain local control of utility systems	Federal/State enforcement of regulatory compliance and loss of local control
Environmental stewardship	Threats to public health and safety
Economic development and job creation	Negative impact on economic development objectives
Financial stability	Lawsuits, risk claims, dependence on General Fund
System sustainability	Increased potential of system failure and increased maintenance costs

**Financial Considerations:** The financial plan and rate proposal complies with the Proposition 218 mandate which only allows utilities to charge rates sufficient to recover the cost of providing utility services. DOU is proposing a rate adjustment plan at this time for water and wastewater services only. The Proposition 218 notification of rate increases for water and wastewater is targeted to go out in early December with the goal of bringing the rate proposals to the City Council for consideration and approval in early 2012, after the URAC holds the public hearing and provides its rate recommendation. Rate adjustments are proposed to be effective July 1, 2012.

As was mentioned above the water and wastewater program and funding plan framework is built on the following guiding principles that were developed in collaboration with the community as part of our ongoing outreach efforts:

- Continued high-level customer service
- Environmental stewardship
- Regulatory compliance
- Investment in infrastructure
- Cost efficiencies
- Plan for competitive credit rating/borrowing costs
- Competitive user rates, at-cost customer charges

As the infrastructure needs are significant and immediate, funding the water and wastewater program on a cash basis would cause dramatic rate spikes. Therefore, consistent with the above guiding principles, the proposed funding plan uses a mix of bond and cash financing that will allow the City to invest in its infrastructure and meet regulatory requirements while smoothing rate increases and avoiding rate spikes for utility customers. While issuing bonds will increase the long-term cost of financing the City's capital and regulatory programs, issuing bonds in the near term will mitigate the impact on water and wastewater rates and more equitably spread the benefits and costs of the infrastructure and regulatory investment to utility customers over a longer term. The long-term financing plan gradually builds up the cash funding portion and decreases the debt financing component to ultimately achieve a sustainable "pay-go" program. (Details of the funding methodology and approach, and regional rate comparisons can be found in Attachments 2 and 3 respectively.)

The rate comparison charts demonstrate that the City's current water and wastewater rates are the lowest and fourth lowest in the region respectively. The proposed rate adjustments will allow the City to maintain its position as having competitive costs in the region for water and wastewater service.

**Emerging Small Business Development (ESBD):** Not applicable.

## Background

The Department of Utilities (DOU) provides dependable, high quality, cost-effective water, storm drainage, wastewater, and solid waste services in an environmentally sustainable manner.

Over the past couple of years, DOU has had many successes, among them continuing to provide high quality services to its customers, implementing various water conservation programs, and incorporating efficiencies to keep operational costs down. Two separate audits (the Management Partners citywide audit in 2010 and the 2011 City Auditor's Sacramento Department of Utilities Operational Efficiency and Cost Savings Audit) largely conclude that DOU is managing the City's utility business effectively. Examples of recent successes include:

- No utility rate increases in FY2011/12
- Implemented operational efficiencies between FY2008/09 and 2010/11 including:
  - Reduced staffing from 750 FTE to 697.5 FTE saving
  - Consolidation of on-call supervision, meter reading & water conservation, and warehouse operations
- Recent survey shows high levels of public satisfaction with City of Sacramento utility services
- Identified by the Environmental Working Group as having the best drinking water in California and 18<sup>th</sup> in the nation among communities with populations over 250,000
- Completed 1,326 water conservation audits at Sacramento homes and businesses, implementing the Water Conservation Ambassador program and recruiting 30 community ambassadors
- Secured over \$20 million in federal grants and loans to install 21,500 water meters, which represents 66% of the meters installed to date in the Water Meter Retrofit Program
- Implemented an Automated Meter Information (AMI) project that provides system reliability and efficiencies by allowing staff to automatically read meters using wireless technology and detect leaks and other performance issues
- Enacted a new water conservation ordinance for more effective enforcement
- Enacted a landscape water use efficiency ordinance based on the State model ordinance
- Results from financial audits performed by external auditors demonstrated the Department maintains a high level of integrity in its financial management

The 2011 Operational Audit indicated the Department is doing a good job overall and identified some areas where improvement could lead to additional efficiencies. Both the 2011 audit and the 2010 Management Partners audit concluded that the City's current

investment in its water and wastewater infrastructure system and its maintenance is insufficient. Based on these common findings, DOU has developed a comprehensive financial plan that proposes a proactive approach for the City to invest in its utility infrastructure systems and address ever increasing regulatory requirements while keeping operational costs as low as possible.

The city's water and wastewater infrastructure systems are aging and investment in the City's water and wastewater capital improvement programs has declined significantly in recent years. At the current rate of investment, the City will replace its entire water system every 400 years and its sewer system every 650 years. According to United States Environmental Protection Agency and American Society of Civil Engineers established life cycles, a best practices approach to replacement would replace most of the water and wastewater infrastructure every 70 to 100 years in order to sustain it in a condition that can reliably deliver service. In order to address this problem, DOU has developed a 30-year Water and Wastewater Infrastructure Investment Program (Program) with a specific five year Capital Improvement Program (CIP).

The 30-year Program has two components: a component mandated by regulation, legislation and/or other requirements, and a "Best Practices" infrastructure replacement component. The two main goals of the 30-year Program include fully complying with regulatory, legislative and other requirements; and ramping up system infrastructure replacement to "Best Practices" levels. The total proposed investment for the 30-year Water and Wastewater Infrastructure Investment Program is about \$1.24 billion in the water system and \$0.7 billion in the wastewater system.

The specific mandated programs that require significant capital investment and/or operational activities include a waste discharge requirements permit issued by the State Water Resources Control Board (SWRCB), which mandates capital investment and operational activities to eliminate sanitary sewer overflows (SSOs) in the separated wastewater system; a National Pollution Discharge Elimination System (NPDES) stormwater permit issued under the authority of the Federal Clean Water Act and administered by the California Regional Water Quality Control Board, Central Valley Region, that requires the City to effectively prohibit entry of SSOs into the storm drainage system, and mandates significant improvements in the combined wastewater system; and AB 2572, which requires the installation of water meters for all water services by the year 2025.

The term "Best Practices" is defined as the replacement of capital assets on a schedule based on the useful life of the assets. The tables below illustrates the water and wastewater "National Infrastructure Report Card" issued by the United States Environmental Protection Agency (USEPA) and the American Society of Civil Engineers (ASCE) that show the industry estimated design life of water and wastewater system

components. These report cards are issued every year and use age and condition to grade the national infrastructure against the useful life standard of the infrastructure. The Years of Design Life column of the table illustrates that the useful lives of the electrical and mechanical portions of the system should be replaced, on average, every 20 years and the underground pipe and concrete infrastructure portion of the systems should be replaced, at a minimum, every 100 years.

<b>Wastewater Components</b>	<b>Years of Design Life</b>
Collections	80-100
Force Mains	25
Pumping Stations – Concrete Structures	50
Pumping Stations – Mechanical And Electrical	15

<b>Water Components</b>	<b>Years of Design Life</b>
Treatment Plants	60-70
Trunk Mains	65-95
Distribution	65-95

The table below shows the percentage of water and wastewater infrastructure that is over 100 years old and should have been replaced already, and an even greater percentage of infrastructure that is over 70 years old.

	<i>≥ 100 years old</i>	<i>70-99 years old</i>	<i>40-69 years old</i>	<i>&lt; 40 years old</i>	Estimated replacement cost for 70+ year old pipe
Water Distribution Mains	8%	15%	31%	46%	<b>\$331 million</b>
Water Transmission Mains	1%	9%	48%	42%	\$51 million
Wastewater Separated	7%	16%	45%	32%	\$197 million
Wastewater Combined	25%	54%	6%	15%	\$603 million
<b>% of the Total System</b>	<b>10%</b>	<b>24%</b>	<b>33%</b>	<b>34%</b>	

The proposed 30-year Water and Wastewater Infrastructure Investment Program phases in infrastructure investment to achieve sustainable “Best Practice” levels over a period of 5-10 years, depending on the type and criticality of the infrastructure. To meet the immediate needs of the City’s water and wastewater infrastructure and as part of the proposed 30-year Program, a specific 5-year Capital Investment Program for water and wastewater is proposed.

The 5-year water CIP includes funding for the mandated water meter retrofit program, water treatment plant rehabilitation, well rehabilitation, and pipe replacement in the distribution and transmission main systems, in an effort to phase in water infrastructure investment to achieve sustainable (best practices) levels. The 5-year wastewater program includes funding for projects in both the separated and combined systems to comply with regulatory mandates and a phasing in of a sustainable “Best Practices” pipeline replacement program.

In addition to capital investment, the Program includes continuity of existing production, maintenance and regulatory activities, as well as addressing new regulatory requirements that are performed as part of the department’s production and maintenance activities. The following table represents projected cost to comply with new regulatory requirements:

Unmet Regulatory Program Operational Needs	Water/Waste- water/Both	Amount		
		FY2012/13	FY2013/14	FY2014/15
Water Conservation*	Water	\$1,259,334	\$1,870,666	\$2,307,000
Water Quality*	Water	\$25,000	\$50,000	\$50,000
Sanitary Sewer Management Plan*	Wastewater	\$3,362,699	\$5,362,699	\$5,912,699
Combined System Drainage Inlet Upgrade	Wastewater	\$100,000	\$200,000**	\$100,000
Air Quality (Generators)	Wastewater	\$50,000	\$50,000	\$50,000
Security/Loss Prevention	Both	\$150,000	\$150,000	\$150,000
IT/Efficiency	Both	\$489,000	\$599,000**	\$489,000
Rehab/Repair - Maintain Regulatory Compliance	Both	\$400,000	\$400,000	\$400,000

**Notes:**

\* Program is phased in over time

\*\* Figure includes one-time expenses

Along with costs for new regulatory requirements, DOU incurs other types of expense to continue providing the existing production, maintenance and regulatory activities. Costs for items such as electricity and chemicals continue to rise. In addition, there are uncontrolled and fixed costs such as the General Fund tax, cost plan, and debt service. To mitigate increasing capital and operating costs, DOU is modeling no labor increases for open contracts in the future (FY2012/13 is the last year of closed contracts).

Moreover, DOU will continue to implement audit recommendations, identify additional process improvements and implement efficiencies to help offset increasing costs that DOU cannot control. DOU is also launching a program to better assess the condition of infrastructure to ensure maximizing the life of the system. Lastly, DOU is actively seeking grants to help fund infrastructure and regulatory programs.

DOU proposes the following timeline for the water and wastewater rate adjustment process:

- Community Engagement Activities – Ongoing (Rate workshops, presentations, video/website)
- URAC Workshop (Financing) – November 14, 2011
- Proposition 218 Notification Mailed – December 1, 2011
- URAC Public Rate Hearing – January 18, 2012
- Presentation of Utility Rate Recommendation to City Council – January 31, 2012
- New Water and Wastewater Rates Effective – July 1, 2012



## Department of Utilities Community Engagement Program (Your Utilities. Your Voice.) Summary

The City of Sacramento Department of Utilities (DOU) is engaging the community and seeking insights into the department's water, wastewater and solid waste utilities to help prepare a finance plan and eventually a potential rate adjustment to address its biggest challenges: aging infrastructure and increasing regulations and mandates. This effort is being called Your Utilities. Your Voice.

The Department has identified two goals as outcomes of the effort:

- Community engagement and understanding regarding the Department's aging infrastructure, increasing regulations and mandates and the need for rate adjustments
- City Council support for a finance plan and rate adjustment proposal

The Department is implementing this community engagement process in three phases:

- **Phase 1** consisted of research (phone survey, web survey and written survey) to gauge customer support of guiding principles to be used for development of the Water and Wastewater Plan. Overwhelmingly, the data shows support for the developed guiding principles. DOU also began to outreach to the community and start a dialogue about the Department's challenges. The Department met with neighborhood associations, cultural organizations and business groups. In addition, the Department developed a website, [YourUtilitiesYourVoice.com](http://YourUtilitiesYourVoice.com), which houses all materials created for this effort, additional background materials and videos produced to explain the challenge facing the Department and how funds are spent today.
- **Phase 2** is taking place in October and November 2011 and will provide additional information about the Department's capital needs and regulatory requirements. It features tours of facilities, highlighting the Sacramento River Water Treatment Plant (in operation since 1924) and Sump 2 (in operation since 1927), online video tours, development of fact sheets, and continued meetings with the community.
- **Phase 3** will take place from December through the rate hearings proposed for early 2012. The program will feature additional community rate workshops, community meetings with neighborhood and business leaders and the development of fact sheet regarding the proposed adjustments. Two additional videos will be developed

regarding the Department's efforts, including a video that explains the proposed rate adjustments, and the Department's CIP program and financing strategy.

## Water and Wastewater Capital Financing Approach and Methodology

To develop a financing plan to fund the water and wastewater program, DOU contracted with the FCS Group, a consulting group specializing in utility rate setting. In addition, DOU and FCS Group worked closely with the City Treasurer's Office to develop a financing strategy designed to get the best bond rating.

As the water and wastewater capital needs are significant and immediate, FCS Group is recommending that the City issue bonds to finance its capital and regulatory programs to avoid major rate spikes. While issuing bonds will increase the long-term cost of financing the City's capital and regulatory programs, issuing bonds in the near term will mitigate the impact on water and wastewater rates and more equitably spread the benefits and costs of the infrastructure and regulatory investment to utility customers over a longer term.

The Department worked closely with the City Treasurer's Office to develop bond financing assumptions and issuance strategy designed to achieve a bond rating strong enough to market revenue bonds. Multiple bond issuances are projected to occur over the next ten years, after which time, DOU expects to be able to finance the majority of its capital and regulatory program on a pay-as-you-go basis. The bond financing assumptions regarding reserve levels, cash to debt coverage ratios, projected debt service and interest rates are included in the calculations of the water and wastewater rate adjustments needed to finance the City's water and wastewater infrastructure and regulatory needs at sustainable levels.

The following bond financing assumptions have been built into the long-term utilities finance plan for the water and wastewater program:

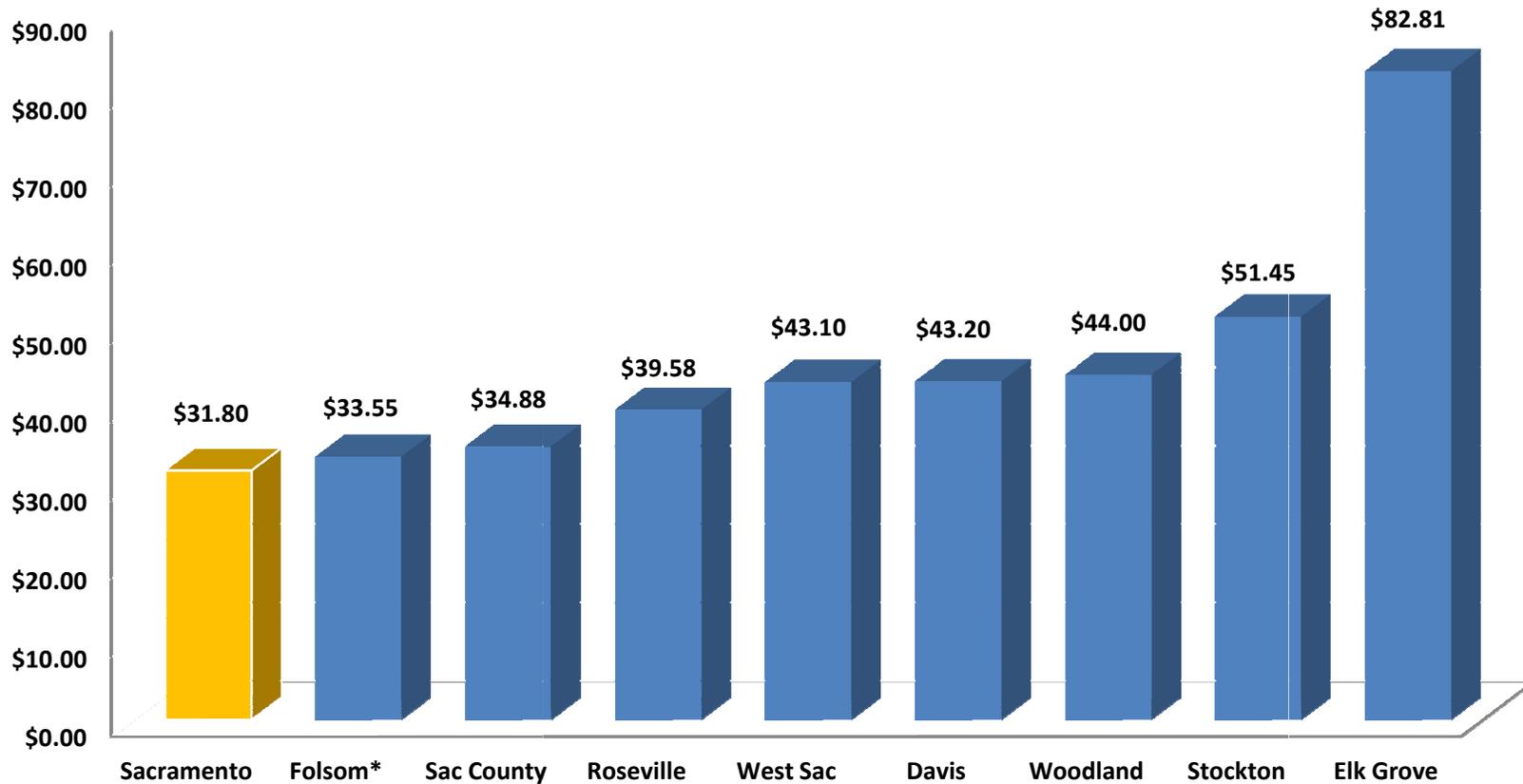
- Reserve requirements:
  - An operating/liquidity reserve (fund balance) of 120 days worth of annual operating expenditures
  - Rate stabilization reserve fund balance equivalent to 25% of annual debt service
  - Debt Service Reserve Fund level of 10% of the PAR value of the bond issuance
- Bond Loan Terms:
  - FY 2012/13 issuance – 5.25% interest rate
  - All issuances thereafter – 5.75% interest rate
  - All issuances assumed to have 36 months of capitalized interest. Capitalized interest costs are included in the issuance amount.

- All issuances are assumed to be repaid in equal annual payments over 30 years.
- Cash to debt coverage ratio:
  - 1.30 times the fund's net operating income to debt ratio



### FY2011/12 Water and Wastewater Regional Rate Comparison

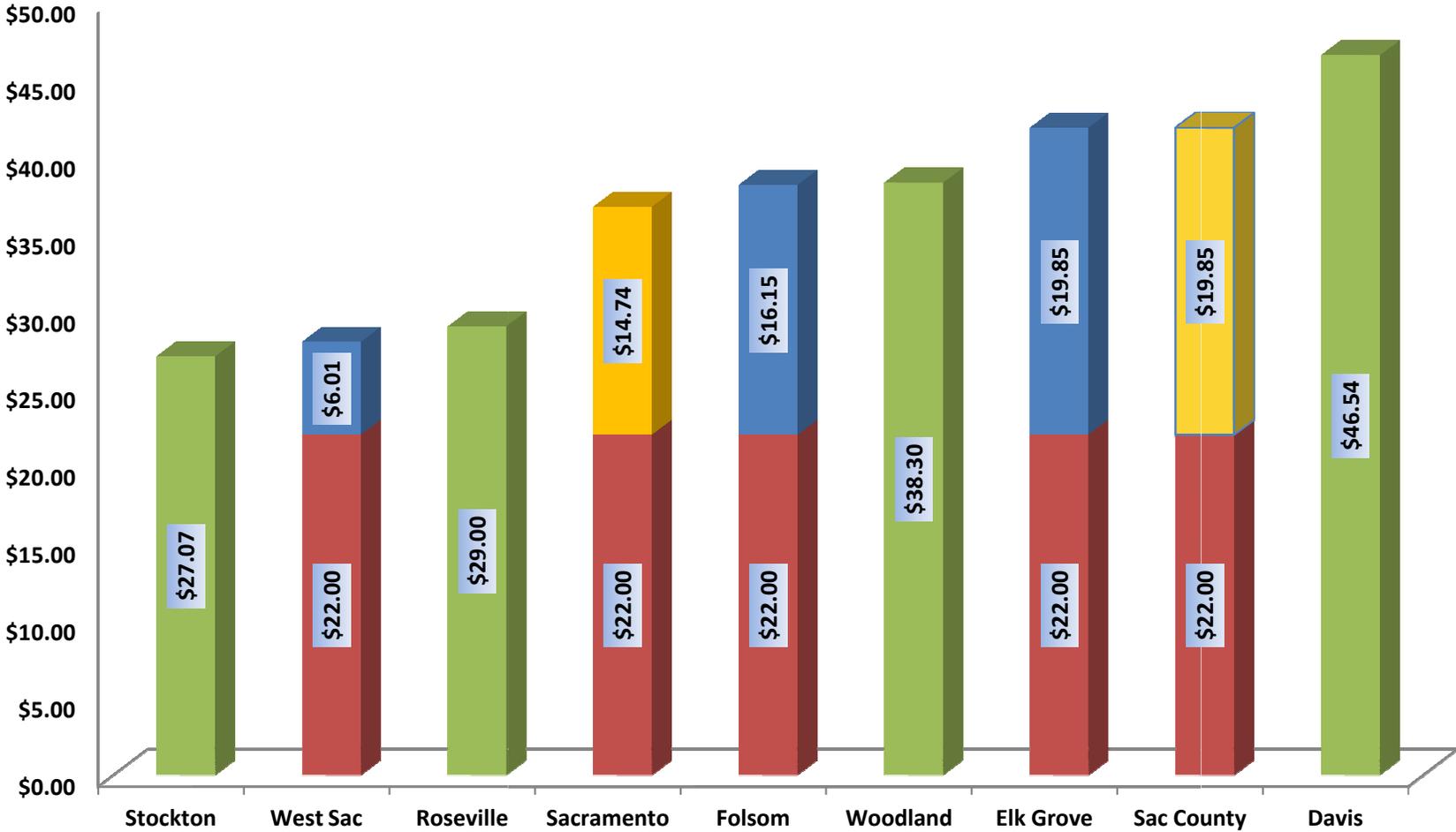
## Water Rate Comparison FY 2011/12



**Note:** Assumed usage is based off 18 ccf of consumption per month and 1" meter size.

\*The water rate for the City of Folsom represents a flat rate, since Folsom does not have metered service

# Wastewater Rate Comparison FY 2011/12



Note: Parts of the City of Sacramento are served by SASD and parts are served by DOU

■ SRCSD Treatment   
 ■ Collection   
 ■ Treatment and Collection