City of Louisville
Utility Rates Task Force

Final Report

May 2, 2014

Date: May 2, 2014

To: Louisville City Council

From: Utility Rates Task Force

Subject: Report of the Utility Rates Task Force

Copy: Kurt Kowar, P.E., Director of Public Works
Kevin Watson, Director of Finance

I. Utility Rates Task Force

The City Council created the Utility Rates Task Force (Task Force) on April 16, 2013, via Resolution No. 20, Series 2013, to provide advisory oversight and recommendations with respect to the water, wastewater and stormwater utility rates and system development charges (SDCs) charged by the City of Louisville (City). The Task Force consists of seven members including two homeowners, two business owners, two homeowner association representatives, and one at-large community representative. The Task Force members are:

Drew Beckwith	Richard Brew
Earl Hauserman	Joel Hayes
Ashley Stolzmann	Ned Williams
Ernest Villany	

Drew Beckwith and Ned Williams were nominated (and accepted the nominations) to present the Task Force recommendations to City Council.

II. Task Force Activities

On April 2, 2013, the City Council retained Red Oak Consulting to conduct a utility rate study for the City's water, wastewater and stormwater utilities. About midway through the study, Red Oak Consulting's two project leaders joined Raftelis Financial Consultants, Inc. (RFC). In response to this change, the City transferred the rate study contract to RFC. RFC completed this work under the oversight of Public Works Department and Finance Department Staff. It included the preparation of comprehensive financial plans and cost of service studies, and the consideration of SDCs for each utility.

The Task Force met on five separate occasions to review the consultant's work and to consider both conceptual and practical issues related to utility financial planning, cost allocations, rate design and SDCs. Task Force meetings were held on May 16, June 6, August 29, October 21, and November 7, 2013.

III. Task Force Recommendations on Utility Financial Planning Alternatives

The City issues revenue bond debt to fund water, wastewater, and stormwater capital expenditures on a combined utility basis. Issuing debt on this basis allows the combined revenue of all three utilities to serve as a guarantor for debt service repayment. It also facilitates compliance with bond covenant requirements such as the maintenance of minimum debt service coverage ratios and cash reserve balances.

Industry standard cost of service principles recommend that the rates charged by each utility be adequate to pay for each utility's costs incurred to provide service. Under these principles, the City's water, wastewater and stormwater utilities should have the financial strength to meet all bond covenant requirements on a "stand-alone basis" as opposed to a combined utility basis. This eliminates inappropriate cross subsidies in which utility customers are required to pay higher rates than would otherwise be the case in order to cross subsidize another utility.

At the present time, the City's wastewater and stormwater utilities do not meet this industry standard because the water utility provides financial support to the wastewater and stormwater utilities in a manner that allows combined utility revenue bond debt service coverage and cash reserve balances to be maintained in full compliance with bond covenants.

The financial challenges confronting the City's wastewater and stormwater utilities during the five-year study period, 2014 – 2018, are more severe than those confronting the water utility. Approximately $20.4 million in revenue bond debt must be issued in 2015 to finance the Staff-proposed wastewater utility capital improvement program (CIP) expenditures. Similarly, approximately $7.7 million in revenue bond debt must be issued in 2015 to finance the Staff-proposed stormwater utility CIP expenditures. In contrast, no debt is required to fund the Staff-proposed water utility capital expenditures. The Task Force noted that the large rate increases that are indicated could possibly be tempered by reductions in the planned capital expenditures.

In light of the unique financial challenges confronting each of the City's utilities, RFC prepared two financial planning scenarios for Task Force consideration. The first of these financial planning scenarios, labeled the "Just-In-Time" scenario, presented the revenue increases required for each utility to maintain immediate financial self-sufficiency in the year when the debt is issued. That is, the revenue increases necessary for each utility to pay for all of the costs to provide service, including meeting minimum stand-alone debt service coverage and cash reserve balance requirements. Table 1 shows the annual revenue increases required under the "Just-In-Time" scenario.

Table 1 Required Revenue Increases Under the "Just-In-Time" Financial Planning Scenario (Immediate Utility Stand-Alone Self-Sufficiency)					
Utility	**2014**	**2015**	**2016**	**FY 2018**	**2019**
Water	0.0%	0.0%	0.0%	0.7%	0.5%
Wastewater	0.0%	71.4%	1.3%	18.6%	0.0%
Stormwater	0.0%	107.1%	0.0%	8.3%	0.0%
Combined [(a)]	0.0%	28.2%	0.5%	8.5%	0.7%
(a) Total water, wastewater, stormwater and sanitation utility bill increase.					

The second financial planning scenario, labeled the "Smoothing" scenario, presented the revenue increases required for the wastewater and stormwater utilities to transition to full financial self-sufficiency during the five-year study period. Under this scenario, the water utility continues to provide financial support to the wastewater and stormwater utilities in a manner that allows combined utility revenue bond debt service coverage and cash reserve balances to be maintained in full compliance with bond covenants.

Table 2 shows the percentage revenue increases required under the "Smoothing" scenario. The "Smoothing" approach lessens the annual impact of rate adjustments by lowering the annual percentage increases. Current monthly wastewater and stormwater utility residential bills are relatively low. A seemingly high percentage increase does not necessarily mean a correspondingly high increase in terms of absolute dollars. For example the current residential stormwater fee is $3.25 per account per month. With the 30% increase indicated for FY 2014 (see Table 2) the fee would increase to $4.23; an increase of $0.98 per month.

Table 2 Required Revenue Increases Under the "Smoothing" Financial Planning Scenario (Transition to Wastewater and Stormwater Utility Stand-alone Self-Sufficiency)					
Utility	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2018**	**FY 2019**
Water	2.0%	2.0%	2.0%	2.5%	2.5%
Wastewater	27.0%	27.0%	8.0%	8.0%	8.0%
Stormwater	30.0%	30.0%	25.0%	25.0%	0.0%
Combined [(a)]	10.5%	12.0%	5.6%	6.2%	3.7%
(a) Total water, wastewater, stormwater and sanitation utility bill increase.					

TASK FORCE FINANCIAL PLANNING RECOMMENDATION:

It is the consensus of the Task Force to recommend that the City pursue the "Smoothing" financial planning scenario shown in Table 2 in order to phase-in, over time, the impact of the total increases to the monthly utility bills. The Task Force also recommends that the City explore what assistance may be available to very low income households that are impacted by the rate increases.

In addition, the Task Force recommends that the City should move towards implementing the industry standard cost of service principle that the rates charged by each utility be adequate to pay for each utility's costs incurred to provide service such that the City's water, wastewater and stormwater utilities should have the financial strength to meet all bond covenant requirements on a "stand-alone basis".

IV. Task Force Pricing Objectives

During the second Task Force meeting Red Oak Consulting (before transfer of the contract to RFC) facilitated a discussion and exercise to determine pricing objectives important in the consideration of rate design alternatives. Table 3 lists the objectives considered.

Table 3
Task Force Pricing Objectives

Administrative Ease Minimizes the administrative burdens associated with implementing and sustaining the use of a rate structure.	**Customer Impact** Minimizes rate impact among customers in similar classes, in both the short-term and long-term.
Cost-of-Service Equity Equitably recovers cost borne by the City to provide that service.	**Fixed Income/Affordability** Provides rate structure that mitigates rates/cost to low income users.
Customer Acceptance Provides rate structure that is both understandable and acceptable to customers.	**Growth Pays for Itself** Supports new housing, commercial, and industrial development.
Peak Usage Reduction Assigns cost of providing peaking facilities to those customers having significant peak to average water use patterns, i.e., discourages use of water during periods of peak demand.	**Revenue Stability** Provides stable revenue stream to recover revenue requirements in the face of variable external factors such as tourism and weather.
Large Volume Customers Has minimum to moderate financial impacts on large water users and significant sewer accounts.	**Water Conservation** Promotes efficient use of resources on a year-round basis.
Environmental Enhancements Provides funding for sustainable / green utility improvements, e.g., wet lands, creek enhancements and utility-related environmental improvements resulting in not just meeting, but exceeding regulatory requirements.	

Table 4 summarizes the results of the Pricing Objectives exercise. The identification and ranking of pricing objectives did not lead to a specific rate design, but did provide direction to the consultant and Staff in the development of the rate design alternatives.

Table 4 Task Force Pricing Objectives Rankings			
Pricing Objective	**Total**	**Average**	**Rank**
Growth pays for itself	32	4.57	1
Cost of service equity	31	4.43	2
Water conservation	30	4.29	3
Environmental enhancements	26	3.71	4
Customer acceptance	23	3.29	5
Customer impact	21	3.00	6
Fixed income / affordability	20	2.86	7
Revenue stability	19	2.71	8
Administrative ease	18	2.57	9
Peak usage reduction	17	2.43	10
Large volume customers	12	1.71	11

V. Task Force Recommendations on Water Rate Structure

Water Rate Structure Alternative 1: Status Quo

The Task Force formally considered four water rate structure alternatives[1]. The first alternative uses the existing water rate structure (Status Quo). Table 5 shows the 2014 rates under the existing water rate structure based on the recommended "Smoothing" scenario (a 2% revenue

[1] Two other rate options were presented to the Task Force by two of its members and a third by a non-member citizen of Louisville. Each alternative was discussed by the Task Force and as deemed appropriate, have to some extent, been included in the four water rate alternatives discussed in this section of the report.

increase; a 2% across-the-board increase over current rates – all customers will see a 2% increase in their bills assuming water use does not change).

Table 5 Water Rate Structure Alternative 1 Status Quo Rate Structure								
	Single Family	**Commercial, Irrigation, Multifamily**						
Meter Size	All	3/4”	1”	1-1/2”	2”	3”	4”	6”
Monthly Service Charge, per bill								
	$12.32	$12.32	$24.63	$36.96	$49.20	$98.56	$197.10	$394.24
Volume Rate, per 1,000 gallons								
Block 1	$0.00	$3.55	$3.55	$3.55	$3.55	$3.55	$3.55	$3.55
Block 2	3.55	8.84	8.84	8.84	8.84	8.84	8.84	8.84
Block 3	8.84	9.55	9.55	9.55	9.55	9.55	9.55	9.55
Block 4	9.55	10.20	10.20	10.20	10.20	10.20	10.20	10.20
Block 5	10.20	10.88	10.88	10.88	10.88	10.88	10.88	10.88
Block 6	10.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Usage in Block, 1,000 gallons								
Block 1	5	20	40	80	160	320	640	1280
Block 2	15	10	20	40	80	160	320	640
Block 3	10	10	20	40	80	160	320	640
Block 4	10	10	20	40	80	160	320	640
Block 5	10	over 50	over 100	over 200	over 400	over 800	over 1600	over 3200
Block 6	over 50	-----	-----	-----	-----	-----	-----	-----

The potential positive aspects of the existing water rate structure include:

1) The existing single family water rate structure, with the inclusion of 5,000 gallons in the monthly service charge, provides what might be viewed as an essential indoor usage amount at a relatively low cost.

2) The existing rate structure can successfully be billed by the City’s existing customer information system and can be implemented in 2014.

3) Presumably, the existing rate structure is understood by the vast majority of customers.

The potential negative aspects of the existing water rate structure include:

1) The existing rate structure does not reflect the actual cost of providing water service to each individual customer class and therefore to the customers in the class, because the volume charges are the same for all customer classes.

2) The existing rate structure rates do not reflect the unique costs each customer class imposes on the water utility system as reflected by the intensity of their maximum day and maximum hour peak demands.

3) The consumption block thresholds used in the existing rate structure bear no relationship to the actual consumption characteristics of each customer class.

Water Rate Structure Alternative 2: Fixed Consumption Blocks for Residential Customers, Single Block for Commercial and Irrigation Customers

The second water rate structure alternative considered by the Task Force features fixed consumption block thresholds for single family residential and multifamily residential customers and a single uniform block for commercial and irrigation-only customers. All customers would pay a monthly service charge that varies by meter size. Table 6 shows the 2014 rates under Alternative 2 based on the recommended "Smoothing" financial planning scenario (a 2% revenue increase).

Table 6
Water Rate Structure Alternative 2
Fixed Consumption Blocks for Residential Customers
and Single Block for Commercial and Irrigation Customers

2014 Volume Rate, per 1,000 gallons		
Consumption Blocks	**Monthly Gallons**	**Rate**
Single Family Residential		
Block 1	0 – 5,000	$2.22
Block 2	5,001 - 15,000	4.44
Block 3	15,001 – 25,000	8.88
Block 4	Over 25,000	11.10
Multifamily Residential		
Block 1	0 - 3,000 gallons per unit	$1.89
Block 2	Next 6,000 gallons per unit	3.78
Block 3	Next 6,000 gallons per unit	7.56
Block 4	Over 15,000 per unit	9.45
Commercial		
Block 1	All Consumption	$4.08
Irrigation		
Block 1	All Consumption	$5.11

2014 Monthly Service Charge, per bill [a]			
Meter Size	**Charge**	**Meter Size**	**Charge**
3/4"	$7.60	3"	$100.40
1"	12.50	4"	175.70
1-1/2"	26.00	6"	256.00
2"	46.90		

(a) The Service Charge recovers meter reading and maintenance, fire protection, customer service and readiness-to-serve (local distribution mains) costs. The irrigation service charges are slightly lower than those shown for the other classes due to the exclusion of fire protection costs.

Because Alternative 2 reflects the results of the customer class cost-of-service (COS) analysis and a materially different rate structure, customer impacts will vary significantly from the Alternative 1 uniform, across-the-board, 2% increases. This is due to the elimination of the 5,000-gallon volume allowance in the minimum monthly bill and the change in the size of the volume rate blocks. The results of the class cost of service analysis indicated that, under the existing rate structure, the single family residential class is being subsidized by other customer classes. Tables 8 and 9 show the impacts to the single family residential customers.

The potential positive aspects of Alternative 2 include:

1) Alternative 2 is based on the results of an industry standard class cost of service study resulting in a determination of the estimated cost of proving service for each customer class. Thus, the volume charges for each customer class are reflective of the intensity of their maximum day and maximum hour peak demands.
2) The consumption block thresholds used for Alternative 2 are based on actual average customer class water consumption characteristics.
3) Alternative 2 does not provide a minimum allotment of water to single family residential customers as part of their monthly service charge (in contrast to Alternative 1). Thus, customers are charged for all water consumption and as such Alternative 2 is viewed as providing a stronger conservation efficiency signal than alternatives that include a minimum allotment of water in the fixed charge.
4) Alternative 2 can successfully be billed by the City's existing customer information system and can be implemented in 2014.

The potential negative aspects of Alternative 2 include:

1) Alternative 2 does not provide a minimum allotment of water. At least one member of the Task Force felt that this was unfair to low consumption customers who currently receive 5,000 gallons as part of the minimum charge they pay under the City's existing rate structure; customers pay for 5,000 gallons whether or not they use it.
2) In the view of at least two Task Force members, the fixed consumption block thresholds for residential customers under Alternative 2 are a "one-size-fits-all" approach that does not reflect the actual indoor and outdoor water usage needs of individual customers.

Water Rate Structure Alternative 3: Individualized Consumption Blocks Based on Average Winter Consumption (AWC)

The third water rate structure alternative considered by the Task Force features individualized consumption block thresholds based on each customer's AWC as determined from water meter readings during the months of January, February and March). Unlike Alternative 2, this rate structure does not feature unique volume rates for each customer class. Instead, all customers (residential and nonresidential) pay the same volume rate as applied to their unique individualized consumption block thresholds. Table 7 shows the 2014 rates under Alternative 3 based on the recommended "Smoothing" scenario (a 2% revenue increase).

The potential positive aspects of Alternative 3 include:

1) Alternative 3 assesses the same rate in each consumption block to all customers regardless of their class. This results in a common price signal that may be perceived as more equitable by some customers because everyone pays the same rate.
2) Consumption block thresholds under Alternative 3 are based on each customer's actual AWC. This may be perceived as more equitable by some customers who dislike "one-size-fits-all" fixed consumption block thresholds used in Alternatives 1 and 2.
3) Alternative 3 is explicitly designed to charge higher rates for high consumption during the outdoor irrigation season. Thus, customers (regardless of customer class) who impose higher peak load demands on the water utility system have higher bills than customers who impose lower peak load demands.

Table 7
Water Rate Structure Alternative 3
Individualized Consumption Blocks Based on Average Winter Consumption

2014 Volume Rate, per 1,000 gallons

Block	Block Usage [(a)]	Rate
Block 1	AWC (100%)	$2.16
Block 2	101% - 300% of AWC	$4.32
Block 3	301% - 500% of AWC	$8.64
Block 4	Over 500% of AWC	$10.80

2014 Monthly Service Charge, per bill [(b)]

Meter Size	Charge	Meter Size	Charge
3/4"	$7.60	3"	$100.40
1"	$12.50	4"	$175.70
1-1/2"	$26.00	6"	$256.00
2"	$46.90		

(a) Average Winter Consumption (AWC) is equal to the average monthly water use meter readings during the months of January, February and March.
(b) The Service Charge recovers meter reading and maintenance, fire protection, customer service and readiness-to-serve (local distribution mains) costs. The Irrigation service charges are slightly lower than those shown for the other classes due to the exclusion of fire protection costs.

The potential negative aspects of Alternative 3 include:

1) At least one member of the Task Force believes that Alternative 3 is unfair to customers with large irrigable areas. For example, consider two customers with the exact same AWC. Both customers would have the same Block 1 consumption threshold. If one

customer had significantly more irrigable area than the other, a larger percentage of his/her consumption would be billed at the higher Block 2 and Block 3 rates.

2) Alternative 3 requires a higher level of customer information system capabilities than currently possessed by the City. It cannot be implemented until 2015 at the earliest due to these limitations.
3) Alternative 3 may require an increased level of customer education and outreach.

Water Rate Structure Alternatives 2 and 3: Customer Bill Impacts
Tables 8 and 9 illustrate the bill impacts associated with Alternatives 2 and 3 as compared to the City's current rate structure. As previously noted under Alternative 1 (the City's current rate approach adjusted to generate 2% more revenue), all customers would see a 2% increase.

Table 8 shows the percent of single family residential bills that increase and decrease within the indicated ranges. For example, under Alternative 2, 8.1% of all the single family residential bills issued over a 12-month period will decrease by up to 5%. The bill impacts reflect the necessary increase in revenues, the results of the change in rate structure/design, and the movement to cost of service. Alternative 3 rates results in fewer bill increases than Alternative 2. Additionally, Alternative 3 increases bills more for the highest water users.

Table 8
Single Family Residential Customer Monthly Water Bill Impacts Under Alternative Water Rates

Range of Monthly Bill Outcomes		Alternative 2 2014 Rates	Alternative 3 2014 Rates
Increase of:	Greater than 50%	17.5%	23.1%
	20% to 50%	56.6%	40.3%
	10% to 20%	11.2%	17.4%
	5% to 10%	0.0%	0.9%
	0% to 5%	0.0%	1.2%
Total		85.3%	82.9%
Bills with Increase		***62,410***	***60,587***
Decrease of:	0% to 5%	8.1%	9.1%
	5% to 10%	0.0%	0.3%
	10% to 20%	3.8%	4.5%
	20% to 50%	2.8%	3.2%
	Greater than 50%	0.0%	0.0%
Total		14.7%	17.1%
Bills with Decrease		***10,658***	***12,481***
Total Bills		***73,068***	***73,068***

Table 9 compares monthly single family residential bills under existing 2013 and alternative 2014 water rates. The second column shows the percent of single family bills for each usage tier. Nearly half of the bills are for monthly usage of 5,000 gallons or less. There is a substantial difference in Alternative 1 bills compared to Alternatives 2 and 3 bills. Water rates for Alternatives 2 and 3 are based on cost of service and result in lower bills for low usage and higher bills for medium and high usage. The cost of service analysis indicates that, under the current rate structure, the single family residential customer class is being subsidized by the other classes. Alternatives 2 and 3 will improve the ability of water rates to equitably recover class cost of service.

Table 9
Comparison of Monthly Single Family Residential Water Bills
Under Existing 2013 and Alternative 2014 Water Rates

Monthly Usage *(gallons)*	**Percent of Monthly Bills**	**Existing 2013 Rates**	**Alternative 1 2014 Rates *(Status Quo Blocks)***	**Alternative 2 2014 Rates *(Revised Blocks)***	**Alternative 3 2014 Rates (1) *(AWC Blocks)***
0	2.4%	$12.08	$12.32	$7.60	$7.60
1,000	3.8%	12.08	12.32	9.82	9.76
2,000	8.0%	12.08	12.32	12.04	11.92
3,000	11.1%	12.08	12.32	14.26	14.08
4,000	11.5%	12.08	12.32	16.48	16.24
5,000	9.4%	12.08	12.32	18.70	20.56
6,000	7.0%	15.56	15.87	23.14	24.88
7,000	5.5%	19.04	19.42	27.58	29.20
8,000	4.3%	22.52	22.97	32.02	33.52
9,000	3.5%	26.00	26.52	36.46	37.84
10,000	3.1%	29.48	30.07	40.90	42.16
15,000	2.0%	46.88	47.82	63.10	76.72
20,000	1.3%	64.28	65.57	107.50	119.92
30,000	0.4%	150.98	153.97	207.40	227.92
40,000	0.1%	244.58	249.47	318.40	335.92
50,000	0.1%	344.58	351.47	429.40	443.92

(1) Monthly bills based on AWC of 4,000 gallons per month.

Similar customer impact information for multi-family, commercial and irrigation accounts was also presented to the Task Force.

Because of the assumptions and data requirements associated with Alternative 4 (discussed in the next section), example rates were not developed and therefore, customer impact information is not available.

Water Rate Structure Alternative 4: Water Budgets

The fourth and final alternative water rate structure considered by the Task Force was the "water budget" rate structure. This rate structure generated much debate among the Task Force members and was ultimately the favored alternative on the part of a majority of Task Force members.

Under a water budget rate structure, each customer receives a monthly allotment of water (their water budget) that reflects their estimated indoor and outdoor water usage needs. Customers who stay within their allotted monthly budget are billed at a lower rate than customers who exceed their allotted monthly budget. One of the benefits or advantages frequently cited for water budget rate structures is that they tend to encourage customer water use efficiency by explicitly defining efficient water usage during each month of the year. Utilities with inadequate water resources might consider water budget rate structures for this reason.

Water budget rate structures can require extensive information to establish the indoor and outdoor water use allotments or budgets for each customer (for example, number of persons per household, irrigable area, type of vegetation, and even irrigation system efficiency). At least one member of the Task Force observed that the indoor budget could be determined by using AWC and thus simplifying the data requirements and avoid being too intrusive (i.e., asking customers to provide information regarding the number of residents in the dwelling). While this could be a reasonable accommodation, another Task Force member stated that AWC, while readily available, was not a good measure of efficient water use. This discussion highlights the "balancing" of equity and administration when considering the detailed elements associated with the design of water budget rates.

The potential positive aspects of Alternative 4 include:

1) Water budget rate structures provide an explicit signal to customers regarding the level of water consumption that is considered reasonable and efficient for both indoor and outdoor water use.

2) Water budget rate structures reward customers with lower bills when they use less than their total budget allotment and penalize customers with higher bills when they use more than their total budget allotment.

3) Water budget rate structures ensure that all customers receive an allocation of water adequate to meet their outdoor irrigation needs at a fair rate. This stands in contrast to the City's existing rate structure (Status Quo), the Alternative 2 rate structure (fixed consumption thresholds), and the Alternative 3 rate structure (consumption thresholds based on AWC). Each of these rate structures may cause customers with large irrigable

areas to be pay high marginal rates for outdoor irrigation consumption - even if they are irrigating in an efficient manner (i.e., even if they are not over-watering their lawns or other landscaping).

4) In other communities where water budgets have been implemented, customers perceive water budgets to be fairer as they are based on the needs of the individual household.

5) Water budget rate structures make drought-response actions easy to track.

6) Water budget rate structures allow identification of over-users and promote targeting of conservation programs and other financial assistance to customers.

7) Water budget rate structures provide greater accuracy/certainty in long-term water resource planning, as there is a good estimate for the quantity of water required for each account.

The potential negative aspects of Alternative 4 include:

1) At least one member of the Task Force noted that water budget rate structures may be considered intrusive by some customers because they require personal information (household size, irrigable area, type of landscaping, etc.) be collected by the utility.

2) At least one member of the Task Force noted that water budget rate structures may actually encourage large lot residential development because water budget rate structures often provide an allotment of water for efficient outdoor irrigation no matter how large a customer's irrigable area may be.

3) More than one Task Force member noted that water budget rate structures may be considered unfair since it could result in differing water bills for the same water usage amount. The following example illustrates this situation by comparing two customers that have the same monthly usage and differing monthly water budgets, resulting in differing water bills.

Sample Water Budget Volume Charge

Block 1	100% of water budget	\$4.00 per 1000 gallons
Block 2	All additional usage	\$6.00 per 1000 gallons

Customer A (small irrigable area)

Water budget	5,000 gallons
Water usage	10,000 gallons
Water bill	= \$50 (\$4.00/Kgal x 5 Kgal + \$6.00/Kgal x 5 Kgal)

Customer B (large irrigable area)

Water budget	10,000 gallons
Water usage	10,000 gallons
Water bill	= \$40 (\$4.00/Kgal x 10 Kgal)

This fundamental feature of water budget rate structures may be perceived by some as inequitable when compared to more traditional rate designs.

4) Alternative 4 water budget rate structures require a higher level of customer information system capabilities and geographic information data than currently possessed by the City. This rate approach cannot be implemented until 2015 (at the earliest) due to these limitations.

5) Water budget rate structures can be complex to implement for nonresidential customers. This is because, unlike single or multifamily residential customers, nonresidential customers often have highly diverse water consumption characteristics that are not directly correlated to metrics such as outdoor irrigation consumption.

6) Water budget rate structures may require an increased level of customer education and outreach.

TASK FORCE WATER RATE STRUCTURE RECOMMENDATION:

Four of the seven members expressed an explicit preference for water budget rate structures. The majority of the Task Force believes that the City should have a rate structure that can be used to restrict the use of water and that this alternative can function in that capacity.

One Task Force member preferred the Alternative 1 rate structure (Status Quo). One member was comfortable with Alternative 2 rate structure (Fixed Consumption Blocks for Residential Customers, Single Block for Commercial and Irrigation Customers). One member was in support of either Alternative 1 or 2 rate structure with the following adjustments: changes to tier sizes, provision of some volume allowance in the service charge; inclusion of duplex and patio homes in single family residential class; and other multifamily customers in nonresidential class.

After considerable discussion, the Task Force members, by consensus, recommends that the City Council move forward with the further evaluation of the Alternative 4 rate structure (Water Budgets). Over the coming months this evaluation should look at the specific elements of this rate approach, e.g., methods for determining both the indoor and outdoor budgets.

The City Council should be aware that if it elects to adopt the use of a water budget rate structure, a process must be undertaken to determine the details of this rate structure for both residential and nonresidential customers. In addition, the City must assess the customer information system and geographic information system capabilities required to implement this rate structure.

VI. Task Force Recommendations on Wastewater Rate Structure

Wastewater Rate Structure Alternative 1: Status Quo

The Task Force considered two wastewater rate structure alternatives. The first alternative was the continued use of the existing wastewater rate structure (Status Quo). The City's existing wastewater rate structure charges a monthly flat rate to all residential customers regardless of their estimated wastewater discharges. For example, in 2013, this rate is $16.29 per single family residential customer and the same for each multifamily residential dwelling unit.

The existing wastewater rate structure for nonresidential customers is highly complex with separate volume charges during the winter and summer months and ten separate consumption block thresholds. Table 10 shows the 2014 rates under the existing wastewater rate structure based on the "Smoothing" financial plan scenario (a 27% revenue increase).

Table 10 Wastewater Rate Structure Alternative 1 Existing Status Quo Rate Structure			
Description	**Residential**	**Nonresidential**	
		May - Sep	**Oct - Apr**
Monthly Charge, per unit	$20.69		
Monthly Minimum		$25.95	$27.87
		Volume Rate, per 1,000 Gallons	
Block 1		$0.00	$0.00
Block 2		1.44	1.54
Block 3		1.48	1.71
Block 4		1.61	1.92
Block 5		1.71	2.06
Block 6		1.92	2.25
Block 7		2.05	2.41
Block 8		2.14	2.66
Block 9		2.32	2.82
Block 10			3.01
		Monthly Usage in Block, 1,000 Gallons	
Block 1		20	15
Block 2		10	5
Block 3		10	10
Block 4		10	10
Block 5		10	10
Block 6		10	10
Block 7		10	10
Block 8		10	10
Block 9		over 90	10
Block 10			over 90

Wastewater Rate Structure Alternative 2: Uniform Volume Charges

The second wastewater rate structure alternative considered by the Task Force includes a single uniform volumetric rate for all wastewater discharges. Under this alternative, residential customers would be billed throughout the year based on their AWC which is a proxy for both indoor water use and year-round wastewater discharges. This methodology recognizes that all water use is not returned to the wastewater system. In contrast, the wastewater bills of nonresidential customers would be based on their actual water consumption throughout the year since this usage normally represents their discharges to the wastewater system. Table 11 shows the 2014 rates under Alternative 2 using the wastewater “Smoothing” scenario (a 27% revenue increase).

The potential positive aspects of Alternative 2 include:

1) Residential customers will be required to pay volume rates that are reflective of the actual demands they impose on the wastewater utility system, particularly as wastewater treatment becomes more expensive.
2) The wastewater rate structure for nonresidential customers will be significantly simplified.
3) Alternative 2 can be implemented in 2014 given the City’s current customer information system capabilities.
4) A significantly reduced fixed monthly charge allows residential customers greater control over the cost of their wastewater service, e.g., installing a new high-efficiency toilet and/or taking other measures to reduce indoor water use.

Table 11 Wastewater Rate Structure Alternative 2: Uniform Volume Rate for All Customers			
Volume Rate, per 1,000 gallons			
All Billable Usage, per 1,000 gallons [a]			$3.20
Residential Monthly Service Charges			
Billing Charge, per bill [b]			$1.72
Readiness-to-Serve Charge, per dwelling unit [c]			$4.47
Nonresidential Monthly Service Charges			
Billing Charge, per bill [b]			$1.72
Readiness-to-Serve Charge, per bill [c]			
Meter Size	Charge	Meter Size	Charge
3/4"	$4.47	3"	$71.60
1”	8.00	4”	127.10
1-1/2"	17.90	6”	186.20
2”	31.90		

(a) Billable usage means AWC for residential customers and monthly metered water use for nonresidential customers.
(b) The billing charge recovers customer service costs.
(c) The readiness-to-serve charge recovers a portion of the cost of local collection facilities.

TASK FORCE WASTEWATER RATE STRUCTURE RECOMMENDATION:

It is the recommendation of the Task Force that the City implement wastewater rate structure Alternative 2 (Uniform Volume Rate – see Table 11).

VII. Task Force Recommendations on Stormwater Rate Structure

Stormwater Rate Structure Alternative 1: Status Quo

The Task Force considered two stormwater rate structure alternatives. The first alternative was the continued use of the existing stormwater rate structure (Status Quo). The City's existing stormwater structure assesses a monthly flat charge to all residential customers regardless of their impervious area.

The existing stormwater structure for nonresidential customers is based on the number of equivalent residential units (EQU). One EQU equals 3,500 square feet of impervious area. Table 12 shows the 2014 rates under the existing stormwater rate structure based on the "Smoothing" financial plan scenario (a 30% revenue increase; a 30% across-the-board increase for all customers). The current residential fee or EQU value is $3.25.

Table 12
Stormwater Rate Structure Alternative 1
Status Quo

Customer Class	Rate
Residential, per monthly bill	$4.23
Nonresidential, per EQU [a]	$4.23

(a) One EQU equals 3,500 square feet of impervious area.

Stormwater Rate Structure Alternative 2: Impervious Area for all Customers

The second stormwater rate structure alternative considered by the Task Force is based on the number of EQUs for residential and nonresidential customers. This would be possible once the impervious area for each residential customer is determined. If City Council moves ahead with water rate structure Alternative 4 (Water Budgets), the data required for that alternative could be used to more equitably bill stormwater customers based on their property specific impervious area rather than charging all residential customers the same monthly amount.

TASK FORCE STORMWATER RATE STRUCTURE RECOMMENDATION:

It is the recommendation of the Task Force that the City continue with the stormwater rate structure Alternative 1 (Status Quo) until such time when the impervious area data is developed for residential customers.

VIII. Recommendations on System Development Charges

Water and Wastewater System Development Charges

Staff indicated at the beginning of the process that the Task Force would have an opportunity to discuss SDCs but the primary purpose of the Task Force was to consider rate design alternatives. Through the process the Task Force was briefed on SDC methodologies, and the calculated SDCs were shared with the Task Force (as calculated by RFC and Staff). These briefings included topics such as:

1) The three primary industry standard approaches to the SDC calculation - Buy-In, Incremental, and Combined (Hybrid) methodologies.
2) The types of costs recovered through SDCs. For the water SDC, these costs are associated with major "backbone" infrastructure such as water mains, storage facilities, water treatment plants, and water resources including water rights. For the wastewater SDC, these costs are associated with wastewater interceptors, treatment plants, lift stations, and biosolids handling facilities.
3) Whether to include contributed assets in the SDC calculation. The cost of assets contributed by developers to the City should be excluded from the SDC calculation. Otherwise developers would be paying for these assets twice: once through the contribution and once through the SDC.
4) Whether the water SDC should be split into separate facilities and water resource components that will allow the City to reflect the changing value of its water rights. This change is proposed for 2014.

Table 13 compares the City's existing and proposed water SDCs. The proposed water SDC contains an explicit identification of both a facilities component and water resources component.

Table 13
Water System Development Charges

		Proposed		
Meter Size	**Existing**	**Facilities**	**Water Resources**	**Total**
3/4"	$24,140	$12,800	$11,300	$24,100
1"	42,910	22,800	20,200	43,000
1 1/2"	96,540	51,200	45,200	96,400
2"	171,630	91,100	80,400	171,500
3"	386,160	204,800	180,800	385,600
4"	693,400	364,100	321,400	685,500

Table 14 compares the City's existing and proposed wastewater SDCs. The City's current practice is to charge nonresidential customers a wastewater SDC equal to 50% of the water SDC for the same meter size. The proposed wastewater SDC features an explicit calculation of the appropriate nonresidential SDC based on meter size, not 50% of the water SDC.

Table 14
Wastewater System Development Charges

Unit	Existing	Proposed
Single Family Residential	$3,221	$4,400
Multi-family, per Unit	$2,577	$3,600
Nonresidential		
Meter Size		
3/4"	50% of Water SDC	$4,400
1"	50% of Water SDC	7,900
1 1/2"	50% of Water SDC	17,600
2"	50% of Water SDC	31,300
3"	50% of Water SDC	70,400
4"	50% of Water SDC	125,200

Stormwater System Development Charges

The City does not currently have a stormwater SDC. The Task Force had discussions regarding the potential design of a stormwater SDC based on the City's existing stormwater drainage basins. Due to data and time limitations, a final proposed stormwater SDC was not calculated.

SYSTEM DEVELOPMENT CHARGES RECOMMENDATIONS:

There was support from the majority of the Task Force to move forward with the calculated water and wastewater SDCs.

The Task Force indicated support for Staff to move forward with the analysis of a stormwater SDC and to present such analysis and recommendation to the City Council. This should include the consideration of both a uniform City-wide stormwater SDC and a separate stormwater SDC for each stormwater drainage basis to recognize unique cost and service differentials between basins.