

# City of Des Moines

## Stormwater Rate Study Preliminary Draft Results

April 11, 2013



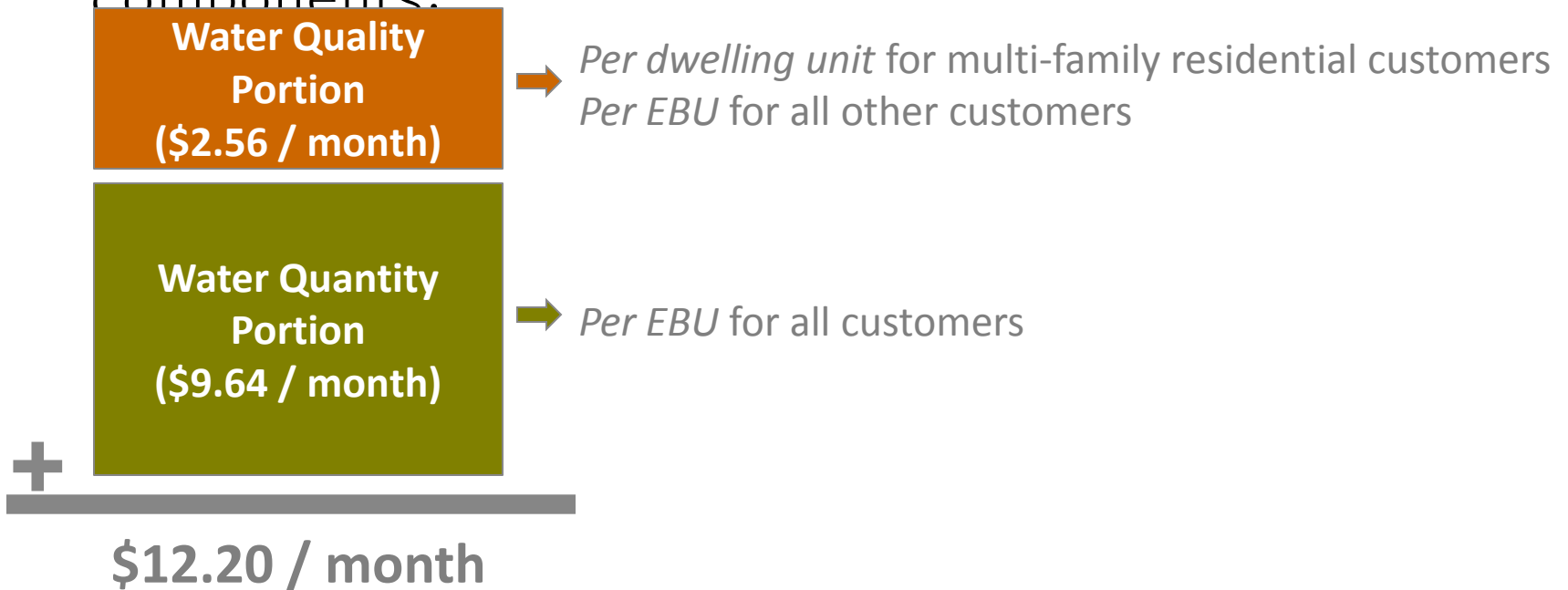
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# Work Plan

- ❖ Develop Rate Structure Policy Framework
  - Rate structure alternatives
  - Private streets and public right-of-way
  - Rate credits
  - Multi-family rates
  - Rates to public entities
- ❖ Revenue Neutral Rate Analysis
  - Recalculate equivalent billing unit (EBU) value and resulting total EBUs
  - Develop rate structure alternatives incorporating outcomes of the policy discussion

# Existing Rate Structure

- ❖ Existing rate structure consists of two components:



- ❖ One equivalent billing unit (EBU) is equal to one single family residential dwelling; 2,400 sq. ft. of impervious surface area for non-single family residential customers.

# Rate Structure Recommendations

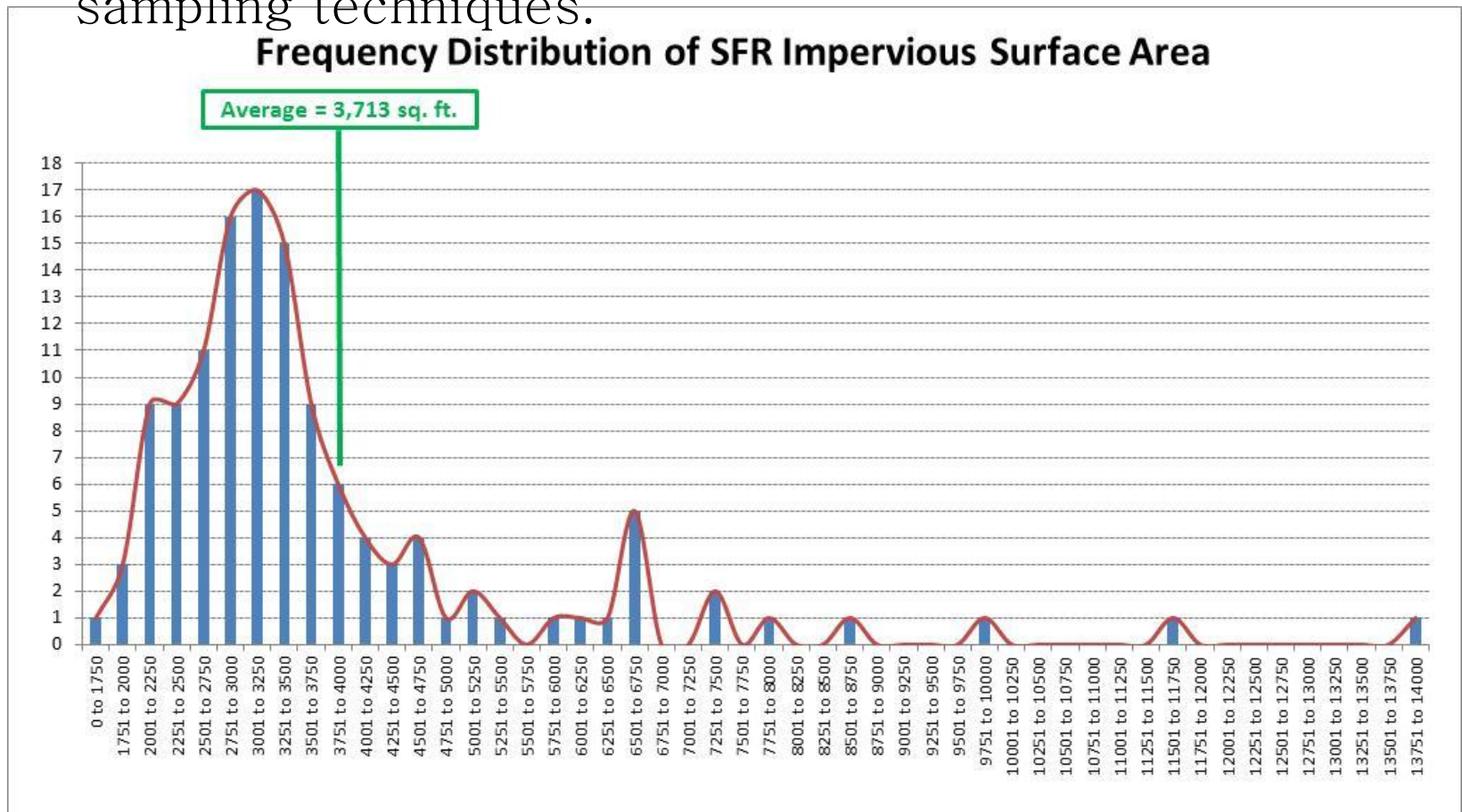
- ❖ Maintain the impervious rate basis
  - Impervious surface area is widely used and accepted as an appropriate measure of a property's contribution of runoff, providing a clear relationship, or "rational nexus", to service received from a stormwater program.
- ❖ Update the EBU definition to reflect the current average impervious surface area of single family residential customers.
  - Create tiered approach for small, medium, large, and extra large footprints
  - Charge extra large parcels based on measured impervious surface area
- ❖ Recalculate the water quality and water quantity rate components based on the utility's current program costs.
- ❖ Charge multi-family residential customers based on impervious surface area for both the water quality and water quantity components – similar to commercial customers. Eliminate per dwelling unit approach for

# Rate Structure Recommendations (continued)

- ❖ Private Streets and Public Right-of-Ways
  - Continue to exempt public streets because they are part of the stormwater conveyance system.
  - Continue charging private streets, provide rate credits within the framework of a broader credit policy for on-site mitigation measures.
- ❖ Rate Credits / Discounts
  - Continue providing low-income senior or disabled rate discounts.
  - Institute a rate credit policy for qualifying on-site mitigation.

# EBU Definition Update

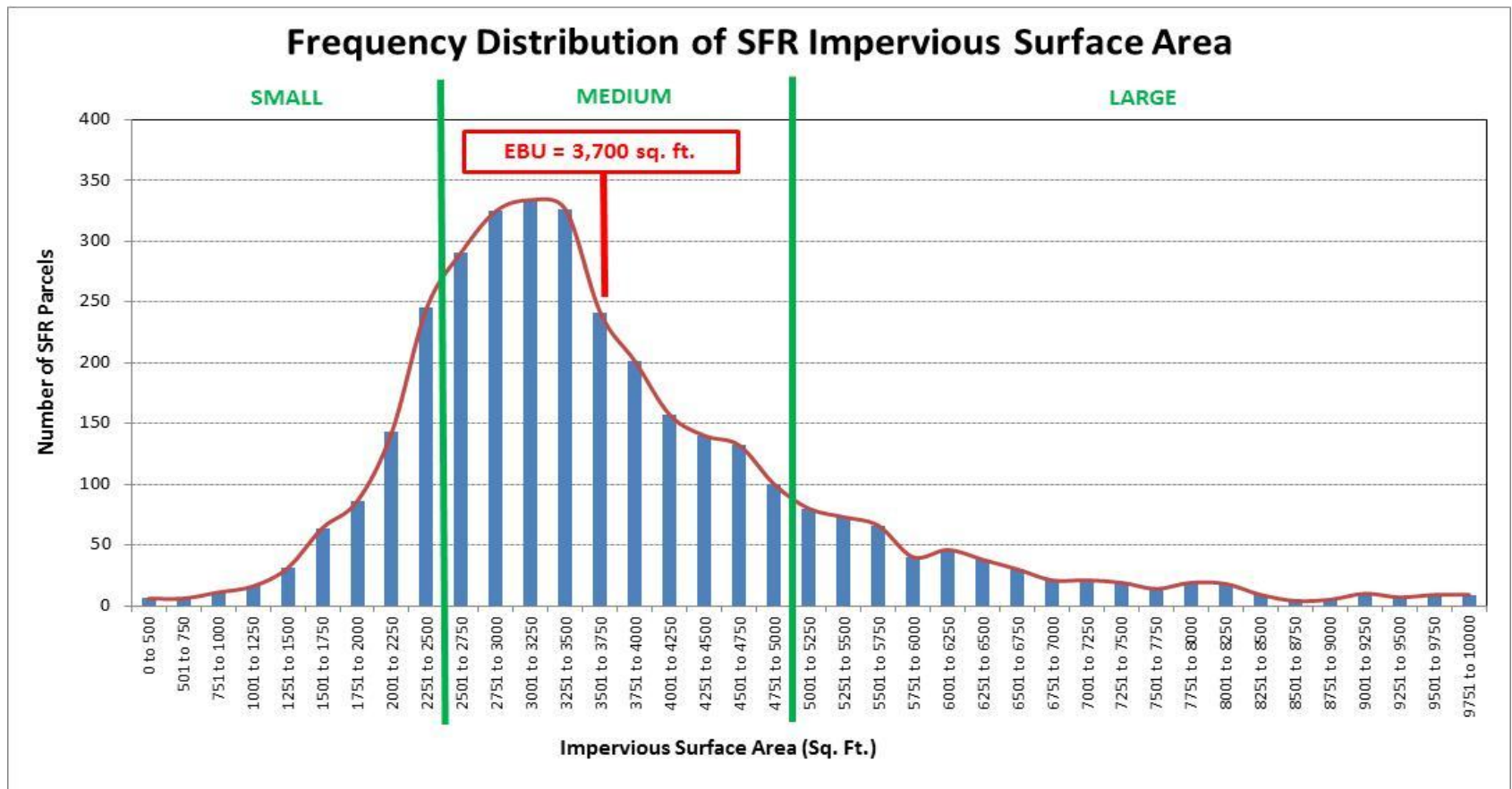
- ❖ A sample of 126 single family residential properties were measured as a starting point using statistical sampling techniques.



## PARTIAL CUSTOMER BASE

# EBU Definition Update

- ❖ City staff started measuring each parcel using geographic information system (GIS) data and techniques.



## PARTIAL CUSTOMER BASE

# EBU Definition Update

- ❖ One EBU is set equal to 3,700 square feet of impervious surface area.

Tier Classifications & Tresholds	No of Customers	Average Impervious Surface Area (sq. ft.)	
		Up to Upper Treshold	Within Each Block
Small (0 to 2,500 sq. ft.)	608	2,034	2,034
Medium (2,500 to 5,000 sq. ft.)	2,247	3,183	3,494
Large (5,000 to 10,000 sq. ft.)	538	3,697	6,420
<b>subtotal</b>	<b>3,393</b>		
Measured (> 10,000 sq. ft.)	130		
<b>TOTAL</b>	<b>3,523</b>		

Equivalent Billing Unit Conversions			
Small (0 to 2,500 sq. ft.)	$2,000 / 3,700 =$	0.54	EBU
Medium (2,500 to 5,000 sq. ft.)	$3,700 / 3,700 =$	1.00	EBU
Large (5,000 to 10,000 sq. ft.)	$6,400 / 3,700 =$	1.73	EBU

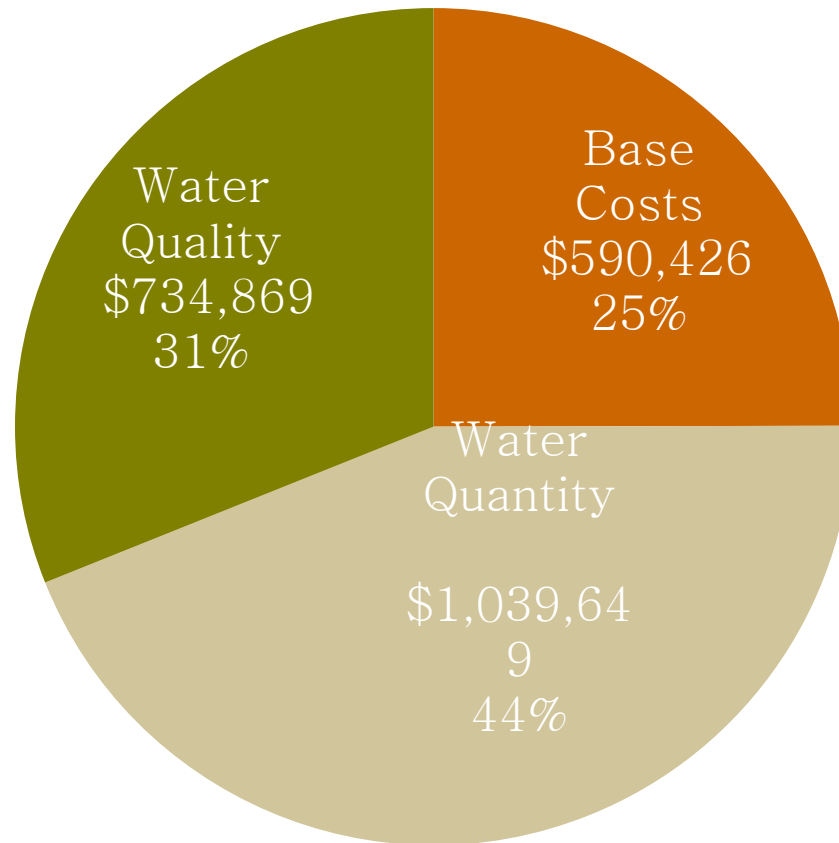


# Assumptions Used in the Rate Analysis

- ❖ Number of EBUs that benefit from rate discounts for having and maintaining on-site mitigation measures
  - 5% with full credit
  - 10% with partial credit
- ❖ Rate discounts are assumed to be
  - 100% for full credit
  - 50% for partial credit
- ❖ Actual credit amounts (i.e. percentage of rate discounts) will be determined based on site analysis by City staff upon property owners' application
  - Calculated rates will provide for the maximum allowable credit amount

# Functional Breakdown of Utility Costs

2013 Budgeted Rate Revenues  
\$2,364,945



# Calculated Monthly Rates

**PRELIMINARY DRAFT**

Rate Design	Base	Water Quality		Water Quantity		Total
		Direct	Indirect	Direct	Indirect	
Revenue Requirements	\$ 590,426	\$ 320,943	\$ 413,927	\$ 369,874	\$ 669,775	\$ 2,364,945
Weighted Number of EBUs <b>[a]</b>	13,895	13,374	13,895	13,374	13,895	
<b>Monthly Rates per EBU</b>	<b>\$ 3.54</b>	<b>\$ 2.00</b>	<b>\$ 2.48</b>	<b>\$ 2.30</b>	<b>\$ 4.02</b>	<b>\$ 14.34</b>
Single Family Residential Customers						
Small (0.54 ERU)	\$ 3.54	\$ 1.08	\$ 1.34	\$ 1.25	\$ 2.17	\$ 9.38
Medium (1.00 ERU)	\$ 3.54	\$ 2.00	\$ 2.48	\$ 2.30	\$ 4.02	\$ 14.34
Large (1.73 ERU)	\$ 3.54	\$ 3.46	\$ 4.29	\$ 3.99	\$ 6.95	\$ 22.23
Discounted Rate for On-site Mitigation (per EBU)						
With Full Credit	\$ 3.54	\$ -	\$ 2.48	\$ -	\$ 4.02	\$ 10.04
With Partial Credit <b>[b]</b>	\$ 3.54	\$ 1.00	\$ 2.48	\$ 1.15	\$ 4.02	\$ 12.19
Percent Discount for On-site Mitigation						
With Full Credit	0%	100%	0%	100%	0%	30%
With Partial Credit	0%	50%	0%	50%	0%	15%

**[a]** Assumes 5% of non-single family residential customers would benefit from full discount, and 10% of non-single family residential customers would benefit from partial discount.

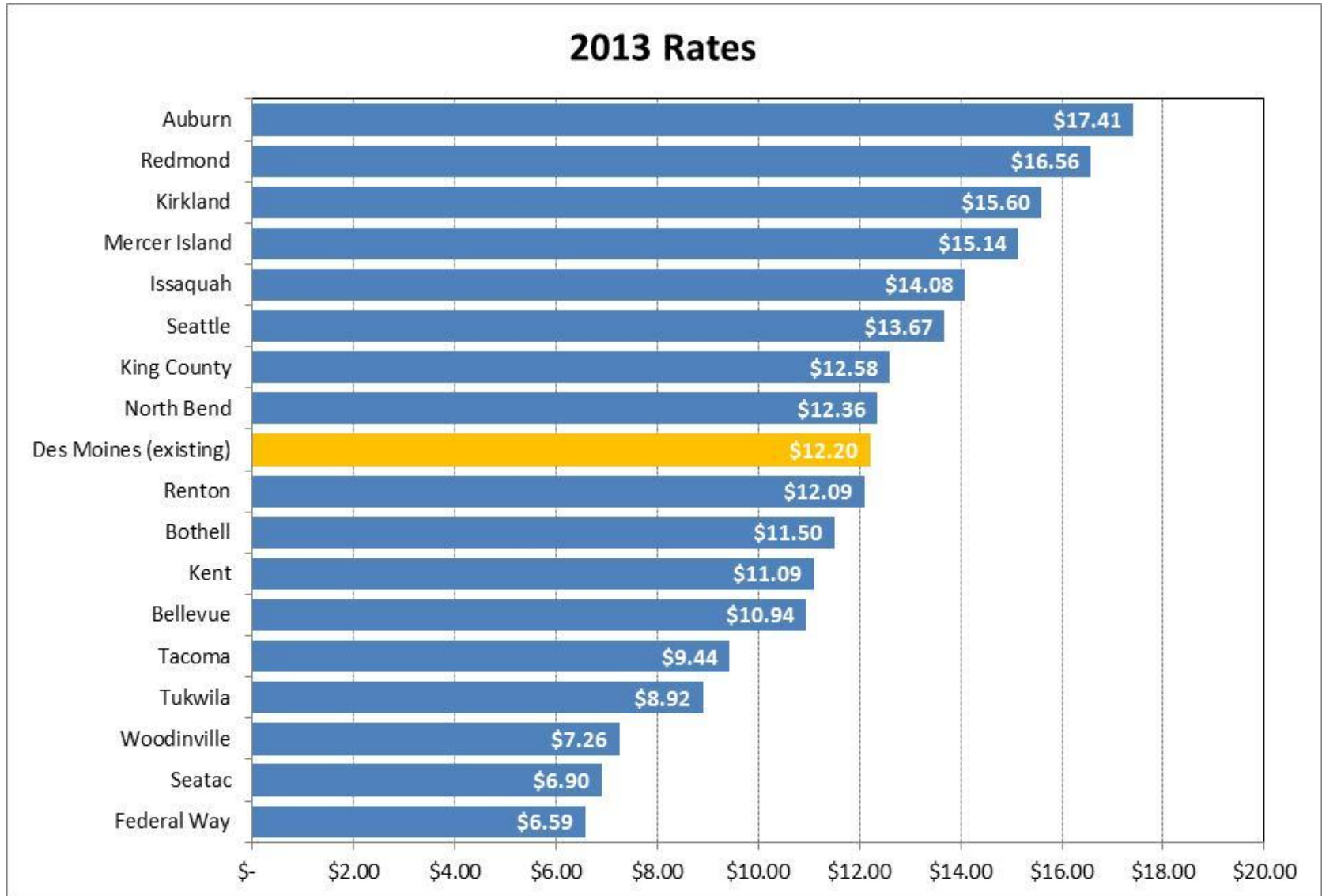
**[b]** Assumes partial credit amount is 50% of direct water quality and water quantity costs.

**Creditable Rate Portion**

# Implementation of the New Rate Structure

- ❖ Regularly inspect for proper maintenance of on-site facilities, and require periodic renewal / application process for rate credits.
- ❖ Amount of credit will be dependent on site-specific analysis by City staff.
- ❖ Credits for on-site mitigation measures will be only available for non-single family residential customers.

# Comparison of Rates with Other Jurisdictions



# Other Issues / Questions

# Application of Credit Approach

