

**CARSON CITY UTILITY FINANCIAL OVERSIGHT COMMITTEE
REQUEST FOR COMMITTEE ACTION**

Date Submitted: June 22, 2015

Meeting Date: June 30, 2015

To: Utility Financial Oversight Committee

From: Darren Schulz, Director of Public Works

Subject Title: For Possible Action: A review and discussion of commercial connection charges. A presentation from and discussion with FCS Group and staff on commercial water and sewer connection charges, with possible action to provide recommendations to the Board of Supervisors.

Staff Summary: FCS Group will present information of commercial water and sewer connection charges.

Type of Action Requested: (check one)

- None – Informational Only
- Formal Action/Motion

Recommended Commission Action: I move to recommend to the Board of Supervisors:

- For the water utility, customers that connect with a 1 ½” meter or larger, be charged a connection fee of \$6,219 per maximum day, gallon per minute, use.
- For the Sewer Utility, a connection charge of \$4,493 per Sewer Equivalent Residential Customer (SERC).

Explanation for Recommended Commission Action: The City imposes capital connection charges on new development or redevelopment as a condition of connecting to the water and sewer systems, or when increasing capacity of an existing connection. The purpose of the connection charge is to mitigate the impact of growth on the utility system and to compensate for investments already made to provide available capacity to service future growth.

Applicable Statute, Code, Policy, Rule or Regulation: NA

Fiscal Impact: Increasing connection charges would positively benefit the utilities.

Alternatives: NA

Supporting Material:

- FCS Group connection charge presentation (6/30/2015)

Prepared By: David Bruketta, Utility Manager

Reviewed By:

Al M. Brubetta
(Utility Manager)

Date: 6/22/15

[Signature]
(Public Works Director)

Date: 6/22/15

[Signature]
(District Attorney)

Date: 6/22/15

[Signature]
(Finance Director)

Date: 6/22/15

Committee Action Taken:

Motion: _____ 1) _____ Aye/Nay
2) _____ _____

_____ (Vote Recorded By)



Carson City, Nevada

Water and Sewer Connection Charges

June 30, 2015

 **FCS GROUP**
Solutions-Oriented Consulting



Agenda

- ◆ **Water Results**
 - Proposed Schedule of Charges
 - Comparison of Commercial Connection Charges
- ◆ **Sewer Results**
 - Proposed Schedule of Charges
 - Comparison of Commercial Connection Charges

Water Results



Water Proposed Schedule

Meter Size	Meter Equivalency Factors [a]	Proposed Charge
Customers up through 1" meters:		
5/8-inch	1.00	\$ 3,440
1-inch	2.50	\$ 8,600
Multifamily per unit [b]:		\$ 1,032
Customers 1 1/2" meters or larger:		
Charge per maximum day GPM [c]		\$ 6,219

[a] AWWA meter capacity equivalent ratios

[b] Alternative multifamily option: 30% of 5/8" meter charge per unit

[c] Estimated water use in maximum day gallons per minute

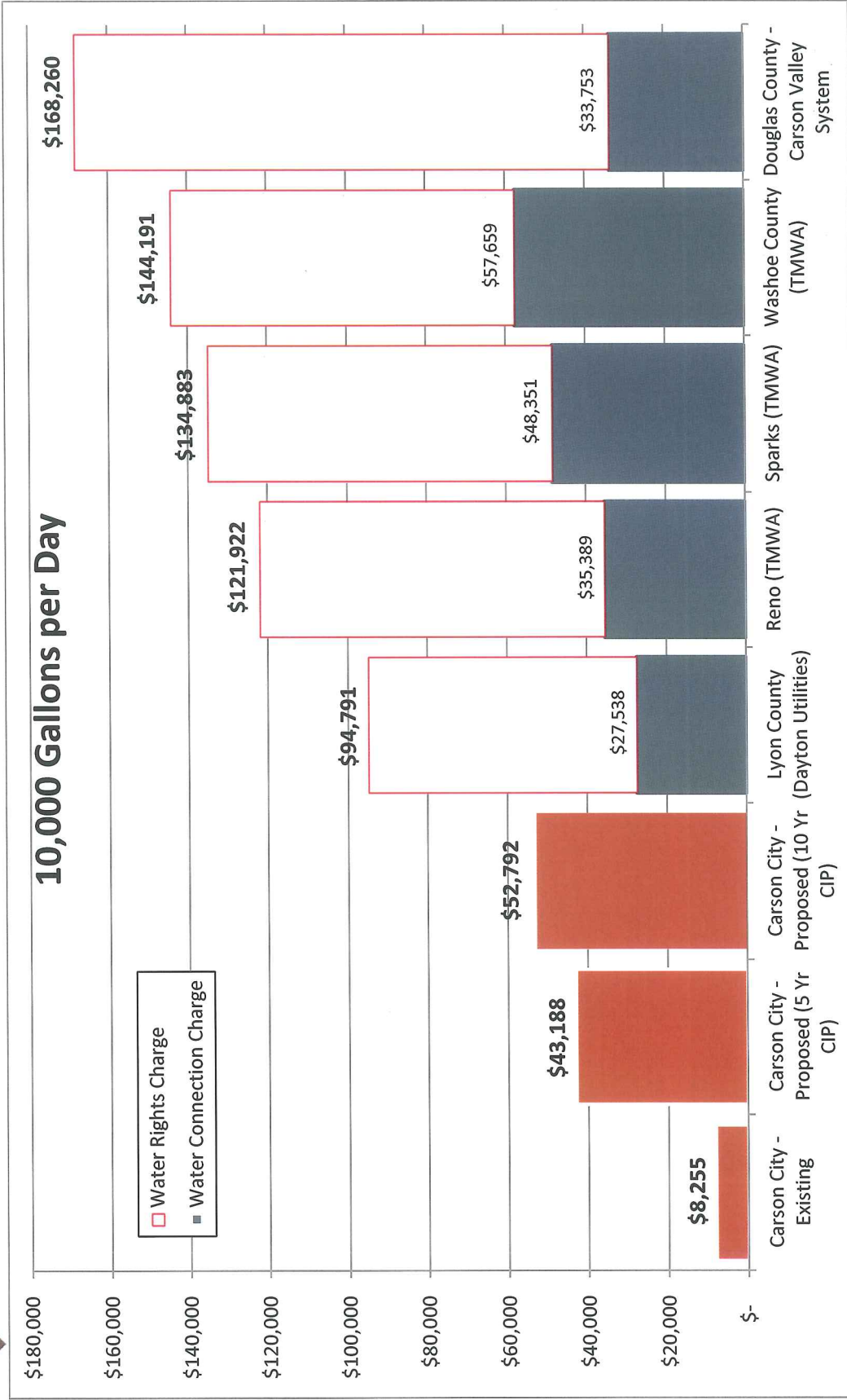


Water Customer Bill Assumptions

- ◆ **Current charge is \$454 per Water Equivalent Residential Customer (WERC)**
- ◆ **Calculated charge under proposed methodology is \$6,219 per maximum day gallons per minute (GPM)**
- ◆ **Commercial customer bill comparison assumes maximum day use equal to average day use**
- ◆ **Survey participant bills reflect currently adopted charges**
- ◆ **Carson City proposed bill assumes implementation as of 7/1/15; phase-in strategies presented**
- ◆ **Water rights:**
 - Assumes groundwater water rights
 - Lyon County assumed at \$6,000/ac-ft
 - TMWA calculated at \$7,720/ac-ft
 - Douglas County calculated at \$12,000/ac-ft



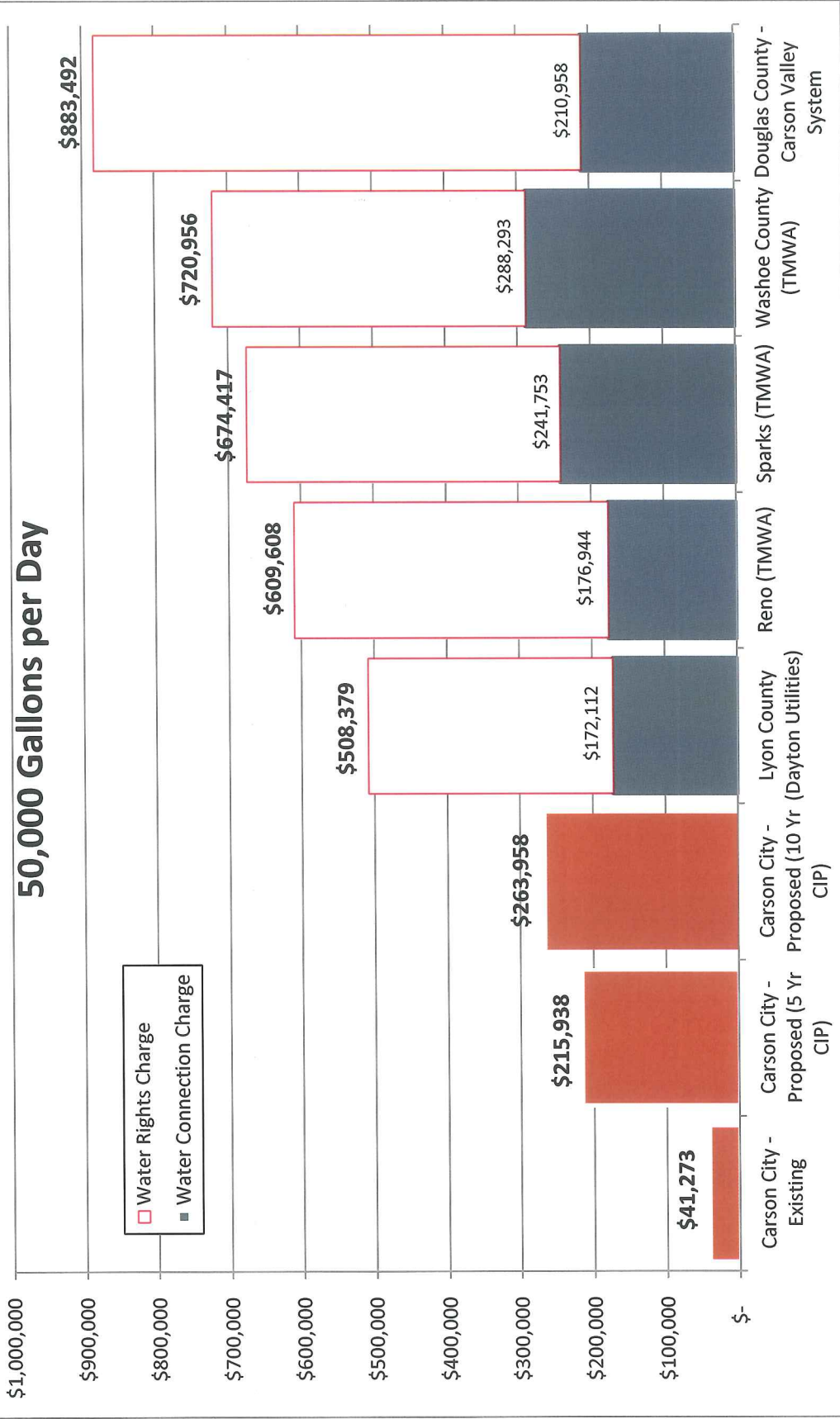
Water Commercial Customer Bill Comparison



Note: Average of TMWA areas for Sparks and Washoe County shown; rates vary



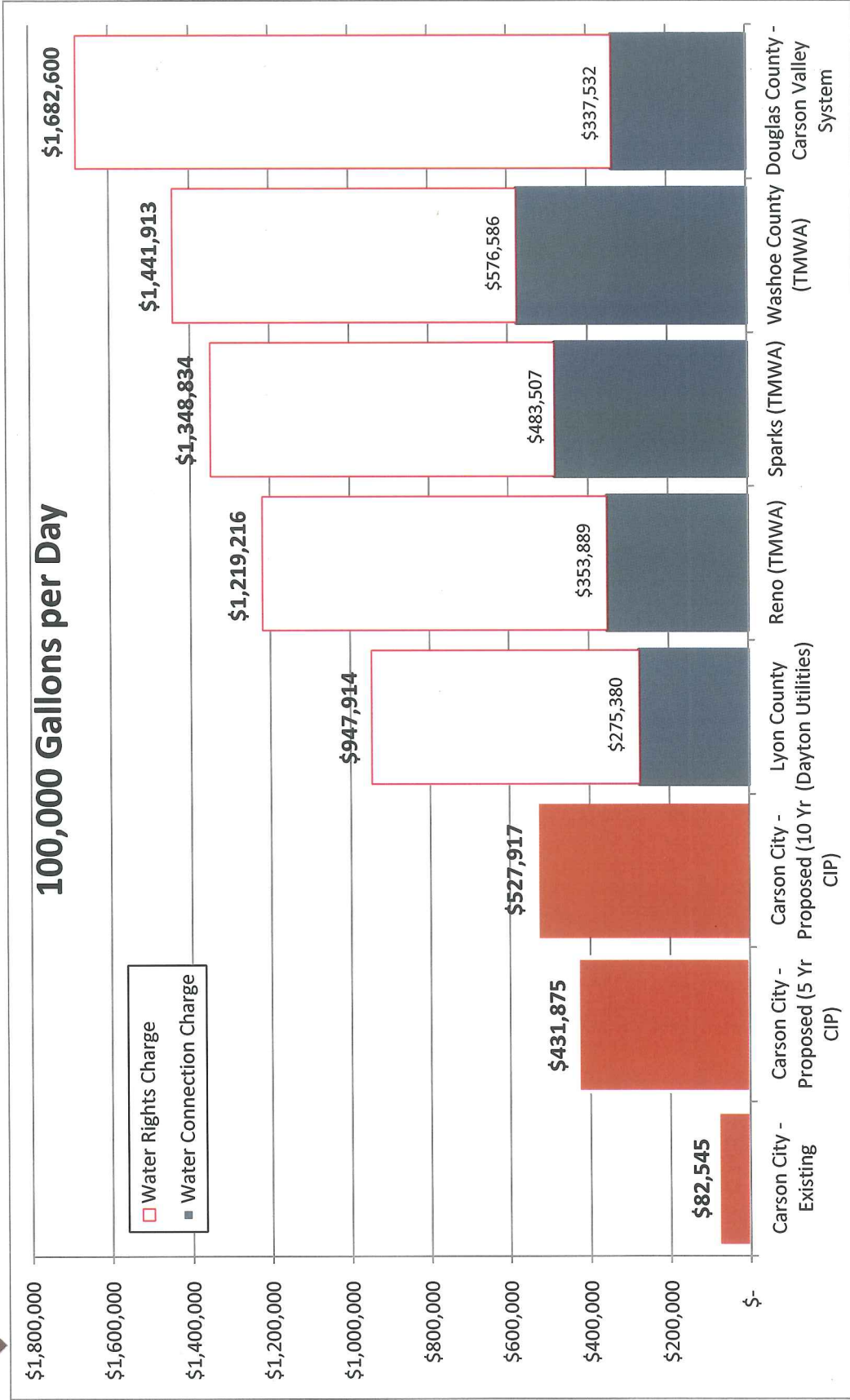
Water Commercial Customer Bill Comparison



Note: Average of TMWA areas for Sparks and Washoe County shown; rates vary



Water Commercial Customer Bill Comparison



Note: Average of TMWA areas for Sparks and Washoe County shown; rates vary

Sewer Results



Sewer Proposed Schedule

Customer Class	Existing SERC [a]	Existing Charge	Proposed SERC [b]	Proposed Charge
Single Family Residence	1.00	\$ 577	1.00	\$ 4,493
Duplex (each living unit)	1.00	577	0.75	3,370
Apartment (each living unit)	0.50	289	0.65	2,920
Mobile Home Individual lot	1.00	577	1.00	4,493
Mobile Home Park (each pad)	0.50	289	0.65	2,920
All others, per SERC	1.00	577	1.00	4,493

[a] One existing SERC is equal to 250 gallons per day

[b] One proposed SERC is equal to 200 gallons per day

SERC = Sewer Equivalent Residential Customer; gpd = gallons per day

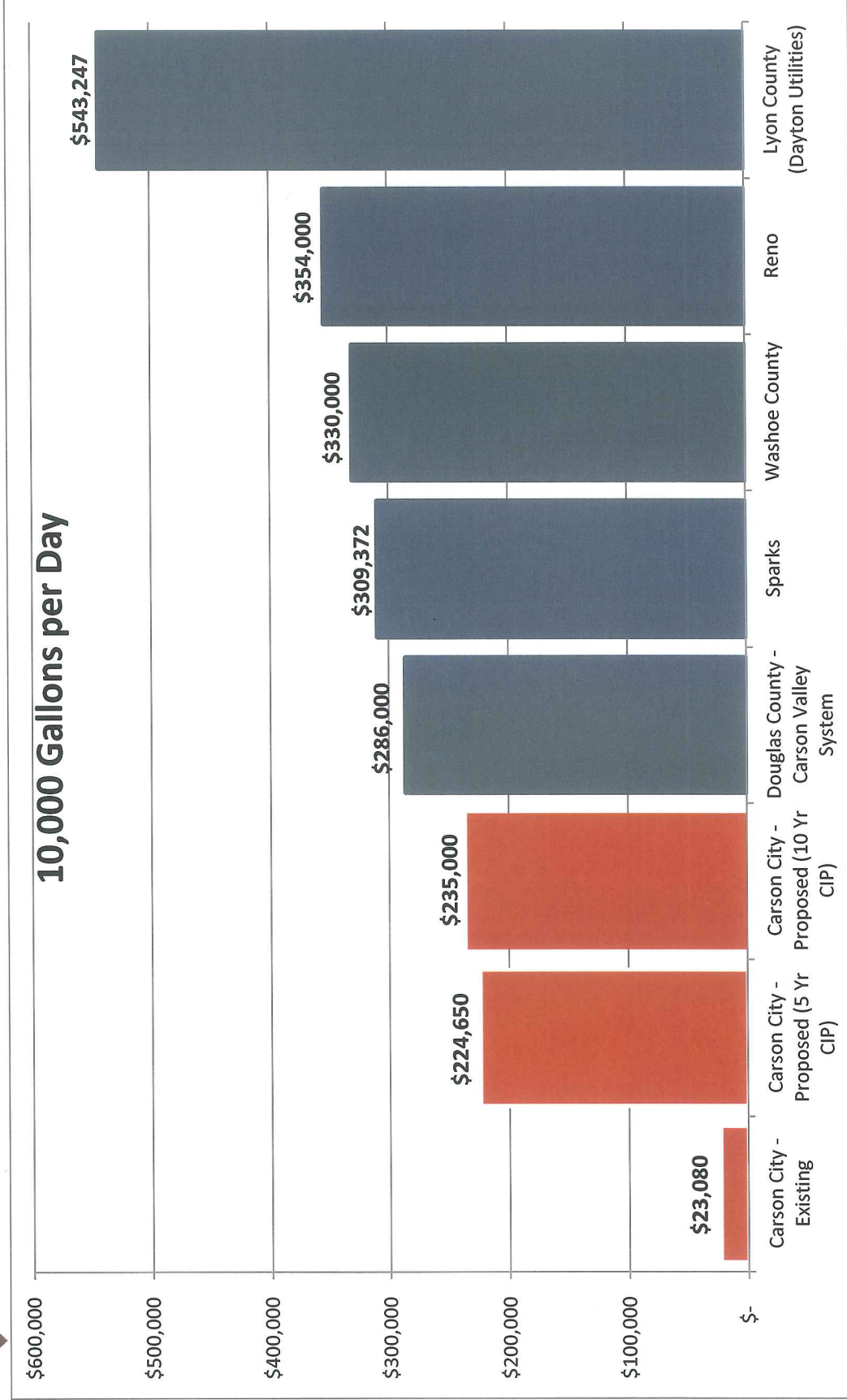


Sewer Customer Bill Assumptions

- ◆ **Current charge is \$577 per Sewer Equivalent Residential Customer (SERC)**
- ◆ **Calculated charge under proposed methodology is \$4,493 per SERC**
- ◆ **Survey participant bills reflect currently adopted charges**
- ◆ **Carson City proposed bill assumes implementation as of 7/1/15; phase-in strategies presented**



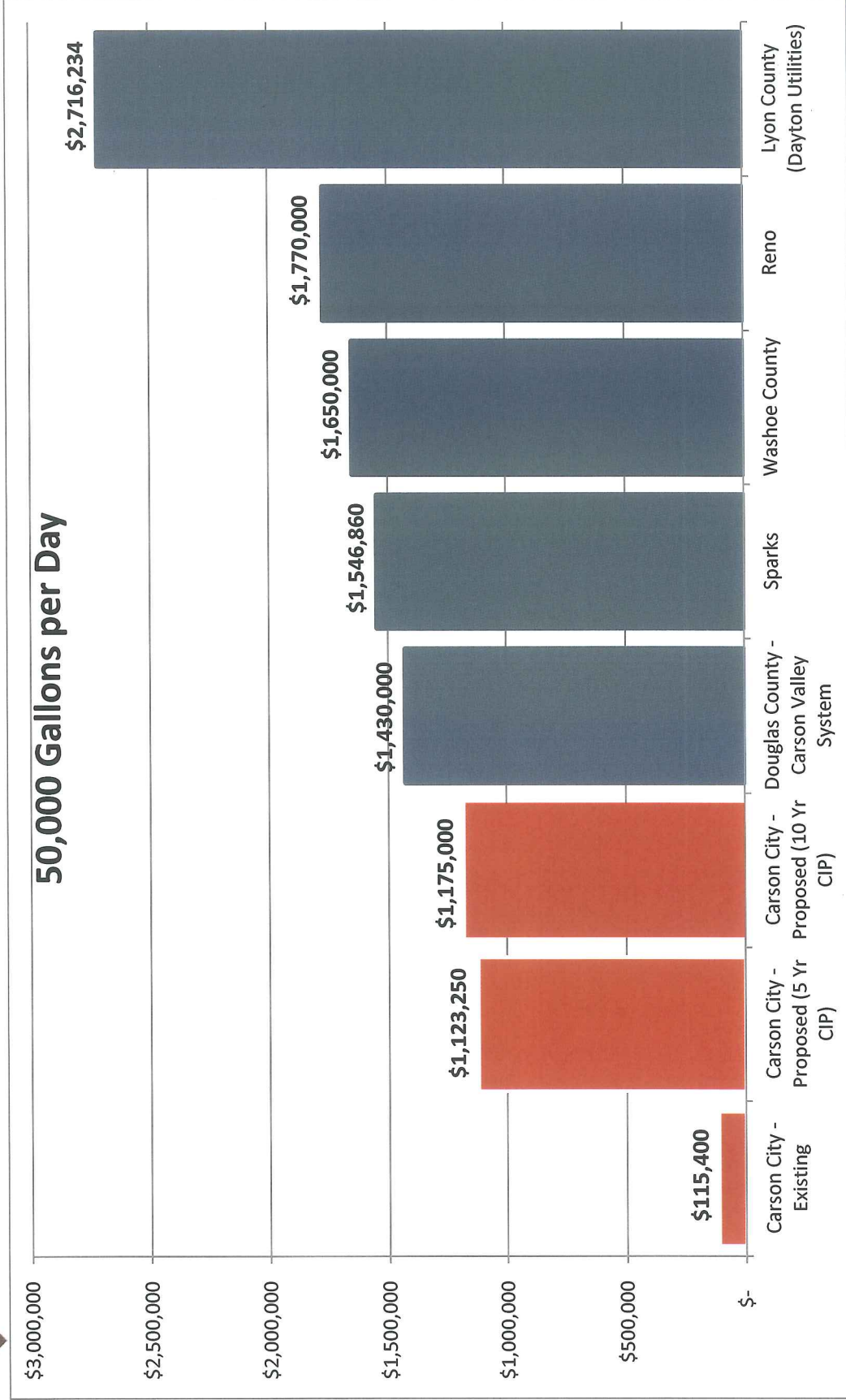
Sewer Commercial Customer Bill Comparison



Note: Sparks, Washoe County and Reno charge based on fixture units. An equivalency assumption of 24 fixture units per 200 gpd was used



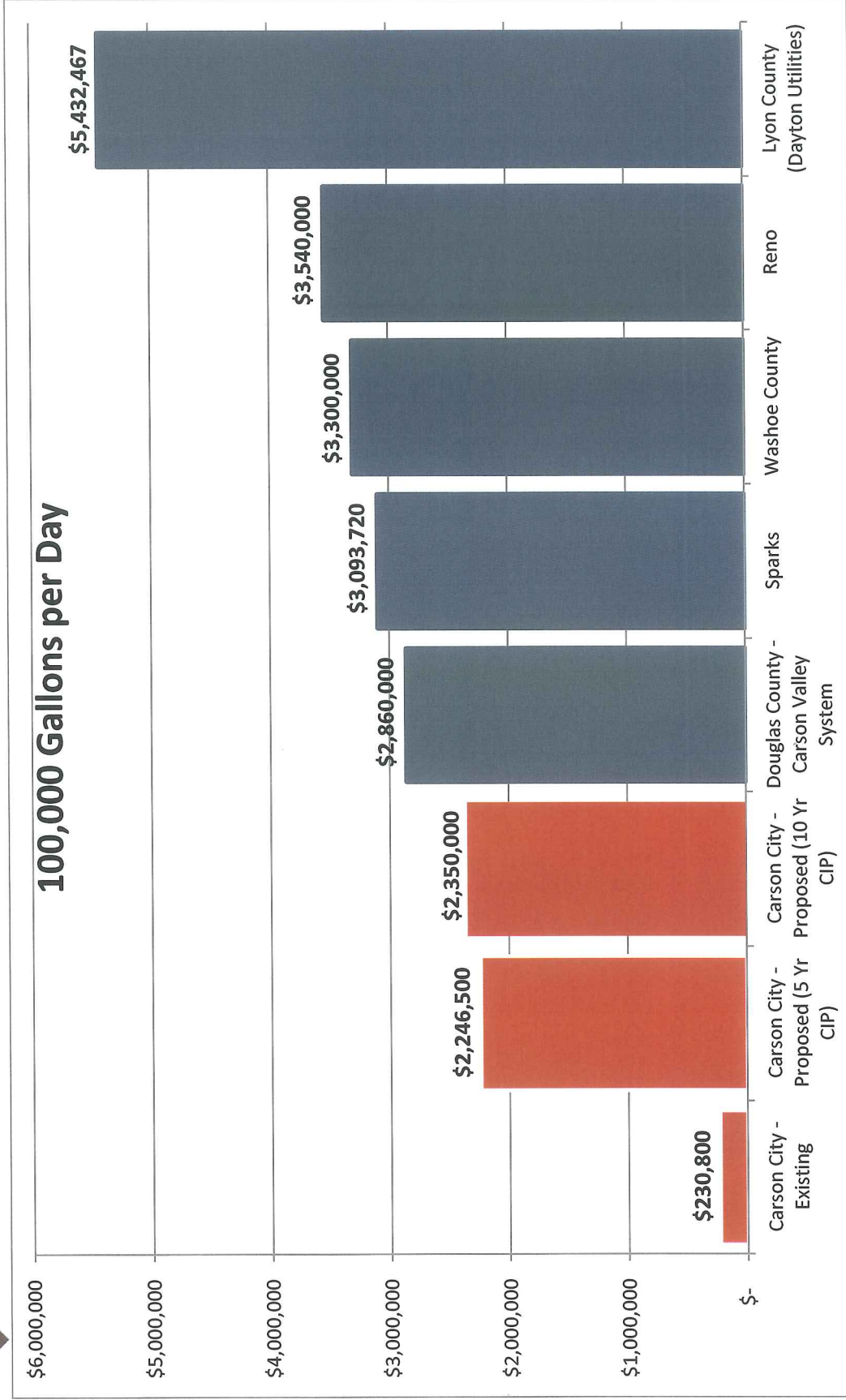
Sewer Commercial Customer Bill Comparison



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Sewer Commercial Customer Bill Comparison



Note: Sparks, Washoe County and Reno charge based on fixture units. An equivalency assumption of 24 fixture units per 200 gpd was used

Contact FCS GROUP:

425.867.1802

www.fcsgroup.com



Additional Background



Alternative Methodologies & Approaches

- ◆ **Alternative Capital Program (CIP) Timeframes**

1. Adopted 5 year program
2. 10 year plan

- ◆ **Alternative Methodologies**

1. Average Existing Cost
2. Capacity Share
3. Average Integrated Cost

Summary of Committee Meeting (Feb. 18)

- ◆ **Water:**
 - Three scenarios using different customer base definitions:
 - Water equivalent residential customers (WERC)
 - Meter equivalency factors
 - Estimated water use (maximum day gallons per minute)
 - Committee recommendation is a hybrid approach
 - Meter equivalency factors for customers with meters up through 1”
 - Charge per dwelling unit for multifamily through 1” meters
 - Estimated water use in gallons per minute approach for customers with meters 1 ½” or greater

Summary of Committee Meeting (Feb. 18)

- ◆ **Sewer:**
 - Updated sewer equivalent residential customer (SERC) definitions
 - Committee recommendation is to adopt updated definitions & charges

- ◆ **Direction to develop 5-year phase-in strategy beginning 7/1/16**



Methodology: Average Existing Cost

1. Average Existing Cost Approach

Existing System Cost
Existing Customer Base

Connection Charge =

- Built-out, mature system
- No future costs
- Rarely used



Methodology: Capacity Share

3. Allocated Capacity Share Approach

Connection Charge =

Existing System Costs:
Unused Capacity

+

Future Project Costs:
Capacity Expansion

Future Growth Served

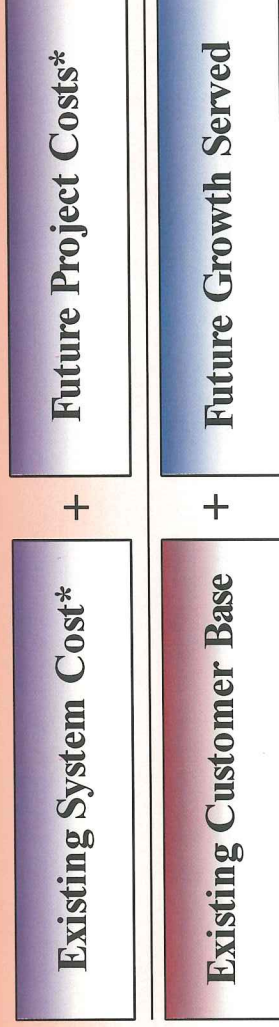
Future Growth Served

- Best suited for a rapidly growing community
- Full cost recovery for future facilities
- Requires complex analysis of project-by-project unused capacity



Methodology: Average Integrated Cost

4. Average Cost – Integrated Approach



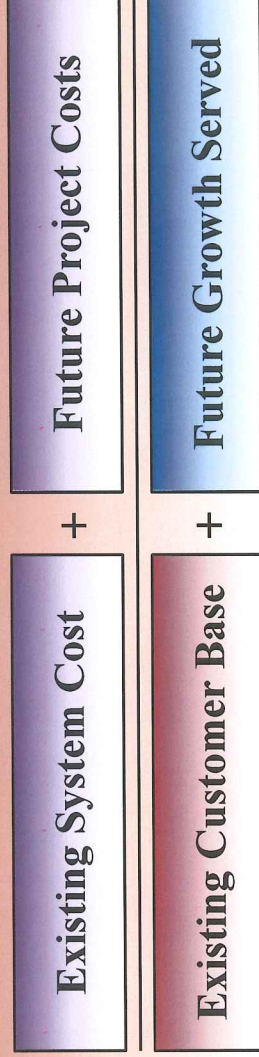
Connection Charge =

* Assumes duplicate capacity removed.

- Appropriate for a community with moderate growth
- Balanced mix of existing and future costs
- Proportional cost recovery of future costs
- Simple, straightforward estimate of equitable share
- More stable than capacity share approach for shorter planning periods

Selected Methodology

Average Cost – Integrated Approach



Connection Charge =

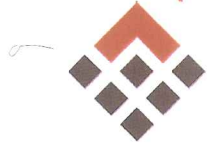
Key Considerations: Numerator

Allocable Capital Cost



- ◆ **Existing facilities costs: recovers an equitable share of the current system**
 - Inclusion of interest
 - Deduction of net debt outstanding
 - Deduction of contributed capital

- ◆ **Future facilities costs: recovers a fair share of future capital costs to serve new customers**
 - Deduction of contributed capital
 - Deduction of repair & replacement projects
 - Planning period of capital program



Key Considerations: Denominator

Applicable Customer Base

- ◆ **Planning period consistent with numerator**
 - Existing customer base represents the number of customers served by the current plant-in-service
 - Future growth represents the number of customers that can be served after completion of the capital program



Key Considerations: Denominator

Applicable Customer Base

- ◆ **Defining system capacity in units**
 - Usage-based equivalent residential units (ERUs)
 - WERC / SERC
 - Meter equivalents
 - Demand-based ERUs

- ◆ **Committee recommendations:**
 - Water: combination of meter equivalents & demand-based ERUs
 - Sewer: update usage-based equivalents (SERC)

ERU = Equivalent Residential Unit; WERC = Water Equivalent Residential Customer; SERC = Sewer Equivalent Residential Customer

Water Utility Draft Results

Water Scenario Definitions

- ◆ **Cost basis is the same in all scenarios; only customer base differs**
- ◆ **Meter Capacity Equivalents**
 - Uses AWWA meter equivalency factors to increase charge by meter size
- ◆ **Usage Based ERUs (Updated WERC)**
 - 1.0 WERC per residential, quasi-residential, or senior discount unit
 - 0.5 WERC per duplex unit
 - 0.3 WERC per multifamily unit
 - All other classes based on usage equal to 425 gallons per day (calculated from the FY 2013/14 customer statistics)
- ◆ **Maximum Day GPM**
 - Estimates maximum day water use upon connection
 - Recommended only for non-single family residential meter sizes of 1 1/2" and larger

ERU = Equivalent Residential Unit; WERC = Water Equivalent Residential Customer; GPM = Gallons per Minute



Water Calculation Summary

Connection Charge Components		Water Connection Charge Calculation		Maximum Day GPM
		Meter Capacity Equivalents	Usage Based ERUs (425 gpd)	
Existing Cost Basis				
Utility Capital Assets	\$ 134,554,918	\$ 134,554,918	\$ 134,554,918	\$ 134,554,918
plus: Construction Work in Progress	2,827,601	2,827,601	2,827,601	2,827,601
less: Contributed Capital	(25,802,750)	(25,802,750)	(25,802,750)	(25,802,750)
plus: Interest on Non-Contributed Plant	40,385,456	40,385,456	40,385,456	40,385,456
Net Assets	\$ 151,965,225	\$ 151,965,225	\$ 151,965,225	\$ 151,965,225
less: Net Debt Principal Outstanding				
Existing Cash Balances	\$ 4,364,927	\$ 4,364,927	\$ 4,364,927	\$ 4,364,927
less: Debt Principal Outstanding	(60,851,971)	(60,851,971)	(60,851,971)	(60,851,971)
Net Debt Principal Outstanding	(56,487,044)	(56,487,044)	(56,487,044)	(56,487,044)
Total Existing Cost Basis	\$ 95,478,181	\$ 95,478,181	\$ 95,478,181	\$ 95,478,181
Future Cost Basis				
Total Future Projects	\$ 16,740,000	\$ 16,740,000	\$ 16,740,000	\$ 16,740,000
less: Identified Repair & Replacement Projects	(8,567,000)	(8,567,000)	(8,567,000)	(8,567,000)
less: Contributed Future Upgrade & Expansion Assets	-	-	-	-
Total Future Cost Basis	\$ 8,173,000	\$ 8,173,000	\$ 8,173,000	\$ 8,173,000
Total Cost Basis	\$ 103,651,181	\$ 103,651,181	\$ 103,651,181	\$ 103,651,181
Customer Base				
Existing	25,222	25,222	23,059	13,951
Future (Incremental)	4,909	4,909	4,488	2,715
Total Customer Base	30,131	30,131	27,547	16,667
Calculated Connection Charge per Equivalent	\$ 3,440	\$ 3,440	\$ 3,763	\$ 6,219



Meter Capacity Equivalents

Meter Size	Meter Equivalency Factors [a]	Proposed Charge
5/8-inch	1.00	\$ 3,440
1-inch	2.50	8,600
1 1/2-inch	5.00	17,200
2-inch	8.00	27,520
3-inch	16.00	55,040
4-inch	25.00	86,000
6-inch	50.00	172,001
8-inch	80.00	275,201
10-inch	115.00	395,601
Multifamily per unit [b]:		\$ 1,032

[a] AWWA meter capacity equivalent ratios

[b] Alternative multifamily option: 30% of 5/8" meter charge per unit



Usage Based ERUs (Updated WERC)

Customer Class	Existing WERC [a]	Existing Charge	Proposed WERC [b]	Proposed Charge
Single Family Residence	1.00	\$ 454	1.00	\$ 3,763
Duplex (each living unit)	1.00	454	0.50	1,881
Apartment (each living unit)	0.50	227	0.30	1,129
Mobile Home Individual lot	1.00	454	1.00	3,763
Mobile Home Park (each pad)	0.50	227	0.30	1,129
All others, per WERC	1.00	454	1.00	3,763

[a] One existing WERC is equal to 550 gallons per day

[b] One proposed WERC is equal to 425 gallons per day

WERC = Water Equivalent Residential Customer; ERU = Equivalent Residential Unit



Maximum Day GPM Calculation

- ◆ **\$6,219 per maximum day GPM applied to estimated maximum day use**
- ◆ **Option to charge for non-single family residential meter sizes 1 1/2" and larger**

GPM = Gallons per Minute



Recommended Action: Water

- ◆ **Adopt the hybrid schedule of connection charges.**
 - Meter capacity equivalents for all customers through 1” meters, except multifamily
 - Multifamily through 1” meters charged 30% of smallest meter size charge per dwelling unit
 - Customers with a 1 ½” meter or larger charged on maximum day gallons per minute

- ◆ **Adopt a phase-in strategy:**
 - 5-year phase in
 - 3-year phase in

- ◆ **Once rates are fully implemented, adjust the fees annually for inflation based on the Engineering News Record’s “Construction Cost Index”**



Water Customer Base

Customer Base Calculations			
System Parameter	Existing	Future	Growth Factor
Average Day Demand (mgd)	9.80	11.71	119.46%
Max Day Demand (mgd) [a]	20.09	24.00	119.46%
Meter Capacity Equivalents [b]	25,222	30,131	119.46%
Maximum Day GPM	13,951	16,667	119.46%

[a] Max day to average day demand ratio = 2.05 per Master Plan

[b] Based on AWWA Meter Capacity Ratios

mgd = million gallons per day; GPM = gallons per minute; AWWA = American Water Works Association



Water Calculation Summary

Water Connection Charge Calculation			
Connection Charge Components	Meter Capacity Equivalents	Maximum Day GPM	
Existing Cost Basis			
Utility Capital Assets	\$ 134,554,918	\$ 134,554,918	
plus: Construction Work in Progress	2,827,601	2,827,601	
less: Contributed Capital	(25,802,750)	(25,802,750)	
plus: Interest on Non-Contributed Plant	40,385,456	40,385,456	
Net Assets	\$ 151,965,225	\$ 151,965,225	
less: Net Debt Principal Outstanding			
Existing Cash Balances	\$ 4,364,927	\$ 4,364,927	
less: Debt Principal Outstanding	(60,851,971)	(60,851,971)	
Net Debt Principal Outstanding	(56,487,044)	(56,487,044)	
Total Existing Cost Basis	\$ 95,478,181	\$ 95,478,181	
Future Cost Basis			
Total Future Projects	\$ 16,740,000	\$ 16,740,000	
less: Identified Repair & Replacement Projects	(8,567,000)	(8,567,000)	
less: Contributed Future Upgrade & Expansion Assets	-	-	
Total Future Cost Basis	\$ 8,173,000	\$ 8,173,000	
Total Cost Basis	\$ 103,651,181	\$ 103,651,181	
Customer Base			
Existing	25,222	13,951	
Future (Incremental)	4,909	2,715	
Total Customer Base	30,131	16,667	
Calculated Connection Charge per Equivalent	\$ 3,440	\$ 6,219	



Water Proposed Schedule

Meter Size	Meter Equivalency Factors [a]	Proposed Charge
Customers up through 1" meters:		
5/8-inch	1.00	\$ 3,440
1-inch	2.50	\$ 8,600
Multifamily per unit [b]:		\$ 1,032
Customers 1 1/2" meters or larger:		
Charge per maximum day GPM [c]		\$ 6,219

[a] AWWA meter capacity equivalent ratios

[b] Alternative multifamily option: 30% of 5/8" meter charge per unit

[c] Estimated water use in maximum day gallons per minute



Water Phase-In Strategy

◆ **Committee recommendation: Begin implementation 7/1/16, 5-year phase-in**

Meter Size	Year 1 7/1/2015	Year 2 7/1/2016	Year 3 7/1/2017	Year 4 7/1/2018	Year 5 7/1/2019	Year 6 7/1/2020
Customers up through 1" meters: 5/8-inch 1-inch	\$ 454	\$ 1,051	\$ 1,648	\$ 2,246	\$ 2,843	\$ 3,440
	\$ 454	\$ 2,083	\$ 3,712	\$ 5,342	\$ 6,971	\$ 8,600
Multifamily per unit [b]:	\$ 227	\$ 388	\$ 549	\$ 710	\$ 871	\$ 1,032
Customers 1 1/2" meters or larger: Charge per maximum day GPM [c]	Existing Rate	\$ 1,244	\$ 2,488	\$ 3,731	\$ 4,975.26	\$ 6,219

[a] AWWA meter capacity equivalent ratios

[b] Alternative multifamily option: 30% of 5/8" meter charge per unit

[c] Estimated water use in maximum day gallons per minute

Note: Year 1 (FY 2015/16) maintains existing rates; 5 year phase in begins in year 2



Phase-In Strategies

◆ Alternative 1: Begin implementation 7/1/15, 3-year phase-in

Meter Size	Year 1 7/1/2015	Year 2 7/1/2016	Year 3 7/1/2017	Year 4 7/1/2018	Year 5 7/1/2019	Year 6 7/1/2020
Customers up through 1" meters:						
	5/8-inch	\$ 1,449	\$ 2,113	\$ 3,440	\$ 3,543	\$ 3,650
	1-inch	\$ 3,169	\$ 4,980	\$ 8,600	\$ 8,858	\$ 9,124
Multifamily per unit [b]:	\$ 495	\$ 674	\$ 1,032	\$ 1,063	\$ 1,095	\$ 1,128
Customers 1 1/2" meters or larger:						
Charge per maximum day GPM [c]	\$ 2,073	\$ 4,146	\$ 6,219	\$ 6,406	\$ 6,598	\$ 6,796
inflation factor: 3.0%						

[a] AWWA meter capacity equivalent ratios

[b] Alternative multifamily option: 30% of 5/8" meter charge per unit

[c] Estimated water use in maximum day gallons per minute

◆ Alternative 2: Implement 7/1/15, no phase-in

Meter Size	Year 1 7/1/2015	Year 2 7/1/2016	Year 3 7/1/2017	Year 4 7/1/2018	Year 5 7/1/2019	Year 6 7/1/2020
Customers up through 1" meters:						
	5/8-inch	\$ 3,440	\$ 3,543	\$ 3,650	\$ 3,759	\$ 3,872
	1-inch	\$ 8,600	\$ 8,858	\$ 9,124	\$ 9,397	\$ 9,679
Multifamily per unit [b]:	\$ 1,032	\$ 1,063	\$ 1,095	\$ 1,128	\$ 1,162	\$ 1,196
Customers 1 1/2" meters or larger:						
Charge per maximum day GPM [c]	\$ 6,219	\$ 6,406	\$ 6,598	\$ 6,796	\$ 7,000	\$ 7,210
inflation factor: 3.0%						

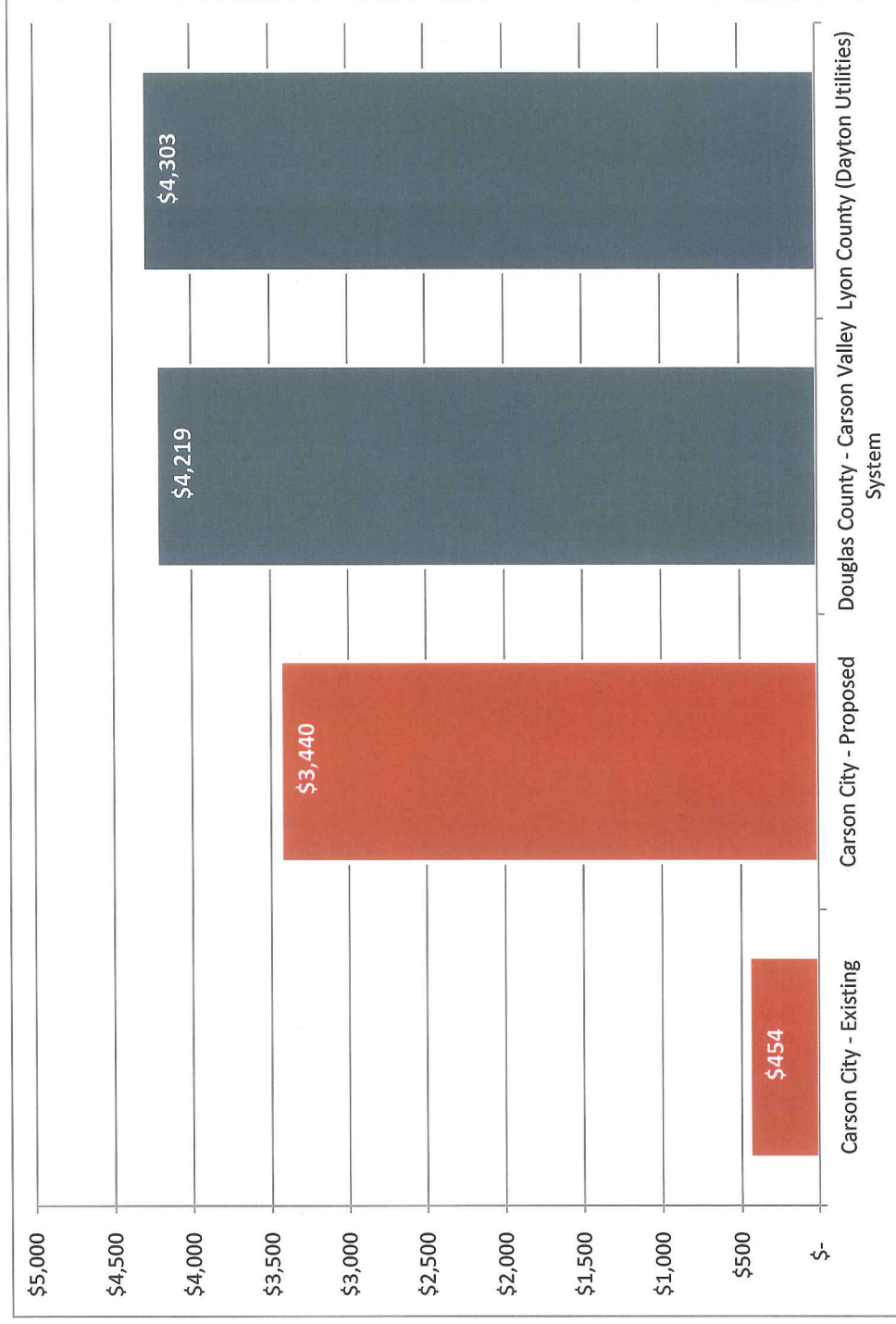
[a] AWWA meter capacity equivalent ratios

[b] Alternative multifamily option: 30% of 5/8" meter charge per unit

[c] Estimated water use in maximum day gallons per minute



Comparison of Residential Water Connection Charges



Note: All other surveyed jurisdictions charge water rights fees in addition to connection charges



Sample Charges

Customer	Meter Size	Scenario A: Usage Based ERUs			Scenario B: Meter Capacity Equivalents		Scenario C: Maximum Day GPM	
		Average Daily Use (gpd)	# WERCs (@ 425 gpd)	Resulting Charge	MCE Ratio	Resulting Charge	Estimated Max Daily use (gpm)	Resulting Charge
Restaurant 1	2"	1,767	4.2	\$ 15,645	8.0	\$ 27,520	2.0	\$ 12,328
Restaurant 2	5/8"	2,195	5.2	\$ 19,435	1.0	\$ 3,440	2.9	\$ 17,970
Restaurant 3	1"	3,710	8.7	\$ 32,849	2.5	\$ 8,600	5.5	\$ 34,483
Restaurant 3 Irrigation	5/8"	77	0.2	\$ 682	1.0	\$ 3,440	0.2	\$ 1,043
Large Retail Store 1	2"	660	1.6	\$ 5,844	8.0	\$ 27,520	0.6	\$ 3,971
Large Retail Store 1 Irrigation	2"	2,353	5.5	\$ 20,834	8.0	\$ 27,520	5.5	\$ 34,483
Large Retail Store 2	2"	1,060	2.5	\$ 9,385	8.0	\$ 27,520	1.6	\$ 10,028
Large Retail Store 2 Irrigation	2"	912	2.1	\$ 8,075	8.0	\$ 27,520	3.2	\$ 20,063
Large Retail Store 3	1-1/2"	6,742	15.9	\$ 59,694	5.0	\$ 17,200	8.3	\$ 51,404
Large Retail Store 3 Irrigation	2"	2,238	5.3	\$ 19,816	8.0	\$ 27,520	3.5	\$ 21,941
Industrial 1	3"	15,584	36.7	\$ 137,983	16.0	\$ 55,040	24.9	\$ 154,639
Industrial 1 Irrigation	1-1/2"	6,126	14.4	\$ 54,240	5.0	\$ 17,200	11.1	\$ 68,960
Industrial 2	2"	342	0.8	\$ 3,028	8.0	\$ 27,520	0.5	\$ 2,928
Industrial 2 Irrigation	1"	1,230	2.9	\$ 10,891	2.5	\$ 8,600	2.8	\$ 17,135
Grocery Store 1	2"	5,490	12.9	\$ 48,609	8.0	\$ 27,520	7.4	\$ 46,183
Grocery Store 1 Irrigation	2"	904	2.1	\$ 8,004	8.0	\$ 27,520	2.6	\$ 15,884
Hotel 1	3"	5,088	12.0	\$ 45,050	16.0	\$ 55,040	8.9	\$ 55,168
Hotel 1 Irrigation	1"	2,874	6.8	\$ 25,447	2.5	\$ 8,600	10.9	\$ 67,496
Hotel 2	6"	6,433	15.1	\$ 56,959	50.0	\$ 172,000	9.5	\$ 59,139
Hotel 2 Irrigation	1-1/2"	3,164	7.4	\$ 28,014	5.0	\$ 17,200	6.8	\$ 42,211

gpd = gallons per day gpm = gallons per minute MCE = meter capacity equivalent

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Sample Charges

Customer	Meter Size	Units	Scenario A: Usage Based ERUs		Scenario B: Meter Capacity Equivalents			Scenario C: Maximum Day GPM	
			# WERCs (0.3 WERC/unit)	Resulting Charge	MCE Ratio	Resulting Charge	Multifamily Charge Option	Estimated Max Daily use (gpm)	Resulting Charge
Apartments 1	1-1/2"	88	26.4	\$ 99,343	5.0	\$ 17,200	\$ 90,816	24.9	\$ 154,847
Apartments 2	1-1/2"	36	10.8	\$ 40,640	5.0	\$ 17,200	\$ 37,152	11.8	\$ 73,352
Apartments 3	5/8"	8	2.4	\$ 9,031	1.0	\$ 3,440	\$ 8,256	1.9	\$ 12,121
Mobile Home Park 1	1-1/2"	54	16.2	\$ 60,961	5.0	\$ 17,200	\$ 55,728	18.4	\$ 114,514

gpd = gallons per day

gpm = gallons per minute

MCE = meter capacity equivalent



Calculation Summary: Water

Water Connection Charge Calculation: Maximum Day GPM; Average Integrated Cost	
Connection Charge Components	10 Year CIP
	5 Year CIP
Existing Cost Basis	
Utility Capital Assets	\$ 134,554,918
plus: Construction Work in Progress	2,827,601
less: Contributed Capital	(25,802,750)
plus: Interest on Non-Contributed Plant	40,385,456
Net Assets	\$ 151,965,225
less: Net Debt Principal Outstanding	
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Future Cost Basis	
Total Future Projects	\$ 16,740,000
less: Identified Repair & Replacement Projects	(8,567,000)
less: Contributed Future Upgrade & Expansion Assets	-
Total Future Cost Basis	\$ 8,173,000
Total Cost Basis	\$ 103,651,181
Customer Base	
Existing	13,951
Future (Incremental)	2,715
Total Customer Base	16,667
Calculated Connection Charge per Equivalent	\$ 6,219
	\$ 7,602

**Sewer Utility
Draft Results**

Usage Based ERUs (Revised SERC)

- ◆ 1.0 SERC per residential, quasi-residential, or senior discount unit
- ◆ 0.75 SERC per duplex unit
- ◆ 0.65 SERC per multifamily unit
- ◆ All other classes based on assumed flow equal to 200 gallons per day
(calculated from the FY 2013/14 customer statistics)

SERC = Sewer Equivalent Residential Customer



Recommended Action: Sewer

- ◆ **Adopt the schedule of sewer connection charges with updated SERC factors.**
 - SERC value updated from 250 gpd to 200 gpd
 - SERC factors updated by customer class
- ◆ **Adopt a phase-in strategy:**
 - 5-year phase in
 - 3-year phase in
- ◆ **Once rates are fully implemented, adjust the fees annually for inflation based on the Engineering News Record's "Construction Cost Index"**

SERC = Sewer Equivalent Residential Customer



Sewer Customer Base

Total Customer Base Calculations	
System Parameter	Capacity
Average Day Demand (mgd)	6.90
Proposed: Usage Based ERUs (200 gpd)	34,500

mgd = million gallons per day; gpd = gallons per day

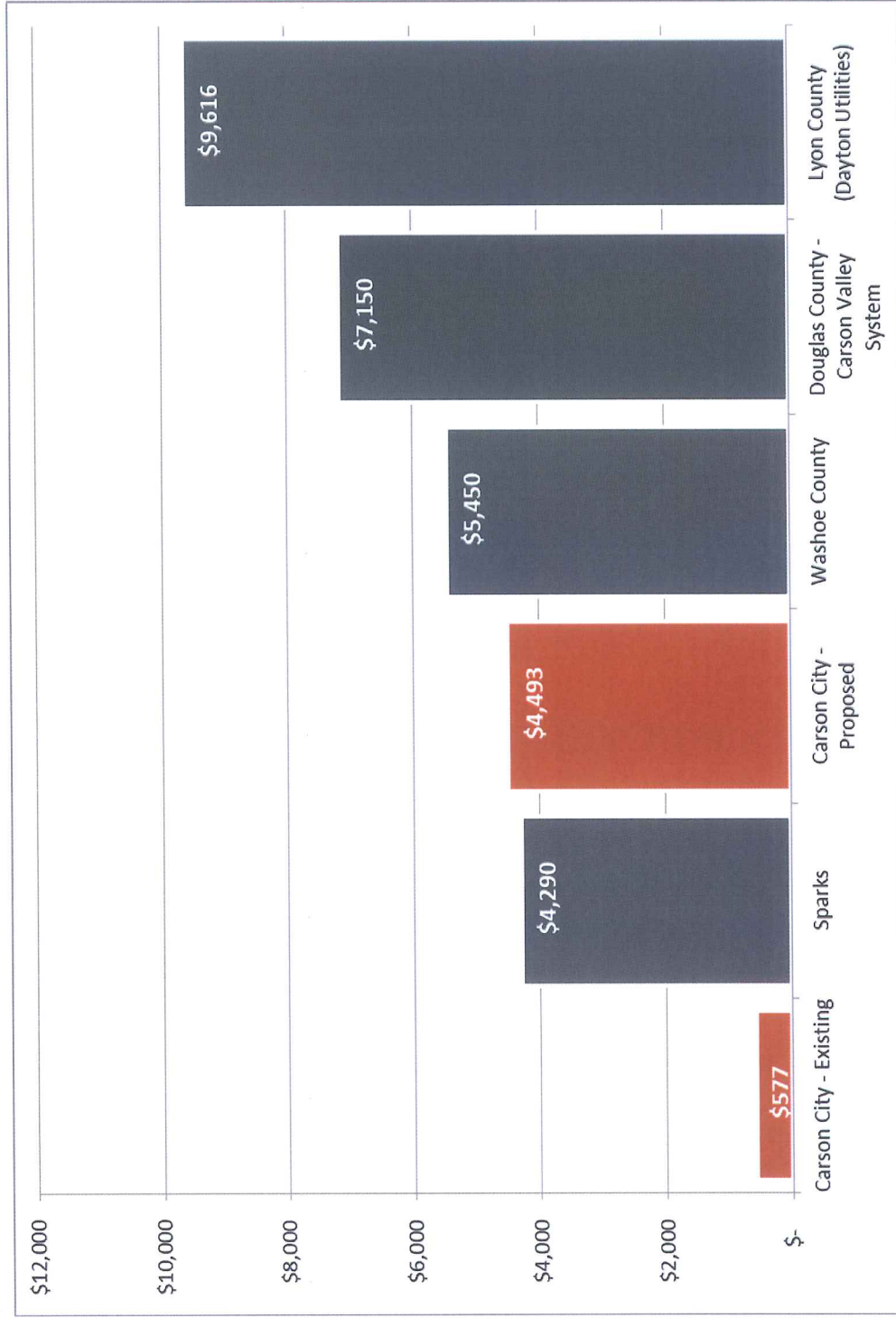


Sewer Calculation Summary

Sewer Connection Charge Calculation		Results
Connection Charge Components		
Existing Cost Basis		
Utility Capital Assets	\$ 122,670,868	
plus: Construction Work in Progress	1,238,412	
less: Contributed Capital	(19,951,899)	
plus: Interest on Non-Contributed Plant	60,288,050	
Net Assets		\$ 164,245,431
less: Net Debt Principal Outstanding		
Existing Cash Balances	\$ 1,163,270	
less: Debt Principal Outstanding	(13,196,234)	
Net Debt Principal Outstanding		(12,032,964)
Total Existing Cost Basis		\$ 152,212,467
Future Cost Basis		
Total Future Projects	\$ 48,152,680	
less: Identified Repair & Replacement Projects	(45,367,000)	
less: Contributed Future Upgrade & Expansion Assets	-	
Total Future Cost Basis		\$ 2,785,680
Total Cost Basis		\$ 154,998,147
Customer Base		
Existing	29,563	
Future (Incremental)	4,937	
Total Customer Base	34,500	
Calculated Connection Charge per Equivalent		\$ 4,493



Comparison of Residential Sewer Connection Charges





Sewer Proposed Schedule

Customer Class	Existing SERC [a]	Existing Charge	Proposed SERC [b]	Proposed Charge
Single Family Residence	1.00	\$ 577	1.00	\$ 4,493
Duplex (each living unit)	1.00	577	0.75	3,370
Apartment (each living unit)	0.50	289	0.65	2,920
Mobile Home Individual lot	1.00	577	1.00	4,493
Mobile Home Park (each pad)	0.50	289	0.65	2,920
All others, per SERC	1.00	577	1.00	4,493

[a] One existing SERC is equal to 250 gallons per day

[b] One proposed SERC is equal to 200 gallons per day

SERC = Sewer Equivalent Residential Customer; gpd = gallons per day



Phase-In Strategy

◆ **Committee recommendation: Begin implementation 7/1/16, 5-year phase-in**

Customer Class	Year 1 7/1/2015	Year 2 7/1/2016	Year 3 7/1/2017	Year 4 7/1/2018	Year 5 7/1/2019	Year 6 7/1/2020
Single Family Residence	\$ 577	\$ 1,360	\$ 2,143	\$ 2,926	\$ 3,710	\$ 4,493
Duplex (each living unit)	577	1,136	1,694	2,253	2,811	3,370
Apartment (each living unit)	289	815	1,341	1,868	2,394	2,920
Mobile Home Individual lot	577	1,360	2,143	2,926	3,710	4,493
Mobile Home Park (each pad)	289	815	1,341	1,868	2,394	2,920
All others, per SERC	577	1,360	2,143	2,926	3,710	4,493

SERC = Sewer Equivalent Residential Customer

Note: Year 1 (FY 2015/16) maintains existing rates; 5 year phase in begins in year 2

Phase-In Strategies

◆ Alternative 1: Begin implementation 7/1/15, 3-year phase-in

Customer Class	Year 1 7/1/2015	Year 2 7/1/2016	Year 3 7/1/2017	Year 4 7/1/2018	Year 5 7/1/2019	Year 6 7/1/2020
Single Family Residence	\$ 1,882	\$ 3,187	\$ 4,493	\$ 4,627	\$ 4,766	\$ 4,909
Duplex (each living unit)	1,508	2,439	3,370	3,471	3,575	3,682
Apartment (each living unit)	1,166	2,043	2,920	3,008	3,098	3,191
Mobile Home Individual lot	1,882	3,187	4,493	4,627	4,766	4,909
Mobile Home Park (each pad)	1,166	2,043	2,920	3,008	3,098	3,191
All others, per SERC	1,882	3,187	4,493	4,627	4,766	4,909
Initiation factor:						3.0%

◆ Alternative 2: Implement 7/1/15, no phase-in

Customer Class	Year 1 7/1/2015	Year 2 7/1/2016	Year 3 7/1/2017	Year 4 7/1/2018	Year 5 7/1/2019	Year 6 7/1/2020
Single Family Residence	\$ 4,493	\$ 4,627	\$ 4,766	\$ 4,909	\$ 5,057	\$ 5,208
Duplex (each living unit)	3,370	3,471	3,575	3,682	3,792	3,906
Apartment (each living unit)	2,920	3,008	3,098	3,191	3,287	3,385
Mobile Home Individual lot	4,493	4,627	4,766	4,909	5,057	5,208
Mobile Home Park (each pad)	2,920	3,008	3,098	3,191	3,287	3,385
All others, per SERC	4,493	4,627	4,766	4,909	5,057	5,208
Initiation factor:						3.0%

Note: If phase-in start date shifts later in FY 2015/16, revenues collected would be slightly lower than shown



Calculation Summary: Sewer

Sewer Connection Charge Calculation: Average Integrated Cost		
Connection Charge Components	5 Year CIP	10 Year CIP
Existing Cost Basis		
Utility Capital Assets	\$ 122,670,868	\$ 122,670,868
plus: Construction Work in Progress	1,238,412	1,238,412
less: Contributed Capital	(19,951,899)	(19,951,899)
plus: Interest on Non-Contributed Plant	60,288,050	60,288,050
Net Assets	\$ 164,245,431	\$ 164,245,431
less: Net Debt Principal Outstanding		
Existing Cash Balances	\$ 1,163,270	\$ 1,163,270
less: Debt Principal Outstanding	(13,196,234)	(13,196,234)
Net Debt Principal Outstanding	(12,032,964)	(12,032,964)
Total Existing Cost Basis	\$ 152,212,467	\$ 152,212,467
Future Cost Basis		
Total Future Projects	\$ 48,152,680	\$ 128,152,680
less: Identified Repair & Replacement Projects	(45,367,000)	(45,367,000)
less: Contributed Future Upgrade & Expansion Assets	-	-
Total Future Cost Basis	\$ 2,785,680	\$ 82,785,680
Total Cost Basis	\$ 154,998,147	\$ 234,998,147
Customer Base		
Existing	29,563	29,563
Future (Incremental)	4,937	20,437
Total Customer Base	34,500	50,000
Calculated Connection Charge per Equivalent	\$ 4,493	\$ 4,700



Implementation of Charges

- ◆ **Represents the maximum allowable charge within the scenario**
- ◆ **The City may implement any charge up to this amount**
- ◆ **Connection charge calculation is in current dollars**
- ◆ **Future years can be updated by:**
 - Recalculating the connection charge annually
 - Building in a provision for inflation to the connection charge
 - Adjusting the current dollar charge annually for inflation based on the Engineering News Record's "Construction Cost Index" (recommended)

*Note: inflation not incorporated during phase-in strategies; to begin after charge is fully phased-in

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