

Feb. 11, 2013

**SNWA Rate  
Examples**





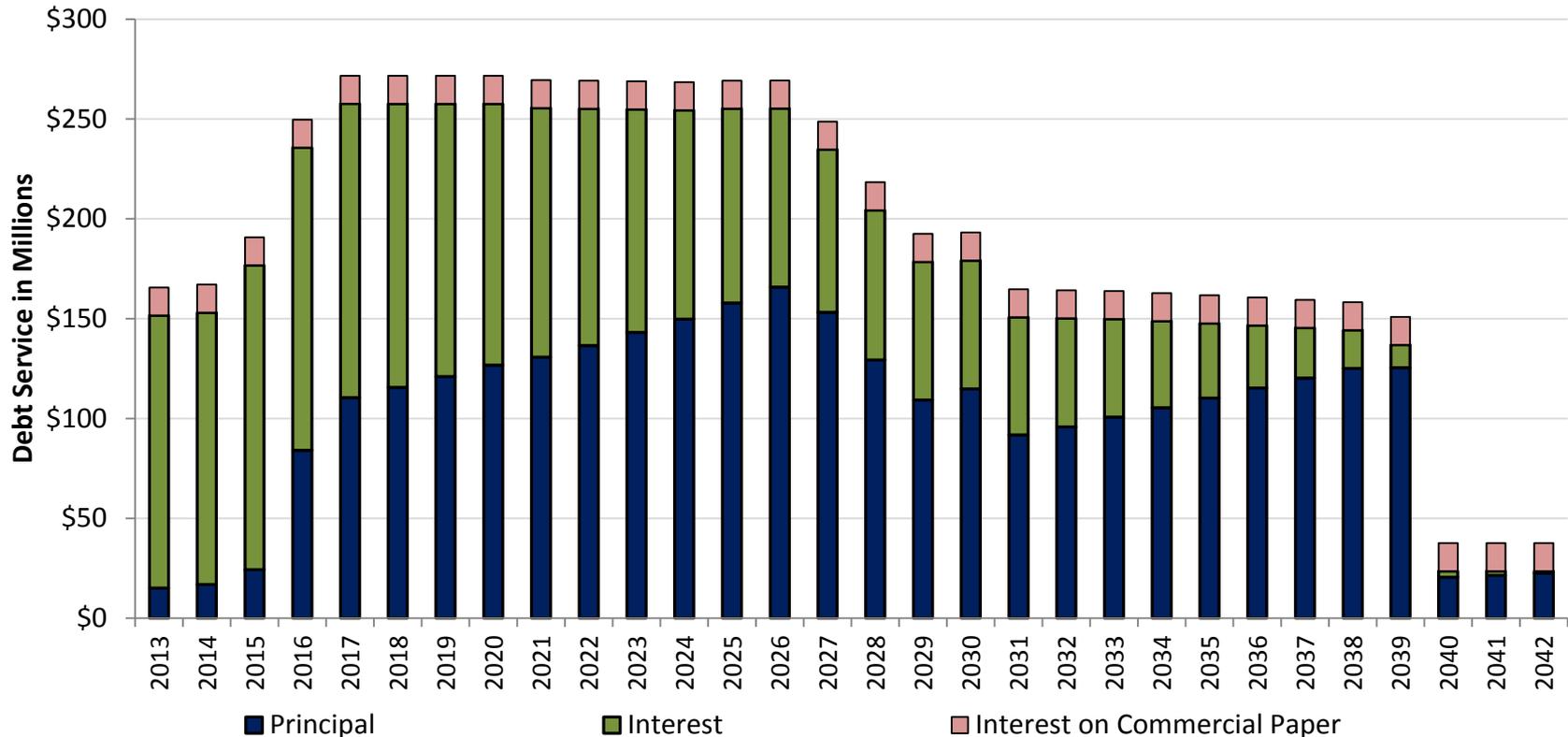
# SNWA Rate Model Assumptions

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- **Sales Tax revenues were estimated to grow at 3.5% annually**
- **SNWA annual service area population growth estimates average 1.07% annual growth between 2013-2021. Use UNLV Center for Business and Economic Research figures until SNAPI's revised numbers are available, and then, use a hybrid.**
- **Annual operating costs increasing at 4 percent.**
- **Connection charges remain steady through 2014, and then increase with population growth.**
- **Water sales were projected to grow at 0.80% annually**
- **Maintain fund balance target of \$280 million**

# SNWA Total Debt Profile

## SNWA Annual Debt Service (FY)



- Note: (1) July 1 payments are included in prior fiscal year - effective cash outflow  
 (2) Debt Service shown includes debt service dedicated to the New Expansion Debt Service Fund as well as the Wholesale Delivery Operations Fund.  
 (3) Debt service does not include the 35% interest subsidy from the federal government for the Authority's Build America Bonds.



## Types of Input From Rate Examples:

- **Are we on the right track?**
- **Are there other major variations (not just tweaks) that you would like to see?**
- **Are there any examples that could be eliminated from future consideration?**
- **Should the fireline charge increase proportionately or at some other rate?**

## Revenue Requirements (2013 – 2016)

Fiscal Year (in Thousands)	2012	2013	2014	2015	2016	Cumulative 2012-2016
Total Operating Expenses for NEDS Fund	(\$11,607)	(\$33,073)	(\$34,374)	(\$35,694)	(\$37,064)	(\$151,812)
<b>Debt Service</b>						
Existing Debt Service (incl. Commercial Paper)	(137,397)	(139,595)	(140,728)	(140,808)	(192,728)	(751,256)
Series 2012B Bonds Debt Service				(23,610)	(23,607)	(47,217)
Total Debt Service	(\$137,397)	(\$139,595)	(\$140,728)	(\$164,418)	(\$216,335)	(\$798,473)
<b>Total Funding Requirement</b>	<b>(\$149,004)</b>	<b>(\$172,668)</b>	<b>(\$175,102)</b>	<b>(\$200,112)</b>	<b>(\$253,399)</b>	<b>(\$950,285)</b>
<b>Expected Revenues (Base case)</b>						
Regional Connection Charge	13,791	10,776	10,776	10,889	11,011	57,242
Regional Commodity Charge (1)	40,666	41,805	41,820	41,961	42,201	208,453
Reliability Surcharge	4,598	4,404	4,406	4,420	4,445	22,273
Sales Tax	45,131	43,642	45,170	46,751	48,387	229,082
Other Revenues		2,300	2,300	2,300	2,300	8,531
Boulder City share of common previously capitalized cost		580	591	614	639	2,424
Interest Income	478	2,802	2,927	3,046	2,938	12,190
<b>Total Expected Revenue</b>	<b>\$103,995</b>	<b>\$106,309</b>	<b>\$107,988</b>	<b>\$109,982</b>	<b>\$111,921</b>	<b>\$540,194</b>
<b>Total Funding Gap before Infrastructure Surcharge</b>	<b>(\$45,009)</b>	<b>(\$66,359)</b>	<b>(\$67,114)</b>	<b>(\$90,130)</b>	<b>(\$141,478)</b>	<b>(\$410,091)</b>
Infrastructure Surcharge Current Level	16,193	78,846	79,054	79,299	79,605	332,996
<b>Total Funding Gap</b>	<b>(\$28,816)</b>	<b>\$12,486</b>	<b>\$11,940</b>	<b>(\$10,831)</b>	<b>(\$61,874)</b>	<b>(\$77,094)</b>
Beginning Fund Balance (Base Case)	\$308,990	\$280,174	\$292,660	\$304,601	\$293,769	
Ending Fund Balance (Base Case)	\$280,174	\$292,660	\$304,601	\$293,769	\$231,896	

## Revenue Requirements (2017 – 2021)

Fiscal Year (in Thousands)	2017	2018	2019	2020	2021	Cumulative 2012-2021
Total Operating Expenses for NEDS Fund	(\$38,486)	(\$39,961)	(\$41,484)	(\$43,064)	(\$44,695)	(\$359,502)
<b>Debt Service</b>						
Existing Debt Service (incl. Commercial Paper)	(214,644)	(214,535)	(214,454)	(214,360)	(212,630)	(1,821,879)
Series 2012B Bonds Debt Service	(23,606)	(23,608)	(23,606)	(23,606)	(23,609)	(165,252)
Total Debt Service	(\$238,249)	(\$238,144)	(\$238,060)	(\$237,967)	(\$236,239)	(\$1,987,132)
<b>Total Funding Requirement</b>	<b>(\$276,735)</b>	<b>(\$278,105)</b>	<b>(\$279,543)</b>	<b>(\$281,031)</b>	<b>(\$280,935)</b>	<b>(\$2,346,634)</b>
<b>Expected Revenues (Base case)</b>						
Regional Connection Charge	11,139	11,274	11,406	11,536	11,664	114,260
Regional Commodity Charge (1)	42,542	43,057	43,565	44,062	44,551	426,230
Reliability Surcharge	4,480	4,533	4,586	4,637	4,687	45,196
Sales Tax	50,081	51,834	53,648	55,525	57,469	497,638
Other Revenues	2,300	2,300	2,300	2,300	2,300	20,031
Boulder City share of common previously capitalized cost	664	691	719	747	777	6,023
Interest Income	2,319	1,486	660			4,466
<b>Total Expected Revenue</b>	<b>\$113,525</b>	<b>\$115,175</b>	<b>\$116,884</b>	<b>\$118,807</b>	<b>\$121,448</b>	<b>\$1,126,034</b>
<b>Total Funding Gap before Infrastructure Surcharge</b>	<b>(\$163,210)</b>	<b>(\$162,930)</b>	<b>(\$162,659)</b>	<b>(\$162,223)</b>	<b>(\$159,487)</b>	<b>(\$1,220,600)</b>
Infrastructure Surcharge Current Level	79,963	80,320	80,678	81,104	81,631	736,693
<b>Total Funding Gap</b>	<b>(\$83,247)</b>	<b>(\$82,610)</b>	<b>(\$81,981)</b>	<b>(\$81,120)</b>	<b>(\$77,855)</b>	<b>(\$483,907)</b>
Beginning Fund Balance (Base Case)	\$231,896	\$148,649	\$66,039	(\$15,942)	(\$97,062)	
Ending Fund Balance (Base Case)	\$148,649	\$66,039	(\$15,942)	(\$97,062)	(\$174,917)	

# SNWA Rate Examples

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The following are examples of rate structures, not rate proposals.

- Example 1: Increasing the Commodity Charge
- Example 2: Increasing the Infrastructure Surcharge
  - Version A: No additional charge to the Fire Meters
  - Version B: Including additional fire meter charges at 17.5% of domestic meters (35% net of 50% credit)
- Example 3: Increasing both the Commodity Charge and the Infrastructure Surcharge to fund 50% of revenues shortfall respectively
  - Version A: No additional charge to the Fire Meters
  - Version B: Including additional fire meter charges at 17.5% of domestic meters (35% net of 50% credit)

# EXAMPLE 1: Commodity Charge Increase

## Sample Bill

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	6"	6	01/09/13	6	12/10/12	0

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0443647	<b>Billed Usage:</b> 0
<b>Register Constant</b>	47
Service Charge \$2.5215 x 30 Days	75.65
1 x 6" Backflow(s) @ 2.4863	74.59
SNWA Infrastructure Charge 30 x \$8.4183	252.55
SNWA Infrastructure Charge 30 x \$-4.2091	-126.27
SNWA Reliability Surcharge x 2.5%	3.76
<b>Subtotal</b>	<b>\$280.28</b>

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	1.5"	20672	01/09/13	20558	12/10/12	114

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0415403	<b>Billed Usage:</b> 114
Service Charge \$0.7419 x 30 Days	22.26
Tier #1 25 x \$1.16	29.00
Tier #2 25 x \$2.08	52.00
Tier #3 64 x \$3.09	197.76
1 x 1 1/2" Backflow(s) @ 0	7.46
<b>SNWA Commodity Charge 114 x \$0.30</b>	<b>34.20</b>
SNWA Infrastructure Charge 30 x \$2.4053	72.16
SNWA Reliability Surcharge x 2.5%	8.57
<b>Subtotal</b>	<b>\$423.41</b>



### WHAT IT IS:

Increase to the Commodity Charge

### WHAT IT WOULD DO:

- Impact the customer's cost of water per thousand gallons

### FIXED OR CONSUMPTION-BASED CHARGE:

Consumption-based

## Example 1: Increase of Commodity Charge

Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue Requirement without Price Elasticity	(\$12,486)	(\$11,940)	\$10,831	\$61,874	\$83,247	\$82,610	\$81,981	\$81,120	\$77,855
Additional Required Revenues due to Price Elasticity				\$1,520	\$2,609	\$2,641	\$2,587	\$2,574	\$2,472
<b>Required Revenues</b>	<b>(\$12,484)</b>	<b>(\$11,938)</b>	<b>\$10,833</b>	<b>\$63,396</b>	<b>\$85,858</b>	<b>\$85,253</b>	<b>\$84,570</b>	<b>\$83,695</b>	<b>\$80,330</b>
<b>Additional Regional Commodity Charge</b>				<b>\$50,174</b>	<b>\$83,860</b>	<b>\$84,874</b>	<b>\$83,322</b>	<b>\$82,976</b>	<b>\$79,950</b>
<i>Current Commodity Charge Level (per 1,000 Gallons)</i>	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30
<i>Additional Commodity Charge Level (per 1,000 Gallons)</i>	\$0.00	\$0.00	\$0.00	\$0.37	\$0.63	\$0.63	\$0.61	\$0.60	\$0.57
<i>Total Commodity Charge Level (per 1,000 Gallons)</i>	\$0.30	\$0.30	\$0.30	\$0.67	\$0.93	\$0.93	\$0.91	\$0.90	\$0.87
<b>Implicit Additional Reliability Surcharge</b>				<b>\$560</b>	<b>\$936</b>	<b>\$947</b>	<b>\$930</b>	<b>\$926</b>	<b>\$892</b>
Beginning Fund Balance with Revenue Adjustments	\$280,174	\$292,658	\$304,597	\$293,763	\$281,101	\$280,038	\$280,606	\$280,287	\$280,494
Ending Fund Balance with Revenue Adjustments	\$292,658	\$304,597	\$293,763	\$281,101	\$280,038	\$280,606	\$280,287	\$280,494	\$281,006



# EXAMPLE 2(A): Infrastructure Charge Increase with no Additional Charge to Firelines

## Sample Bill

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	6"	6	01/09/13	6	12/10/12	0

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0443647	<b>Billed Usage:</b> 0
<b>Register Constant</b>	47
Service Charge \$2.5215 x 30 Days	75.65
1 x 6" Backflow(s) @ 2.4863	74.59
<b>SNWA Infrastructure Charge 30 x \$8.4183</b>	<b>252.55</b>
SNWA Infrastructure Charge 30 x \$-4.2091	-126.27
SNWA Reliability Surcharge x 2.5%	3.76
<b>Subtotal</b>	<b>\$280.28</b>



Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	1.5"	20672	01/09/13	20558	12/10/12	114

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0415403	<b>Billed Usage:</b> 114
Service Charge \$0.7419 x 30 Days	22.26
Tier #1 25 x \$1.16	29.00
Tier #2 25 x \$2.08	52.00
Tier #3 64 x \$3.09	197.76
1 x 1 1/2" Backflow(s) @ 0.	7.46
SNWA Commodity Charge 114 x \$0.30	34.20
<b>SNWA Infrastructure Charge 30 x \$2.4053</b>	<b>72.16</b>
SNWA Reliability Surcharge x 2.5%	8.57
<b>Subtotal</b>	<b>\$423.41</b>



### WHAT IT IS:

Increase to the Infrastructure Charge (Fireline charges would remain the same)

### WHAT IT WOULD DO:

- Increase user's Infrastructure Charge
- Remove the \$5 ceiling from single-family residential customers

### FIXED OR CONSUMPTION-BASED CHARGE:

Fixed

## Example 2A: Increased Infrastructure Surcharge

No restriction on residential rates. No additional charges to fire meters.

Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue Requirement without Price Elasticity	(12,486)	(11,940)	10,831	61,874	83,247	82,610	81,981	81,120	77,855
Additional Required Revenues due to Price Elasticity				923	1,589	1,576	1,563	1,543	1,470
<b>Total Required Revenues</b>	<b>(12,486)</b>	<b>(11,940)</b>	<b>10,831</b>	<b>62,797</b>	<b>84,836</b>	<b>84,185</b>	<b>83,544</b>	<b>82,662</b>	<b>79,325</b>

<b>Fixed Charge per Meter Revenue</b>	<b>\$49,054</b>	<b>\$84,853</b>	<b>\$84,239</b>	<b>\$83,597</b>	<b>\$82,691</b>	<b>\$79,377</b>			
<i>Fixed Charge - Residential - 5/8" &amp; 3/4" meter sizes</i>	\$5.00	\$5.00	\$5.00	\$11.06	\$15.35	\$15.15	\$14.95	\$14.70	\$14.15
<i>Fixed Charge - Residential - 1" meter size</i>	\$19.21	\$19.21	\$19.21	\$31.11	\$39.80	\$39.64	\$39.48	\$39.27	\$38.46
<i>Fixed Charge - Residential - 1.5" meter size</i>	\$38.41	\$38.41	\$38.41	\$62.20	\$79.58	\$79.26	\$78.95	\$78.52	\$76.90
<i>Fixed Charge - Residential - 2" meter size</i>	\$61.46	\$61.46	\$61.46	\$99.53	\$127.32	\$126.82	\$126.32	\$125.64	\$123.05
<i>Fixed Charge - Residential - 3" meter size</i>	\$122.90	\$122.90	\$122.90	\$199.03	\$254.62	\$253.61	\$252.62	\$251.25	\$246.07
<i>Fixed Charge - Residential - 4" meter size</i>	\$192.03	\$192.03	\$192.03	\$310.97	\$397.84	\$396.27	\$394.71	\$392.57	\$384.47
<i>Fixed Charge - Residential - 6" meter size</i>	\$384.05	\$384.05	\$384.05	\$621.93	\$795.67	\$792.52	\$789.40	\$785.13	\$768.93
<i>Fixed Charge - Residential - 8" meter size and larger</i>	\$614.47	\$614.47	\$614.47	\$995.08	\$1,273.06	\$1,268.01	\$1,263.03	\$1,256.19	\$1,230.28
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes</i>	\$19.05	\$19.05	\$19.05	\$25.33	\$29.92	\$29.84	\$29.76	\$29.64	\$29.22
<i>Fixed Charge - Non-Residential - 1" meter size</i>	\$36.08	\$36.08	\$36.08	\$47.98	\$56.67	\$56.51	\$56.35	\$56.14	\$55.33
<i>Fixed Charge - Non-Residential - 1.5" meter size</i>	\$72.16	\$72.16	\$72.16	\$95.95	\$113.33	\$113.01	\$112.70	\$112.27	\$110.65
<i>Fixed Charge - Non-Residential - 2" meter size</i>	\$115.45	\$115.45	\$115.45	\$153.52	\$181.31	\$180.81	\$180.31	\$179.63	\$177.04
<i>Fixed Charge - Non-Residential - 3" meter size</i>	\$230.90	\$230.90	\$230.90	\$307.03	\$362.62	\$361.61	\$360.62	\$359.25	\$354.07
<i>Fixed Charge - Non-Residential - 4" meter size</i>	\$360.79	\$360.79	\$360.79	\$479.73	\$566.60	\$565.03	\$563.47	\$561.33	\$553.23
<i>Fixed Charge - Non-Residential - 6" meter size</i>	\$721.57	\$721.57	\$721.57	\$959.45	\$1,133.19	\$1,130.04	\$1,126.92	\$1,122.65	\$1,106.45
<i>Fixed Charge - Non-Residential - 8" meter size</i>	\$1,154.50	\$1,154.50	\$1,154.50	\$1,535.11	\$1,813.09	\$1,808.04	\$1,803.06	\$1,796.22	\$1,770.31
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes</i>	\$1,659.59	\$1,659.59	\$1,659.59	\$2,206.71	\$2,606.32	\$2,599.05	\$2,591.90	\$2,582.06	\$2,544.81
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes Fire Meter</i>	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34
<i>Fixed Charge - Non-Residential - 1" meter size Fire Meter</i>	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32
<i>Fixed Charge - Non-Residential - 1.5" meter size Fire Meter</i>	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63
<i>Fixed Charge - Non-Residential - 2" meter size Fire Meter</i>	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21
<i>Fixed Charge - Non-Residential - 3" meter size Fire Meter</i>	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41
<i>Fixed Charge - Non-Residential - 4" meter size Fire Meter</i>	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14
<i>Fixed Charge - Non-Residential - 6" meter size Fire Meter</i>	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28
<i>Fixed Charge - Non-Residential - 8" meter size Fire Meter</i>	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes Fire Meter</i>	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43
<b>Beginning Fund Balance with Revenue Adjustments</b>	<b>\$280,174</b>	<b>\$292,660</b>	<b>\$304,601</b>	<b>\$293,769</b>	<b>\$280,027</b>	<b>\$280,044</b>	<b>\$280,097</b>	<b>\$280,150</b>	<b>\$280,179</b>
<b>Ending Fund Balance with Revenue Adjustments</b>	<b>\$292,660</b>	<b>\$304,601</b>	<b>\$293,769</b>	<b>\$280,027</b>	<b>\$280,044</b>	<b>\$280,097</b>	<b>\$280,150</b>	<b>\$280,179</b>	<b>\$280,231</b>

# EXAMPLE 2(B): Infrastructure Charge Increase with an Increase to Firelines

## Sample Bill

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	6"	6	01/09/13	6	12/10/12	0

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0443647	<b>Billed Usage:</b> 0
<b>Register Constant</b>	47
Service Charge \$2.5215 x 30 Days	75.65
1 x 6" Backflow(s) @ 2.4863	74.59
SNWA Infrastructure Charge 30 x \$8.4183	252.55
SNWA Infrastructure Charge 30 x \$-4.2091	-126.27
SNWA Reliability Surcharge x 2.5%	3.76
<b>Subtotal</b>	<b>\$280.28</b>

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	1.5"	20672	01/09/13	20558	12/10/12	114

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0415403	<b>Billed Usage:</b> 114
Service Charge \$0.7419 x 30 Days	22.26
Tier #1 25 x \$1.16	29.00
Tier #2 25 x \$2.08	52.00
Tier #3 64 x \$3.09	197.76
1 x 1 1/2" Backflow(s) @ 0.	7.46
SNWA Commodity Charge 114 x \$0.30	34.20
SNWA Infrastructure Charge 30 x \$2.4053	72.16
SNWA Reliability Surcharge x 2.5%	8.57
<b>Subtotal</b>	<b>\$423.41</b>

### WHAT IT IS:

Increase to the Infrastructure Charge and fireline charges

### WHAT IT WOULD DO:

- Increase user's Infrastructure Charge
- Remove the \$5 residential ceiling
- Increase the fireline charge correspondingly

### FIXED OR CONSUMPTION-BASED CHARGE:

Fixed

## Example 2B: Increased Infrastructure Surcharge

No restriction on residential rates. Including additional charges to fire meters.

Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue Requirement without Price Elasticity	(12,486)	(11,940)	10,831	61,874	83,247	82,610	81,981	81,120	77,855
Additional Required Revenues due to Price Elasticity									
<b>Total Required Revenues</b>	<b>(12,486)</b>	<b>(11,940)</b>	<b>10,831</b>	<b>61,874</b>	<b>83,247</b>	<b>82,610</b>	<b>81,981</b>	<b>81,120</b>	<b>77,855</b>

Fixed Charge per Meter Revenue	\$48,123	\$83,276	\$82,667	\$82,035	\$81,173	\$77,881			
<i>Fixed Charge - Residential - 5/8" &amp; 3/4" meter sizes</i>	\$5.00	\$5.00	\$5.00	\$10.43	\$14.28	\$14.10	\$13.92	\$13.70	\$13.20
<i>Fixed Charge - Residential - 1" meter size</i>	\$19.21	\$19.21	\$19.21	\$29.88	\$37.66	\$37.52	\$37.38	\$37.19	\$36.47
<i>Fixed Charge - Residential - 1.5" meter size</i>	\$38.41	\$38.41	\$38.41	\$59.74	\$75.31	\$75.03	\$74.75	\$74.37	\$72.92
<i>Fixed Charge - Residential - 2" meter size</i>	\$61.46	\$61.46	\$61.46	\$95.58	\$120.50	\$120.05	\$119.60	\$118.99	\$116.68
<i>Fixed Charge - Residential - 3" meter size</i>	\$122.90	\$122.90	\$122.90	\$191.13	\$240.97	\$240.07	\$239.18	\$237.95	\$233.33
<i>Fixed Charge - Residential - 4" meter size</i>	\$192.03	\$192.03	\$192.03	\$298.64	\$376.51	\$375.10	\$373.71	\$371.80	\$364.57
<i>Fixed Charge - Residential - 6" meter size</i>	\$384.05	\$384.05	\$384.05	\$597.26	\$753.01	\$750.19	\$747.40	\$743.59	\$729.12
<i>Fixed Charge - Residential - 8" meter size and larger</i>	\$614.47	\$614.47	\$614.47	\$955.60	\$1,204.81	\$1,200.29	\$1,195.83	\$1,189.72	\$1,166.58
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes</i>	\$19.05	\$19.05	\$19.05	\$24.68	\$28.80	\$28.72	\$28.65	\$28.55	\$28.16
<i>Fixed Charge - Non-Residential - 1" meter size</i>	\$36.08	\$36.08	\$36.08	\$46.75	\$54.53	\$54.39	\$54.25	\$54.06	\$53.34
<i>Fixed Charge - Non-Residential - 1.5" meter size</i>	\$72.16	\$72.16	\$72.16	\$93.49	\$109.06	\$108.78	\$108.50	\$108.12	\$106.67
<i>Fixed Charge - Non-Residential - 2" meter size</i>	\$115.45	\$115.45	\$115.45	\$149.57	\$174.49	\$174.04	\$173.59	\$172.98	\$170.67
<i>Fixed Charge - Non-Residential - 3" meter size</i>	\$230.90	\$230.90	\$230.90	\$299.13	\$348.97	\$348.07	\$347.18	\$345.95	\$341.33
<i>Fixed Charge - Non-Residential - 4" meter size</i>	\$360.79	\$360.79	\$360.79	\$467.40	\$545.27	\$543.86	\$542.47	\$540.56	\$533.33
<i>Fixed Charge - Non-Residential - 6" meter size</i>	\$721.57	\$721.57	\$721.57	\$934.78	\$1,090.53	\$1,087.71	\$1,084.92	\$1,081.11	\$1,066.64
<i>Fixed Charge - Non-Residential - 8" meter size</i>	\$1,154.50	\$1,154.50	\$1,154.50	\$1,495.63	\$1,744.84	\$1,740.32	\$1,735.86	\$1,729.75	\$1,706.61
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes</i>	\$1,659.59	\$1,659.59	\$1,659.59	\$2,149.96	\$2,508.20	\$2,501.70	\$2,495.30	\$2,486.52	\$2,453.24
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes Fire Meter</i>	\$3.34	\$3.34	\$3.34	\$4.33	\$5.05	\$5.04	\$5.02	\$5.01	\$4.94
<i>Fixed Charge - Non-Residential - 1" meter size Fire Meter</i>	\$6.32	\$6.32	\$6.32	\$8.19	\$9.55	\$9.53	\$9.50	\$9.47	\$9.34
<i>Fixed Charge - Non-Residential - 1.5" meter size Fire Meter</i>	\$12.63	\$12.63	\$12.63	\$16.37	\$19.09	\$19.04	\$18.99	\$18.93	\$18.67
<i>Fixed Charge - Non-Residential - 2" meter size Fire Meter</i>	\$20.21	\$20.21	\$20.21	\$26.18	\$30.55	\$30.47	\$30.39	\$30.28	\$29.88
<i>Fixed Charge - Non-Residential - 3" meter size Fire Meter</i>	\$40.41	\$40.41	\$40.41	\$52.35	\$61.08	\$60.92	\$60.76	\$60.55	\$59.74
<i>Fixed Charge - Non-Residential - 4" meter size Fire Meter</i>	\$63.14	\$63.14	\$63.14	\$81.80	\$95.43	\$95.18	\$94.94	\$94.60	\$93.34
<i>Fixed Charge - Non-Residential - 6" meter size Fire Meter</i>	\$126.28	\$126.28	\$126.28	\$163.60	\$190.85	\$190.36	\$189.87	\$189.20	\$186.67
<i>Fixed Charge - Non-Residential - 8" meter size Fire Meter</i>	\$202.04	\$202.04	\$202.04	\$261.74	\$305.35	\$304.56	\$303.78	\$302.71	\$298.66
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes Fire Meter</i>	\$290.43	\$290.43	\$290.43	\$376.25	\$438.94	\$437.80	\$436.68	\$435.15	\$429.32
Beginning Fund Balance with Revenue Adjustments	\$280,174	\$292,660	\$304,601	\$293,769	\$280,018	\$280,048	\$280,105	\$280,159	\$280,213
Ending Fund Balance with Revenue Adjustments	\$292,660	\$304,601	\$293,769	\$280,018	\$280,048	\$280,105	\$280,159	\$280,213	\$280,239



# EXAMPLE 3(A): Increase to Commodity Charges and Infrastructure Charges

## Sample Bill

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	6"	6	01/09/13	6	12/10/12	0

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0443647	<b>Billed Usage:</b> 0
<b>Register Constant</b>	47
Service Charge \$2.5215 x 30 Days	75.65
1 x 6" Backflow(s) @ 2.4863	74.59
SNWA Infrastructure Charge 30 x \$8.4183	252.55
SNWA Infrastructure Charge 30 x \$-4.2091	-126.27
SNWA Reliability Surcharge x 2.5%	3.76
<b>Subtotal</b>	<b>\$280.28</b>



Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	1.5"	20672	01/09/13	20558	12/10/12	114

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0415403	<b>Billed Usage:</b> 114
Service Charge \$0.7419 x 30 Days	22.26
Tier #1 25 x \$1.16	29.00
Tier #2 25 x \$2.08	52.00
Tier #3 64 x \$3.09	197.76
1 x 1 1/2" Backflow(s) @ 0	7.46
SNWA Commodity Charge 114 x \$0.30	34.20
SNWA Infrastructure Charge 30 x \$2.4053	72.16
SNWA Reliability Surcharge x 2.5%	8.57
<b>Subtotal</b>	<b>\$423.41</b>



### WHAT IT IS:

Increase the Infrastructure Charge and Commodity Charge (existing fireline charges would remain the same)

### WHAT IT WOULD DO:

- Increase the Commodity Charge
- Increase the Infrastructure Charge
- No impacts to fireline charges

### FIXED OR CONSUMPTION-BASED CHARGE:

Both

# Example 3A: Increasing both the Commodity Charge and the Infrastructure Surcharge to fund 50% of revenues shortfall respectively

No restriction on residential rates. No additional charges to fire meters.

Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue Requirement without Price Elasticity	(\$12,486)	(\$11,940)	\$10,831	\$61,874	\$83,247	\$82,610	\$81,981	\$81,120	\$77,855
Additional Required Revenues due to Price Elasticity				1,204	2,084	2,094	2,060	2,020	1,954
<b>Total Required Revenues</b>			<b>\$10,831</b>	<b>\$63,078</b>	<b>\$85,331</b>	<b>\$84,703</b>	<b>\$84,041</b>	<b>\$83,140</b>	<b>\$79,809</b>
<b>Additional Regional Commodity Charge Revenue</b>				<b>\$24,598</b>	<b>\$41,807</b>	<b>\$42,329</b>	<b>\$41,505</b>	<b>\$40,640</b>	<b>\$39,757</b>
<b>Implicit Additional Reliability Surcharge Revenue</b>				<b>\$274</b>	<b>\$466</b>	<b>\$472</b>	<b>\$463</b>	<b>\$453</b>	<b>\$444</b>
<b>Fixed Charge per Meter Revenue</b>				<b>\$24,685</b>	<b>\$42,705</b>	<b>\$42,401</b>	<b>\$42,082</b>	<b>\$41,598</b>	<b>\$39,916</b>
<b>Total Revenues Additional Revenues</b>				<b>\$49,558</b>	<b>\$84,978</b>	<b>\$85,202</b>	<b>\$84,050</b>	<b>\$82,692</b>	<b>\$80,116</b>
Beginning Fund Balance with Revenue Adjustments	\$280,174	\$292,660	\$304,601	\$293,769	\$280,249	\$279,897	\$280,396	\$280,404	\$279,956
Ending Fund Balance with Revenue Adjustments	\$292,660	\$304,601	\$293,769	\$280,249	\$279,897	\$280,396	\$280,404	\$279,956	\$280,263
<i>Additional Commodity Charge Level (per 1,000 Gallons)</i>	\$0.00	\$0.00	\$0.00	\$0.18	\$0.31	\$0.31	\$0.30	\$0.29	\$0.28
<i>Total Commodity Charge Level (per 1,000 Gallons)</i>	\$0.30	\$0.30	\$0.30	\$0.48	\$0.61	\$0.61	\$0.60	\$0.59	\$0.58
<i>Fixed Charge - Residential - 5/8" &amp; 3/4" meter sizes</i>	\$5.00	\$5.00	\$5.00	\$8.05	\$10.21	\$10.11	\$10.01	\$9.88	\$9.60
<i>Fixed Charge - Residential - 1" meter size</i>	\$19.21	\$19.21	\$19.21	\$25.20	\$29.57	\$29.49	\$29.41	\$29.30	\$28.90
<i>Fixed Charge - Residential - 1.5" meter size</i>	\$38.41	\$38.41	\$38.41	\$50.38	\$59.12	\$58.96	\$58.80	\$58.58	\$57.78
<i>Fixed Charge - Residential - 2" meter size</i>	\$61.46	\$61.46	\$61.46	\$80.60	\$94.59	\$94.34	\$94.09	\$93.74	\$92.44
<i>Fixed Charge - Residential - 3" meter size</i>	\$122.90	\$122.90	\$122.90	\$161.18	\$189.15	\$188.66	\$188.15	\$187.45	\$184.86
<i>Fixed Charge - Residential - 4" meter size</i>	\$192.03	\$192.03	\$192.03	\$251.84	\$295.54	\$294.78	\$293.98	\$292.88	\$288.84
<i>Fixed Charge - Residential - 6" meter size</i>	\$384.05	\$384.05	\$384.05	\$503.67	\$591.06	\$589.54	\$587.94	\$585.75	\$577.67
<i>Fixed Charge - Residential - 8" meter size and larger</i>	\$614.47	\$614.47	\$614.47	\$805.87	\$945.69	\$943.25	\$940.68	\$937.18	\$924.26
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes</i>	\$19.05	\$19.05	\$19.05	\$22.21	\$24.52	\$24.48	\$24.44	\$24.38	\$24.17
<i>Fixed Charge - Non-Residential - 1" meter size</i>	\$36.08	\$36.08	\$36.08	\$42.07	\$46.44	\$46.36	\$46.28	\$46.17	\$45.77
<i>Fixed Charge - Non-Residential - 1.5" meter size</i>	\$72.16	\$72.16	\$72.16	\$84.13	\$92.87	\$92.71	\$92.55	\$92.33	\$91.53
<i>Fixed Charge - Non-Residential - 2" meter size</i>	\$115.45	\$115.45	\$115.45	\$134.59	\$148.58	\$148.33	\$148.08	\$147.73	\$146.43
<i>Fixed Charge - Non-Residential - 3" meter size</i>	\$230.90	\$230.90	\$230.90	\$269.18	\$297.15	\$296.66	\$296.15	\$295.45	\$292.86
<i>Fixed Charge - Non-Residential - 4" meter size</i>	\$360.79	\$360.79	\$360.79	\$420.60	\$464.30	\$463.54	\$462.74	\$461.64	\$457.60
<i>Fixed Charge - Non-Residential - 6" meter size</i>	\$721.57	\$721.57	\$721.57	\$841.19	\$928.58	\$927.06	\$925.46	\$923.27	\$915.19
<i>Fixed Charge - Non-Residential - 8" meter size</i>	\$1,154.50	\$1,154.50	\$1,154.50	\$1,345.90	\$1,485.72	\$1,483.28	\$1,480.71	\$1,477.21	\$1,464.29
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes</i>	\$1,659.59	\$1,659.59	\$1,659.59	\$1,934.72	\$2,135.72	\$2,132.21	\$2,128.52	\$2,123.49	\$2,104.91
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes Fire Meter</i>	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34	\$3.34
<i>Fixed Charge - Non-Residential - 1" meter size Fire Meter</i>	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32	\$6.32
<i>Fixed Charge - Non-Residential - 1.5" meter size Fire Meter</i>	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63	\$12.63
<i>Fixed Charge - Non-Residential - 2" meter size Fire Meter</i>	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21	\$20.21
<i>Fixed Charge - Non-Residential - 3" meter size Fire Meter</i>	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41	\$40.41
<i>Fixed Charge - Non-Residential - 4" meter size Fire Meter</i>	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14	\$63.14
<i>Fixed Charge - Non-Residential - 6" meter size Fire Meter</i>	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28	\$126.28
<i>Fixed Charge - Non-Residential - 8" meter size Fire Meter</i>	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04	\$202.04
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes Fire Meter</i>	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43	\$290.43

# EXAMPLE 3(B): Increase to Commodity Charges, Infrastructure Charge and Fireline Charges

## Sample Bill

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	6"	6	01/09/13	6	12/10/12	0

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0443647	<b>Billed Usage:</b> 0
<b>Register Constant</b>	47
Service Charge \$2.5215 x 30 Days	75.65
1 x 6" Backflow(s) @ 2.4863	74.59
SNWA Infrastructure Charge 30 x \$8.4183	252.55
SNWA Infrastructure Charge 30 x \$-4.2091	-126.27
SNWA Reliability Surcharge x 2.5%	3.76
<b>Subtotal</b>	<b>\$280.28</b>

Meter #	Size	Current Reading	Current Read Date	Previous Reading	Previous Read Date	Usage in 1000 Gallons
	1.5"	20672	01/09/13	20558	12/10/12	114

<b>Billing Period:</b> 12/11/12 - 01/09/13	<b>Total # of Days:</b> 30
<b>Meter #:</b> 0415403	<b>Billed Usage:</b> 114
Service Charge \$0.7419 x 30 Days	22.26
Tier #1 25 x \$1.16	29.00
Tier #2 25 x \$2.08	52.00
Tier #3 64 x \$3.09	197.76
1 x 1 1/2" Backflow(s) @ 0	7.46
SNWA Commodity Charge 114 x \$0.30	34.20
SNWA Infrastructure Charge 30 x \$2.4053	72.16
SNWA Reliability Surcharge x 2.5%	8.57
<b>Subtotal</b>	<b>\$423.41</b>

### WHAT IT IS:

Increase to the Commodity Charge, Infrastructure Charge and its fireline charge

### WHAT IT WOULD DO:

- Increase the Commodity Charge
- Increase the Infrastructure Charge
- Increase the fireline charge correspondingly

### FIXED OR CONSUMPTION-BASED CHARGE:

Both

## Example 3B: Increasing both the Commodity Charge and the Infrastructure Surcharge to fund 50% of revenues shortfall respectively

Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue Requirement without Price Elasticity	(\$12,486)	(\$11,940)	\$10,831	\$61,874	\$83,247	\$82,610	\$81,981	\$81,120	\$77,855
Additional Required Revenues due to Price Elasticity				1,163	2,013	2,024	1,991	1,953	1,890
<b>Total Required Revenues</b>	<b>(\$12,486)</b>	<b>(\$11,940)</b>	<b>\$10,831</b>	<b>\$63,037</b>	<b>\$85,260</b>	<b>\$84,633</b>	<b>\$83,972</b>	<b>\$83,073</b>	<b>\$79,745</b>
<b>Additional Regional Commodity Charge</b>				<b>\$24,623</b>	<b>\$41,880</b>	<b>\$42,401</b>	<b>\$41,574</b>	<b>\$40,705</b>	<b>\$39,817</b>
<b>Implicit Additional Reliability Surcharge</b>				<b>\$275</b>	<b>\$467</b>	<b>\$473</b>	<b>\$464</b>	<b>\$454</b>	<b>\$444</b>
<b>Fixed Charge per Meter Revenue</b>				<b>\$24,639</b>	<b>\$42,634</b>	<b>\$42,339</b>	<b>\$42,026</b>	<b>\$41,598</b>	<b>\$39,890</b>
<b>Total Revenues from Infrastructure Charge and add. Cc</b>				<b>\$49,537</b>	<b>\$84,981</b>	<b>\$85,213</b>	<b>\$84,064</b>	<b>\$82,757</b>	<b>\$80,152</b>
Beginning Fund Balance with Revenue Adjustments	\$280,174	\$292,660	\$304,601	\$293,769	\$280,269	\$279,991	\$280,570	\$280,662	\$280,346
Ending Fund Balance with Revenue Adjustments	\$292,660	\$304,601	\$293,769	\$280,269	\$279,991	\$280,570	\$280,662	\$280,346	\$280,752
<i>Additional Commodity Charge Level (per 1,000 Gallons)</i>	\$0.00	\$0.00	\$0.00	\$0.18	\$0.31	\$0.31	\$0.30	\$0.29	\$0.28
<i>Total Commodity Charge Level (per 1,000 Gallons)</i>	\$0.30	\$0.30	\$0.30	\$0.48	\$0.61	\$0.61	\$0.60	\$0.59	\$0.58
<i>Fixed Charge - Residential - 5/8" &amp; 3/4" meter sizes</i>	\$5.00	\$5.00	\$5.00	\$7.78	\$9.75	\$9.66	\$9.57	\$9.46	\$9.20
<i>Fixed Charge - Residential - 1" meter size</i>	\$19.21	\$19.21	\$19.21	\$24.67	\$28.66	\$28.59	\$28.52	\$28.42	\$28.05
<i>Fixed Charge - Residential - 1.5" meter size</i>	\$38.41	\$38.41	\$38.41	\$49.33	\$57.31	\$57.17	\$57.02	\$56.82	\$56.09
<i>Fixed Charge - Residential - 2" meter size</i>	\$61.46	\$61.46	\$61.46	\$78.93	\$91.70	\$91.47	\$91.24	\$90.92	\$89.74
<i>Fixed Charge - Residential - 3" meter size</i>	\$122.90	\$122.90	\$122.90	\$157.84	\$183.37	\$182.92	\$182.45	\$181.82	\$179.46
<i>Fixed Charge - Residential - 4" meter size</i>	\$192.03	\$192.03	\$192.03	\$246.62	\$286.51	\$285.81	\$285.08	\$284.08	\$280.39
<i>Fixed Charge - Residential - 6" meter size</i>	\$384.05	\$384.05	\$384.05	\$493.23	\$573.00	\$571.61	\$570.14	\$568.15	\$560.77
<i>Fixed Charge - Residential - 8" meter size and larger</i>	\$614.47	\$614.47	\$614.47	\$789.16	\$916.78	\$914.56	\$912.21	\$909.03	\$897.23
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes</i>	\$19.05	\$19.05	\$19.05	\$21.94	\$24.04	\$24.01	\$23.97	\$23.92	\$23.72
<i>Fixed Charge - Non-Residential - 1" meter size</i>	\$36.08	\$36.08	\$36.08	\$41.54	\$45.53	\$45.46	\$45.39	\$45.29	\$44.92
<i>Fixed Charge - Non-Residential - 1.5" meter size</i>	\$72.16	\$72.16	\$72.16	\$83.08	\$91.06	\$90.92	\$90.77	\$90.57	\$89.84
<i>Fixed Charge - Non-Residential - 2" meter size</i>	\$115.45	\$115.45	\$115.45	\$132.92	\$145.69	\$145.46	\$145.23	\$144.91	\$143.73
<i>Fixed Charge - Non-Residential - 3" meter size</i>	\$230.90	\$230.90	\$230.90	\$265.84	\$291.37	\$290.92	\$290.45	\$289.82	\$287.46
<i>Fixed Charge - Non-Residential - 4" meter size</i>	\$360.79	\$360.79	\$360.79	\$415.38	\$455.27	\$454.57	\$453.84	\$452.84	\$449.15
<i>Fixed Charge - Non-Residential - 6" meter size</i>	\$721.57	\$721.57	\$721.57	\$830.75	\$910.52	\$909.13	\$907.66	\$905.67	\$898.29
<i>Fixed Charge - Non-Residential - 8" meter size</i>	\$1,154.50	\$1,154.50	\$1,154.50	\$1,329.19	\$1,456.81	\$1,454.59	\$1,452.24	\$1,449.06	\$1,437.26
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes</i>	\$1,659.59	\$1,659.59	\$1,659.59	\$1,910.71	\$2,094.16	\$2,090.96	\$2,087.59	\$2,083.01	\$2,066.05
<i>Fixed Charge - Non-Residential - 5/8" &amp; 3/4" meter sizes Fire Meter</i>	\$3.34	\$3.34	\$3.34	\$3.85	\$4.22	\$4.21	\$4.20	\$4.20	\$4.16
<i>Fixed Charge - Non-Residential - 1" meter size Fire Meter</i>	\$6.32	\$6.32	\$6.32	\$7.28	\$7.98	\$7.97	\$7.95	\$7.94	\$7.87
<i>Fixed Charge - Non-Residential - 1.5" meter size Fire Meter</i>	\$12.63	\$12.63	\$12.63	\$14.55	\$15.94	\$15.92	\$15.89	\$15.86	\$15.73
<i>Fixed Charge - Non-Residential - 2" meter size Fire Meter</i>	\$20.21	\$20.21	\$20.21	\$23.27	\$25.51	\$25.47	\$25.43	\$25.37	\$25.16
<i>Fixed Charge - Non-Residential - 3" meter size Fire Meter</i>	\$40.41	\$40.41	\$40.41	\$46.53	\$51.00	\$50.92	\$50.84	\$50.72	\$50.31
<i>Fixed Charge - Non-Residential - 4" meter size Fire Meter</i>	\$63.14	\$63.14	\$63.14	\$72.70	\$79.68	\$79.56	\$79.43	\$79.25	\$78.61
<i>Fixed Charge - Non-Residential - 6" meter size Fire Meter</i>	\$126.28	\$126.28	\$126.28	\$145.39	\$159.35	\$159.11	\$158.85	\$158.50	\$157.21
<i>Fixed Charge - Non-Residential - 8" meter size Fire Meter</i>	\$202.04	\$202.04	\$202.04	\$232.62	\$254.95	\$254.56	\$254.15	\$253.59	\$251.53
<i>Fixed Charge - Non-Residential - 10" and larger meter sizes Fire Meter</i>	\$290.43	\$290.43	\$290.43	\$334.38	\$366.48	\$365.92	\$365.33	\$364.53	\$361.56



## Types of Input From Rate Examples:

- Are we on the right track?
- Are there other major variations (not just tweaks) that you would like to see?
- Are there any examples that could be eliminated from future consideration?
- Should the fireline charge increase proportionately or at some other rate?