

# WATER & WASTEWATER ENTERPRISES

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Rate Analysis

January 2018

Aspiring. Achieving. Accelerating.



# IMPACT TO CUSTOMERS

## Residential Impact February 2018 Utility Rate Increase

Water				
Usage	Old Bill	New Bill	\$ Increase	% Increase
0	\$ 11.20	\$ 11.87	\$ 0.67	5.98%
1	\$ 12.35	\$ 13.08	\$ 0.73	5.91%
2	\$ 13.50	\$ 14.29	\$ 0.79	5.85%
3	\$ 14.65	\$ 15.50	\$ 0.85	5.80%
4	\$ 15.80	\$ 16.71	\$ 0.91	5.76%
5	\$ 17.63	\$ 18.64	\$ 1.01	5.73%
6	\$ 19.46	\$ 20.57	\$ 1.11	5.70%
7	\$ 21.29	\$ 22.50	\$ 1.21	5.68%
8	\$ 23.12	\$ 24.43	\$ 1.31	5.67%
9	\$ 25.80	\$ 27.27	\$ 1.47	5.70%
10	\$ 28.48	\$ 30.11	\$ 1.63	5.72%
11	\$ 31.16	\$ 32.95	\$ 1.79	5.74%
12	\$ 33.84	\$ 35.79	\$ 1.95	5.76%
13	\$ 38.04	\$ 40.24	\$ 2.20	5.78%
14	\$ 42.24	\$ 44.69	\$ 2.45	5.80%
15	\$ 46.44	\$ 49.14	\$ 2.70	5.81%
16	\$ 50.64	\$ 53.59	\$ 2.95	5.83%
17	\$ 54.84	\$ 58.04	\$ 3.20	5.84%
18	\$ 59.04	\$ 62.49	\$ 3.45	5.84%
19	\$ 63.24	\$ 66.94	\$ 3.70	5.85%
20	\$ 67.44	\$ 71.39	\$ 3.95	5.86%
21	\$ 71.64	\$ 75.84	\$ 4.20	5.86%
22	\$ 75.84	\$ 80.29	\$ 4.45	5.87%
23	\$ 80.04	\$ 84.74	\$ 4.70	5.87%
24	\$ 84.24	\$ 89.19	\$ 4.95	5.88%
25	\$ 88.44	\$ 93.64	\$ 5.20	5.88%

Sewer					
Usage	Billed*	Old Bill	New Bill	\$ Increase	% Increase
0	0	\$ 6.50	\$ 6.89	\$ 0.39	6.00%
1	1	\$ 10.32	\$ 10.93	\$ 0.61	5.91%
2	2	\$ 14.14	\$ 14.97	\$ 0.83	5.87%
3	2	\$ 14.14	\$ 14.97	\$ 0.83	5.87%
4	3	\$ 17.96	\$ 19.01	\$ 1.05	5.85%
5	4	\$ 21.78	\$ 23.05	\$ 1.27	5.83%
6	5	\$ 25.60	\$ 27.09	\$ 1.49	5.82%
7	6	\$ 29.42	\$ 31.13	\$ 1.71	5.81%
8	6	\$ 29.42	\$ 31.13	\$ 1.71	5.81%
9	7	\$ 33.24	\$ 35.17	\$ 1.93	5.81%
10	8	\$ 37.06	\$ 39.21	\$ 2.15	5.80%
11	9	\$ 40.88	\$ 43.25	\$ 2.37	5.80%
12	10	\$ 44.70	\$ 47.29	\$ 2.59	5.79%
13	10	\$ 44.70	\$ 47.29	\$ 2.59	5.79%
14	11	\$ 48.52	\$ 51.33	\$ 2.81	5.79%
15	12	\$ 52.34	\$ 55.37	\$ 3.03	5.79%
16	13	\$ 56.16	\$ 59.41	\$ 3.25	5.79%
17	14	\$ 59.98	\$ 63.45	\$ 3.47	5.79%
18	14	\$ 59.98	\$ 63.45	\$ 3.47	5.79%
19	15	\$ 63.80	\$ 67.49	\$ 3.69	5.78%
20	16	\$ 67.62	\$ 71.53	\$ 3.91	5.78%
21	17	\$ 71.44	\$ 75.57	\$ 4.13	5.78%
22	18	\$ 75.26	\$ 79.61	\$ 4.35	5.78%
23	18	\$ 75.26	\$ 79.61	\$ 4.35	5.78%
24	19	\$ 79.08	\$ 83.65	\$ 4.57	5.78%
25	20	\$ 82.90	\$ 87.69	\$ 4.79	5.78%

\* Billed sewer charges are calculated by taking the customer's average water usage during the winter months (Dec, Jan, Feb) less 20%. This calculation assumes that 20% of water used does not return through the sewer system.

# WATER VALLEY-WIDE RATE COMPARISON

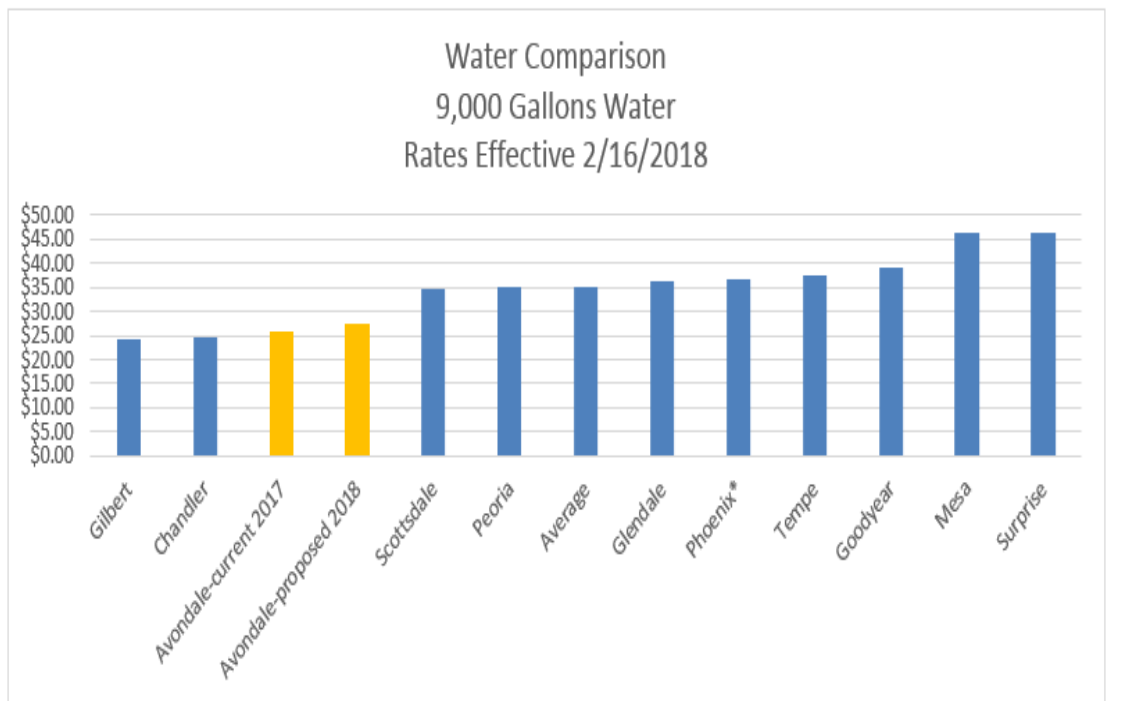
## 9,000 GALLONS/MONTH

City /Town	Water Rate
Gilbert	24.35
Chandler	24.75
Avondale-current 2017	25.80
Avondale-proposed 2018	27.27
Scottsdale	34.55
Peoria	35.00
Average	35.17
Glendale	36.42
Phoenix*	36.60
Tempe	37.56
Goodyear	39.06
Mesa	46.33
Surprise	46.41

\* Phoenix seasonal rates have been averaged

Taxes are not included in computations

Average computation excludes Avondale proposed 2018 rate



# WASTEWATER VALLEY-WIDE RATE COMPARISON

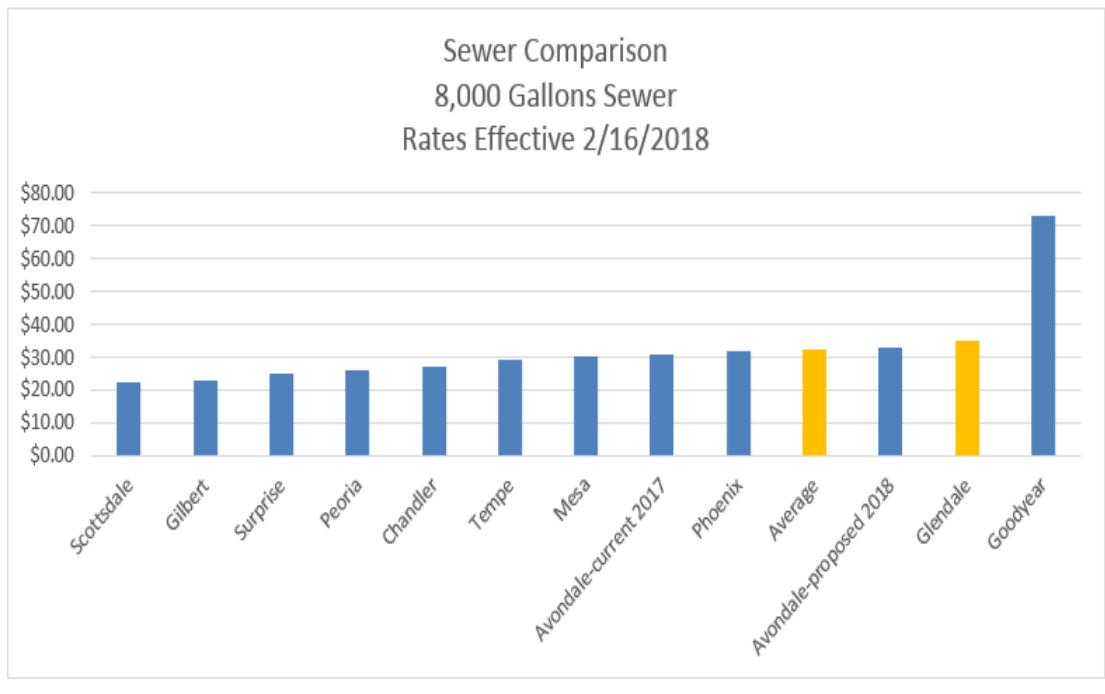
## 8,000 GALLONS/MONTH

City /Town	Sewer Rate
Scottsdale	22.19
Gilbert	22.84
Surprise	24.78
Peoria	26.26
Chandler	27.32
Tempe	29.44
Mesa	30.49
<b>Avondale-current 2017</b>	<b>30.95</b>
Phoenix	31.96
Average	32.17
<b>Avondale-proposed 2018</b>	<b>32.75</b>
Glendale	34.83
Goodyear	72.85

Taxes are not included in computations

Computations include return factor where applicable

Average computation excludes Avondale proposed 2018 rate



# OUTREACH

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- November 7, 2017 – Flyers at HOA Summit
- November 8, 2017 – Email to HOA Representatives
- November 15, 2017 – Flyers at NFS Commission Meeting
- December 9, 2017 – Flyers at City’s Movie Night event
- Press Release
- Social Media – Facebook/Twitter
- Public Meetings
  - December 12<sup>th</sup> at City Hall – Lunch-n-Learn
  - December 12<sup>th</sup> at City Hall – Evening
  - December 14<sup>th</sup> at Public Safety Facility - EMCC

# RECOMMENDATIONS

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- Increase water rates by 6.0% on February 20, 2018
- Increase sewer rates by 6.0% on February 20, 2018
- Fund long-range asset replacement plan and working capital reserve for water and wastewater

# WATER FUND ANALYSIS

1	<b>Water Operating Fund</b>	<b>FY 18</b>	<b>FY 19</b>	<b>FY 20</b>	<b>FY 21</b>	<b>FY 22</b>	<b>FY 23</b>
2	<b>Beginning Working Capital</b>	<b>29,958,015</b>	<b>29,526,336</b>	<b>28,953,122</b>	<b>29,303,971</b>	<b>31,520,895</b>	<b>34,287,063</b>
3							
4	Water Rate Revenue	14,300,668	15,522,517	16,848,761	18,288,319	19,101,783	19,951,431
5	Plus: Growth	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
6	Water Rate Revenue After Growth	14,643,884	15,895,057	17,253,131	18,727,239	19,560,226	20,430,265
7	<b>Pct Change in Water Rates</b>	<b>6.00%</b>	<b>6.00%</b>	<b>6.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>
8	Pct of Year Rate Increase Effective	50%	50%	50%	50%	50%	50%
9	Water Rate Revenue After Growth and Rate Increase	15,083,201	16,371,909	17,770,725	18,914,511	19,755,829	20,634,568
10	Other Revenue	687,860	689,996	689,996	689,996	689,996	689,996
11	Interest Income	447,893	442,894	441,787	456,426	486,935	523,540
12	Total Revenue	16,218,954	17,504,799	18,902,508	20,060,933	20,932,760	21,848,104
13	O&M	(12,743,775)	(15,042,033)	(15,524,932)	(15,817,360)	(16,166,592)	(16,628,234)
14	Debt Service	(36,358)	(35,979)	(26,728)	(26,649)	-	-
15	Capital Outlay	(370,500)	-	-	-	-	-
16	Transfers Out	(3,500,000)	(3,000,000)	(3,000,000)	(2,000,000)	(2,000,000)	(2,000,000)
17	Cash Funded Capital	-	-	-	-	-	-
18	<b>Net Cash Flow</b>	<b>(431,679)</b>	<b>(573,214)</b>	<b>350,849</b>	<b>2,216,924</b>	<b>2,766,168</b>	<b>3,219,870</b>
19							
20	Ending Working Capital	29,526,336	28,953,122	29,303,971	31,520,895	34,287,063	37,506,933
21	Working Capital Reserve	9,557,831	11,281,525	11,643,699	11,863,020	12,124,944	12,471,175
22	Restricted Reserve for Replacement/Refurbishment	19,968,505	17,671,597	17,660,272	19,657,875	22,162,119	25,035,757
23	Percent of Reserve to Depreciable Assets	7%	6%	6%	7%	7%	8%

# SEWER FUND ANALYSIS

25	<u>Sewer Operating Fund</u>	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23
26	<b>Beginning Working Capital</b>	<b>12,541,098</b>	<b>13,727,621</b>	<b>16,988,269</b>	<b>21,066,222</b>	<b>25,655,251</b>	<b>30,619,533</b>
27							
28	Sewer Rate Revenue	9,158,389	9,940,882	10,790,231	11,270,180	11,771,478	12,295,073
29	Plus: Growth	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
30	Sewer Rate Revenue After Growth	9,378,190	10,179,463	11,049,196	11,540,664	12,053,993	12,590,155
31	<b>Pct Change in Sewer Rates</b>	<b>6.00%</b>	<b>6.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>
32	Pct of Year Rate Increase Effective	50%	50%	50%	50%	50%	50%
33	Sewer Rate Revenue After Growth and Rate Increase	9,659,536	10,484,847	11,159,688	11,656,071	12,174,533	12,716,056
34	Other Revenue	1,292,900	1,292,900	1,351,826	1,382,353	1,413,614	1,445,624
35	Interest Income	374,147	404,191	446,262	497,866	562,062	628,807
36	Total Revenue	11,326,583	12,181,938	12,957,776	13,536,290	14,150,209	14,790,487
37	O&M	(6,098,451)	(6,175,867)	(6,266,327)	(6,360,295)	(6,529,750)	(6,703,951)
38	Debt Service	(1,311,234)	(1,245,424)	(1,113,496)	(1,086,966)	(656,178)	(653,073)
39	Capital Outlay	(230,375)	-	-	-	-	-
40	Transfers Out	(2,500,000)	(1,500,000)	(1,500,000)	(1,500,000)	(2,000,000)	(2,000,000)
41	Cash Funded Capital	-	-	-	-	-	-
42	<b>Net Cash Flow</b>	<b>1,186,523</b>	<b>3,260,648</b>	<b>4,077,953</b>	<b>4,589,029</b>	<b>4,964,282</b>	<b>5,433,463</b>
43							
44	Ending Working Capital	13,727,621	16,988,269	21,066,222	25,655,251	30,619,533	36,052,995
45	Working Capital Reserve	4,573,838	4,631,900	4,699,745	4,770,222	4,897,312	5,027,964
46	Restricted Reserve for Replacement/Refurbishment	9,153,783	12,356,369	16,366,477	20,885,029	25,722,220	31,025,032
47	Percent of Reserve to Depreciable Assets	3%	4%	5%	7%	8%	10%



# RATE COMPARISON BY METER SIZE AND USAGE

## EXISTING WATER RATES

### Water Rates

**Customer Charge per Bill** \$ 3.20

Meter Size	Charge per Meter
0.75	\$ 8.00
1	\$ 19.90
1.5	\$ 39.90
2	\$ 63.80
3	\$ 119.70
4	\$ 199.50
6	\$ 399.00
8	\$ 638.30
10	\$ 917.60
Hydrant	\$ 199.50

\*\*Meter Charge for Multi-Family will be based upon a 47% Unit Equivalency Factor applied to the 0.75" Meter Charge times number of units.

Hydrant Meters are charged at the 6" Meter rate.

### Flow Charge per 1,000 Gallons

From:	To:	Residential	Non Residential
-	4,000	\$ 1.15	\$ 1.83
5,000	8,000	1.83	1.83
9,000	12,000	2.68	2.68
13,000	And Over	4.20	4.20
Hydrant Usage		4.20	

\*\*Usage Blocks for Multi-Family will be based upon a 47% Unit Equivalency Factor applied to the outer range of the block times the number of units.

\*\*Usage Blocks for Non Residential will be expanded, by meter size, based upon AWWA meter equivalency factors.

## PROPOSED WATER RATES

### Water Rates

**Customer Charge per Bill** \$ 3.39

Meter Size	Charge per Meter
0.75	\$ 8.48
1	\$ 21.09
1.5	\$ 42.29
2	\$ 67.63
3	\$ 126.88
4	\$ 211.47
6	\$ 422.94
8	\$ 676.60
10	\$ 972.66
Hydrant	\$ 211.47

\*\*Meter Charge for Multi-Family will be based upon a 47% Unit Equivalency Factor applied to the 0.75" Meter Charge times number of units.

### Flow Charge per 1,000 Gallons

From:	To:	Residential	Non Residential
-	4,000	1.21	1.93
5,000	8,000	1.93	1.93
9,000	12,000	2.84	2.84
13,000	And Over	4.45	4.45
Hydrant Usage		4.45	

\*\*Usage Blocks for Multi-Family will be based upon a 47% Unit Equivalency Factor applied to the outer range of the block times the number of units.

\*\*Usage Blocks for Non Residential will be expanded, by meter size, based upon AWWA meter equivalency factors.

# RATE COMPARISON BY METER SIZE AND USAGE

## EXISTING WASTEWATER RATES

### Wastewater Rates

Customer Charge per Bill \$ 6.50

Base Volume Charge (per 1,000 gallons) \$ 1.48

Total Charge Per 1,000 Gallons  
(Base Volume Charge plus Strength Charge)

### Strength Charge (per 1,000 gallons)

Residential Non Residential

		Residential	Non Residential
101 Residential	\$ 2.34	\$ 3.82	
110 Auto Steam Cleaning	\$ 9.65		\$ 11.13
111 Bakery Wholesale	\$ 6.01		\$ 7.49
112 Hospital & Convalescence	\$ 1.41		\$ 2.89
113 Hotel w/Dining	\$ 3.57		\$ 5.05
114 Hotel w/o Dining	\$ 1.74		\$ 3.22
115 Markets with Garbage Disposal	\$ 5.41		\$ 6.89
116 Mortuaries	\$ 5.41		\$ 6.89
117 Repair Shop and Service Station	\$ 1.40		\$ 2.88
118 Restaurant	\$ 6.01		\$ 7.49
120 Schools & Colleges	\$ 0.82		\$ 2.30
121 Bars W/O Dining	\$ 1.35		\$ 2.83
177 Laundromat	\$ 0.94		\$ 2.42
178 Commercial Laundry	\$ 2.65		\$ 4.13
179 Car Wash	\$ 0.38		\$ 1.86
201 Professional Office	\$ 0.79		\$ 2.27
202 Department Store & Retail	\$ 1.01		\$ 2.49
301 Multi-Family	\$ 2.34	\$ 3.82	
302 Mobile Home Park	\$ 2.34	\$ 3.82	
500 Goodyear Resident	\$ 2.34	\$ 3.82	

\*\* Billed Wastewater Usage is assumed to be 80% of billed water usage for all customers except laundries and car wash facilities, which are billed at 70% of billed water usage and multi-family apartments which are billed at 100% of billed water usage.

## PROPOSED WASTEWATER RATES

### Wastewater Rates

Customer Charge per Bill \$ 6.89

Base Volume Charge (per 1,000 gallons) \$ 1.56

Total Charge Per 1,000 Gallons  
(Base Volume Charge plus Strength Charge)

### Strength Charge (per 1,000 gallons)

Residential Non Residential

		Residential	Non Residential	Residential	Non Residential
101 Residential	\$ 2.48	\$ 4.04			
110 Auto Steam Cleaning			\$ 10.23	\$	\$ 11.79
111 Bakery Wholesale			\$ 6.37	\$	\$ 7.93
112 Hospital & Convalescence			\$ 1.50	\$	\$ 3.06
113 Hotel w/Dining			\$ 3.79	\$	\$ 5.35
114 Hotel w/o Dining			\$ 1.85	\$	\$ 3.41
115 Markets with Garbage Disposal			\$ 5.74	\$	\$ 7.30
116 Mortuaries			\$ 5.74	\$	\$ 7.30
117 Repair Shop and Service Station			\$ 1.49	\$	\$ 3.05
118 Restaurant			\$ 6.37	\$	\$ 7.93
120 Schools & Colleges			\$ 0.87	\$	\$ 2.43
121 Bars W/O Dining			\$ 1.43	\$	\$ 2.99
177 Laundromat			\$ 1.00	\$	\$ 2.56
178 Commercial Laundry			\$ 2.81	\$	\$ 4.37
179 Car Wash			\$ 0.41	\$	\$ 1.97
201 Professional Office			\$ 0.84	\$	\$ 2.40
202 Department Store & Retail			\$ 1.07	\$	\$ 2.63
301 Multi-Family	\$ 2.48	\$ 4.04			
302 Mobile Home Park	\$ 2.48	\$ 4.04			
500 Goodyear Resident	\$ 2.48	\$ 4.04			

\*\* Billed Wastewater Usage is assumed to be 80% of billed water usage for all customers except laundries and car wash facilities, which are billed at 70% of billed water usage and multi-family apartments which are billed at 100% of billed water usage.

# RATES AT 4% INCREASE

Wastewater			
<b>Per Bill Administrative Charge-All Users</b>		\$ 6.89	\$ 6.76
<b>User Class</b>	Volume Charge per 1,000 Gallons	Volume Charge per 1,000 Gallons	Volume Charge per 1,000 Gallons
Residential	\$ 4.04	\$ 3.97	
Multi-Family	\$ 4.04	\$ 3.97	
Mobile Home Park	\$ 4.04	\$ 3.97	
Auto Steam Cleaning	\$ 11.79	\$ 11.57	
Bakery Wholesale	\$ 7.93	\$ 7.78	
Hospital and Convalescence	\$ 3.06	\$ 3.00	
Markets with Garbage Disposal	\$ 7.30	\$ 7.16	
Repair Shop and Service Station	\$ 3.05	\$ 2.99	
Restaurant	\$ 7.93	\$ 7.78	
Schools and Colleges	\$ 2.43	\$ 2.39	
Bars Without Dining	\$ 2.99	\$ 2.94	
Laundromat	\$ 2.56	\$ 2.51	
Commercial Laundry	\$ 4.37	\$ 4.29	
Car Wash	\$ 1.97	\$ 1.93	
Professional Office	\$ 2.40	\$ 2.36	
Department Store and Retail	\$ 2.63	\$ 2.58	
Hotel With Dining	\$ 5.35	\$ 5.25	
Hotel Without Dining	\$ 3.41	\$ 3.34	
Mortuaries	\$ 7.30	\$ 7.16	

# QUESTIONS?

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