

**LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT**

**MEMORANDUM**

**DATE:** August 25, 2015

**TO:** BOARD OF DIRECTORS  
Lake Arrowhead Community Services District

**FROM:**   
CATHERINE CERRI, Finance Manager

  
LEO HAVENER, General Manager

**SUBJECT:** WATER RATE STRUCTURE ALTERNATIVES

**A. RECOMMENDATION**

This is an information item only.

**B. REASON FOR RECOMMENDATION**

This is an information item only.

**C. BACKGROUND INFORMATION**

At the board meeting on July 28, 2015, Shawn Koorn from HDR Engineering presented the results of the Rate Study. Members of the board asked to see some alternative rate structures as well as some samples of how these charges would affect customers based on their water usage.

**D. FISCAL INFORMATION**

This is an information item only.

**E. ATTACHMENTS**

Rate Structure Alternatives and Samples

**Lake Arrowhead CSD  
Water Utility Rate Study  
Rate Design Summary**

*Please note: Conceptual rates are for board discussion only; rates are pending legal review and be altered as a result of the review*

<b>Rate Transition Plans</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<i>Arrowhead Woods</i>	<i>4.5%</i>	<i>4.5%</i>	<i>4.5%</i>	<i>4.5%</i>	<i>5.0%</i>
<i>Deer Lodge Park</i>	<i>9.5%</i>	<i>9.5%</i>	<i>9.5%</i>	<i>9.5%</i>	<i>9.5%</i>

**Summary of the Alternative Rate Structures**

**Arrowhead Woods**

**Residential**

**Alt 1** Alternative 1 maintains the current Rate Structure. The proposed rate adjustments are applied 'across the board' to all components.

**Alt 2** Alternative 2 maintains the current rate structure, however, the fixed charges are increase more, proportionally, to increase fixed revenue.

**Commercial**

**Alt 1** Alternative 1 maintains the current Rate Structure. The proposed rate adjustments are applied 'across the board' to all components.

**Alt 2** Alternative 2 transitions the current 3 tiered rate structure for the volumetric charge to a uniform rate structure over a three year period in order to mitigate rate impacts.

**Alt 3** Alternative 3 transitions the volumetric charge from 3 tiers to a uniform rate over three years as in Alt 2 but the fixed charge is increased more, proportionally, to increase revenue stability

**Irrigation**

**Alt 1** Alternative 1 maintains the current Rate Structure. The proposed rate adjustments are applied 'across the board' to all components.

**Alt 2** Alternative 2 transitions the current 3 tiered rate structure for the volumetric charge to a uniform rate structure over a three year period in order to mitigate rate impacts.

**Alt 3** Alternative 3 transitions the volumetric charge from 3 tiers to a uniform rate over three years as in Alt 2 but the fixed charge is increased more, proportionally, to increase revenue stability.

**Deer Lodge Park**

**Residential**

**Alt 1** Alternative 1 maintains the current Rate Structure. The proposed rate adjustments are applied 'across the board' to all components.

**Alt 2** Alternative 2 maintains the current rate structure, however, the fixed charges are increase more, proportionally, to increase fixed revenue.

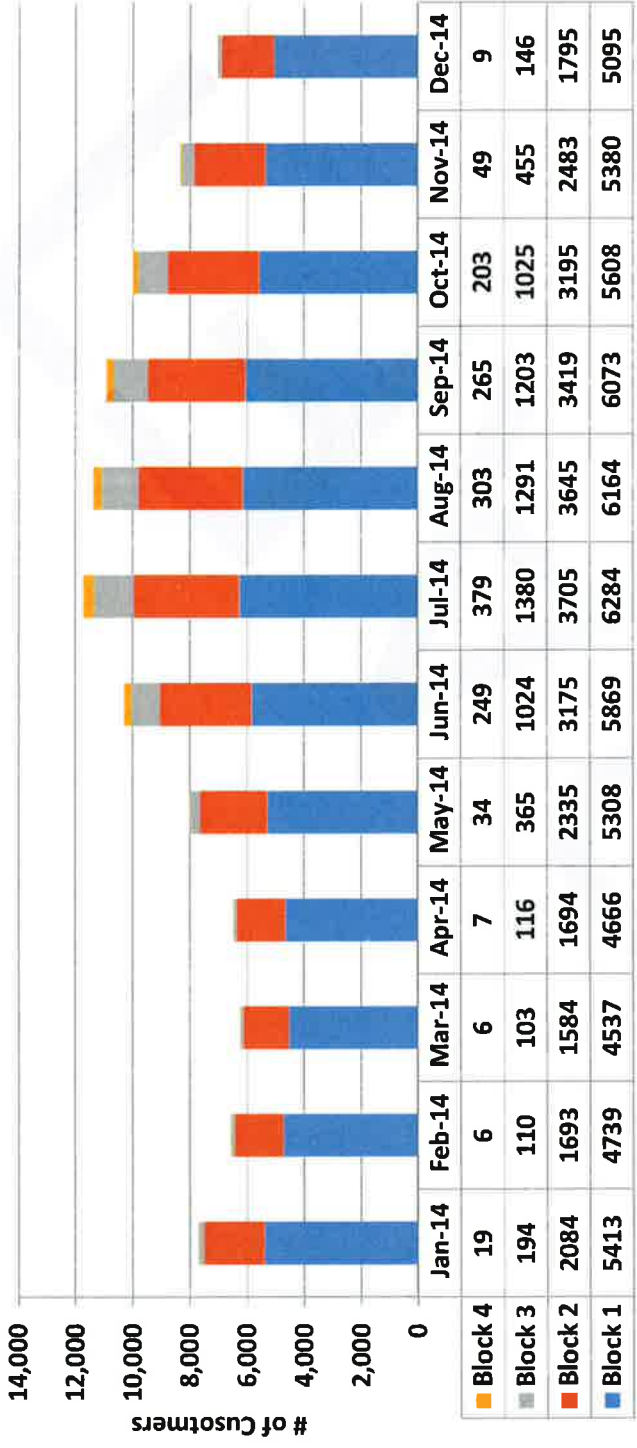
**Rate Schedule  
Residential Rates - Arrowhead Woods  
Alternative 1**

	<i>Present Rates</i>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b><u>Monthly Fixed Fee</u></b>						
3/4" or less	\$34.38	\$35.93	\$37.62	\$39.31	\$41.08	\$43.13
1"	84.23	88.02	92.16	96.31	100.64	105.67
1 1/2"	168.46	176.04	184.31	192.60	201.27	211.33
2"	269.19	281.30	294.52	307.77	321.62	337.70
3"	538.72	562.97	589.43	615.95	643.67	675.85
4"	841.60	879.47	920.81	962.25	1,005.55	1,055.83
6"	1,683.21	1,758.95	1,841.62	1,924.49	2,011.09	2,111.64
<b><u>Volume Charge</u></b>						
0-4 CCF	\$1.18	\$1.49	\$1.56	\$1.63	\$1.70	\$1.79
5-13 CCF	2.24	2.83	2.96	3.09	3.23	3.40
14-30 CCF	6.64	8.38	8.78	9.17	9.57	10.07
31+ CCF	13.84	17.48	18.30	19.12	19.94	20.99

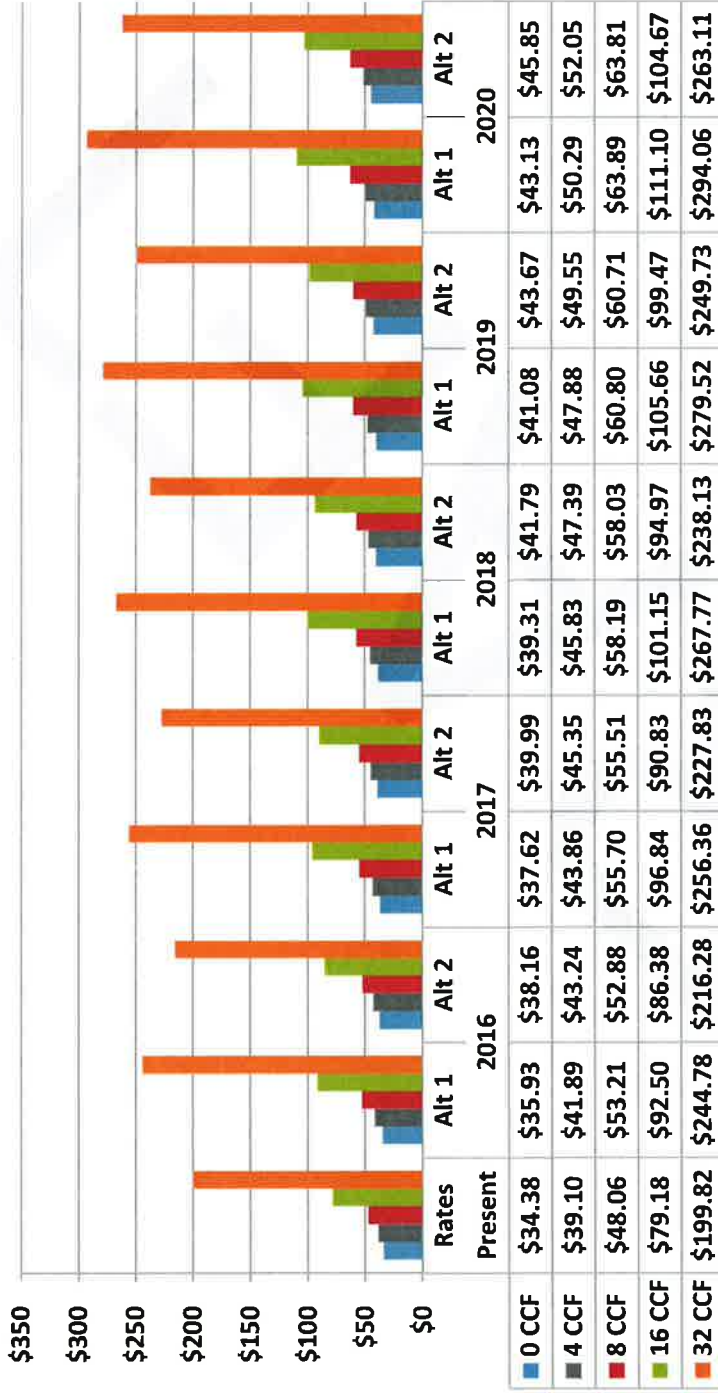
**Rate Schedule  
Residential Rates - Arrowhead Woods  
Alternative 2**

	<i>Present Rates</i>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b><u>Monthly Fixed Fee</u></b>						
3/4" or less	\$34.38	\$38.16	\$39.99	\$41.79	\$43.67	\$45.85
1"	84.23	93.50	97.99	102.40	107.01	112.36
1 1/2"	168.46	186.99	195.97	204.79	214.01	224.71
2"	269.19	298.80	313.14	327.23	341.96	359.06
3"	538.72	597.98	626.68	654.88	684.35	718.57
4"	841.60	934.17	979.01	1,023.07	1,069.11	1,122.57
6"	1,683.21	1,868.36	1,958.04	2,046.15	2,138.23	2,245.14
<b><u>Volume Charge</u></b>						
0-4 CCF	\$1.18	\$1.27	\$1.34	\$1.40	\$1.47	\$1.55
5-13 CCF	2.24	2.41	2.54	2.66	2.79	2.94
14-30 CCF	6.64	7.15	7.54	7.88	8.27	8.72
31+ CCF	13.84	14.90	15.72	16.42	17.24	18.18

### Number of Residential Customers by Block



### Residential Monthly Bill Impacts - 3/4" Meter



**Rate Schedule**  
**Commercial/Industrial Rates - Arrowhead Woods**  
**Alternative 1**

	<b>Present Rates</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Monthly Fixed Fee</b>						
<i>3/4" or less</i>	\$34.38	\$35.93	\$37.62	\$39.31	\$41.08	\$43.13
1"	84.23	88.02	92.16	96.31	100.64	105.67
1 1/2"	168.46	176.04	184.31	192.60	201.27	211.33
2"	269.19	281.30	294.52	307.77	321.62	337.70
3"	538.72	562.97	589.43	615.95	643.67	675.85
4"	841.60	879.47	920.81	962.25	1,005.55	1,055.83
6"	1,683.21	1,758.95	1,841.62	1,924.49	2,011.09	2,111.64
<b>Volume Charge</b>						
Block 1	\$3.11	\$3.60	\$3.78	\$3.95	\$4.13	\$4.35
Block 2	6.21	7.19	7.55	7.89	8.25	8.69
Block 3	12.93	14.97	15.72	16.42	17.17	18.09

**Rate Schedule**  
**Commercial/Industrial Rates - Arrowhead Woods**  
**Alternative 2**

	<b>Present Rates</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Monthly Fixed Fee</b>						
<i>3/4" or less</i>	\$34.38	\$35.93	\$37.62	\$39.31	\$41.08	\$43.13
1"	84.23	88.02	92.16	96.31	100.64	105.67
1 1/2"	168.46	176.04	184.31	192.60	201.27	211.33
2"	269.19	281.30	294.52	307.77	321.62	337.70
3"	538.72	562.97	589.43	615.95	643.67	675.85
4"	841.60	879.47	920.81	962.25	1,005.55	1,055.83
6"	1,683.21	1,758.95	1,841.62	1,924.49	2,011.09	2,111.64
<b>Volume Charge</b>						
Block 1	\$3.11	\$3.83	\$4.20	N/A	N/A	N/A
Block 2	6.21	5.50	4.60	N/A	N/A	N/A
Block 3	12.93	10.50	5.00	N/A	N/A	N/A
All Consumption	N/A	N/A	N/A	\$4.50	\$4.71	\$4.95

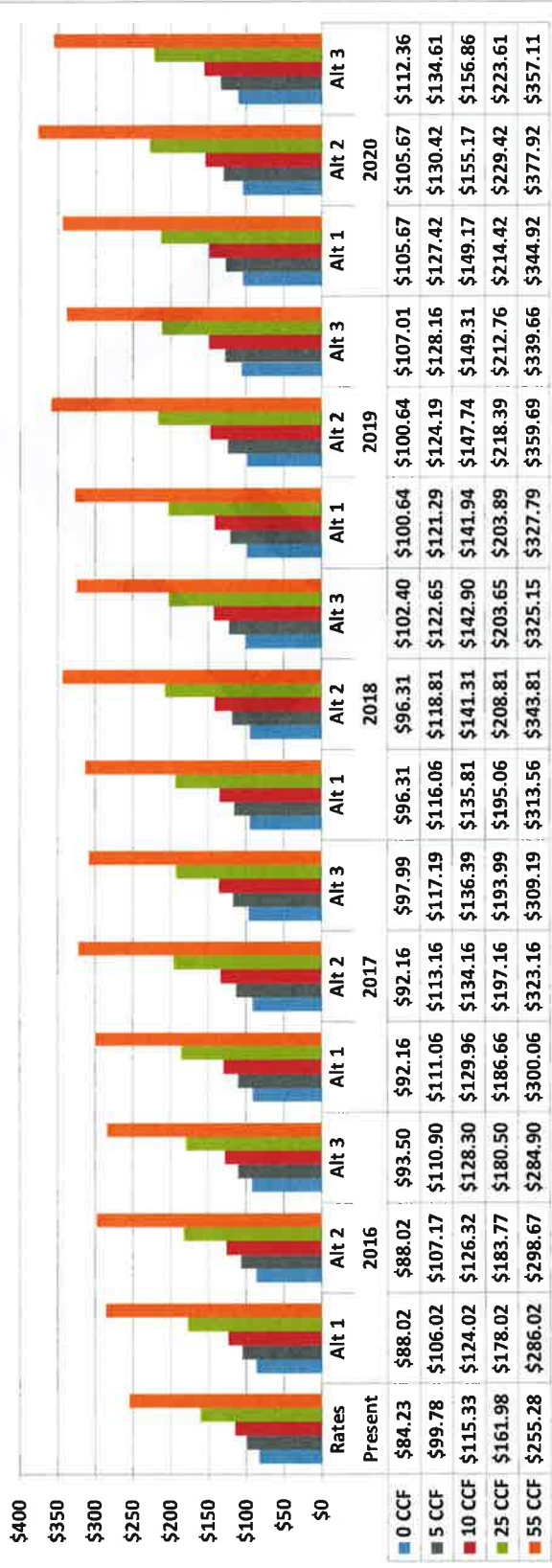
**Rate Schedule**  
**Commercial/Industrial Rates - Arrowhead Woods**  
**Block 1**

	<b>Present Rates</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Monthly Fixed Fee</b>						
<i>3/4" or less</i>	\$34.38	\$38.16	\$39.99	\$41.79	\$43.67	\$45.85
1"	84.23	93.50	97.99	102.40	107.01	112.36
1 1/2"	168.46	186.99	195.97	204.79	214.01	224.71
2"	269.19	298.80	313.14	327.23	341.96	359.06
3"	538.72	597.98	626.68	654.88	684.35	718.57
4"	841.60	934.17	979.01	1,023.07	1,069.11	1,122.57
6"	1,683.21	1,868.36	1,958.04	2,046.15	2,138.23	2,245.14
<b>Volume Charge</b>						
Block 1	\$3.11	\$3.48	\$3.84	N/A	N/A	N/A
Block 2	6.21	5.05	4.10	N/A	N/A	N/A
Block 3	12.93	10.00	4.70	N/A	N/A	N/A
All Consumption	N/A	N/A	N/A	\$4.05	\$4.23	\$4.45

**Rate Schedule**  
**Commercial/Industrial Rates - Arrowhead Woods**  
**Block Sizes**

- 3/4" or less**
- 0-42 CCF
- 43-150 CCF
- 151+ CCF
- 1" Meter**
- 0-72 CCF
- 73-250 CCF
- 251+ CCF
- 1 1/2" Meter**
- 0-145 CCF
- 146-500 CCF
- 501+ CCF
- 2" Meter**
- 0-232 CCF
- 233-800 CCF
- 801+ CCF
- 3" Meter**
- 0-464 CCF
- 465-1,600 CCF
- 1,601+ CCF
- 4" Meter**
- 0-725 CCF
- 726-2,500 CCF
- 2,501+ CCF
- 6" Meter**
- 0-1,450 CCF
- 1,451-5,000 CCF
- 5,001+ CCF

### Commercial Monthly Bill Impacts - 1" Meter



**Rate Schedule**  
**Irrigation Rates - Arrowhead Woods**  
**Alternative 1**

	<b>Present Rates</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Monthly Fixed Fee</b>						
3/4" or less	\$34.38	\$35.93	\$37.62	\$39.31	\$41.08	\$43.13
1"	84.23	88.02	92.16	96.31	100.64	105.67
1 1/2"	168.46	176.04	184.31	192.60	201.27	211.33
2"	269.19	281.30	294.52	307.77	321.62	337.70
3"	538.72	562.97	589.43	615.95	643.67	675.85
4"	841.60	879.47	920.81	962.25	1,005.55	1,055.83
6"	1,683.21	1,758.95	1,841.62	1,924.49	2,011.09	2,111.64
<b>Volume Charge</b>						
0-13 CCF	\$2.25	\$2.25	\$2.25	\$2.35	\$2.46	\$2.59
14+ CCF	13.84	13.84	13.84	14.46	15.13	15.93

**Rate Schedule**  
**Irrigation Rates - Arrowhead Woods**  
**Alternative 2**

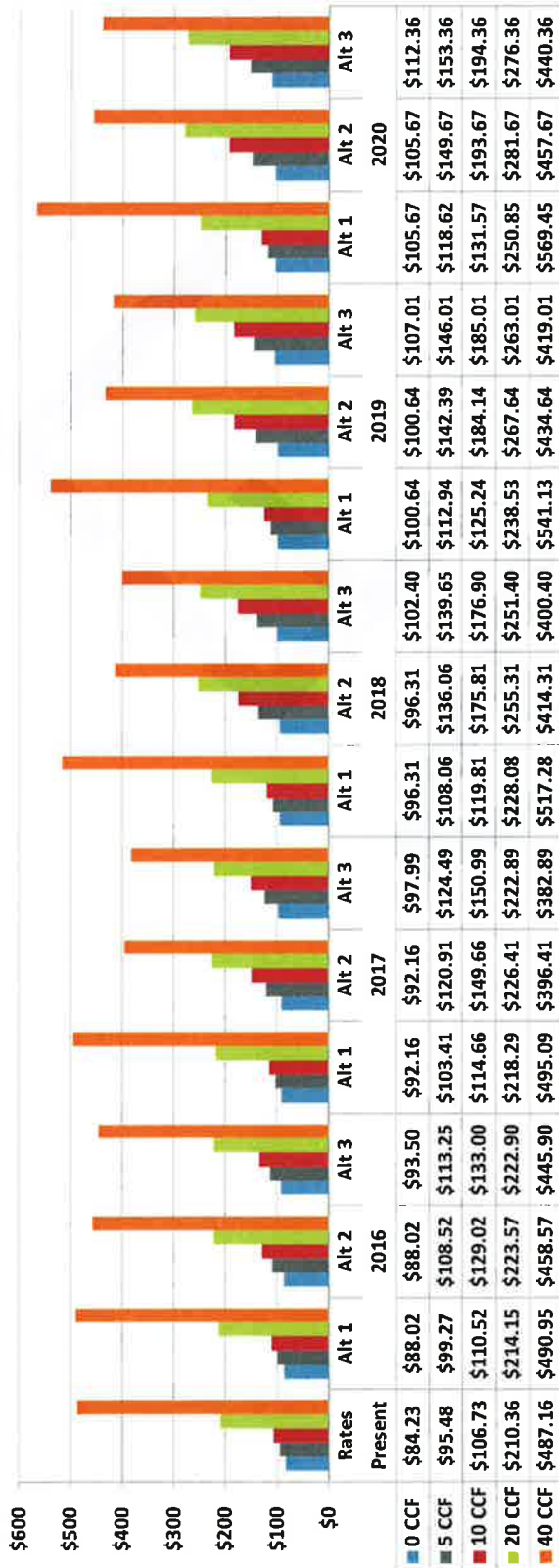
	<b>Present Rates</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Monthly Fixed Fee</b>						
3/4" or less	\$34.38	\$35.93	\$37.62	\$39.31	\$41.08	\$43.13
1"	84.23	88.02	92.16	96.31	100.64	105.67
1 1/2"	168.46	176.04	184.31	192.60	201.27	211.33
2"	269.19	281.30	294.52	307.77	321.62	337.70
3"	538.72	562.97	589.43	615.95	643.67	675.85
4"	841.60	879.47	920.81	962.25	1,005.55	1,055.83
6"	1,683.21	1,758.95	1,841.62	1,924.49	2,011.09	2,111.64
<b>Volume Charge</b>						
0-13 CCF	\$2.25	\$4.10	\$5.75	N/A	N/A	N/A
14+ CCF	13.84	11.75	8.50	N/A	N/A	N/A
All Consumption	N/A	N/A	N/A	\$7.95	\$8.35	\$8.80

**Rate Schedule**  
**Irrigation Rates - Arrowhead Woods**  
**Alternative 3**

	<b>Present Rates</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Monthly Fixed Fee</b>						
3/4" or less	\$34.38	\$38.16	\$39.99	\$41.79	\$43.67	\$45.85
1"	84.23	93.50	97.99	102.40	107.01	112.36
1 1/2"	168.46	186.99	195.97	204.79	214.01	224.71
2"	269.19	298.80	313.14	327.23	341.96	359.06
3"	538.72	597.98	626.68	654.88	684.35	718.57
4"	841.60	934.17	979.01	1,023.07	1,069.11	1,122.57
6"	1,683.21	1,868.36	1,958.04	2,046.15	2,138.23	2,245.14
<b>Volume Charge</b>						
0-13 CCF	\$2.25	\$3.95	\$5.30	N/A	N/A	N/A
14+ CCF	13.84	11.15	8.00	N/A	N/A	N/A
All Consumption	N/A	N/A	N/A	\$7.45	\$7.80	\$8.20



### Irrigation Monthly Bill Impacts - 1" Meter



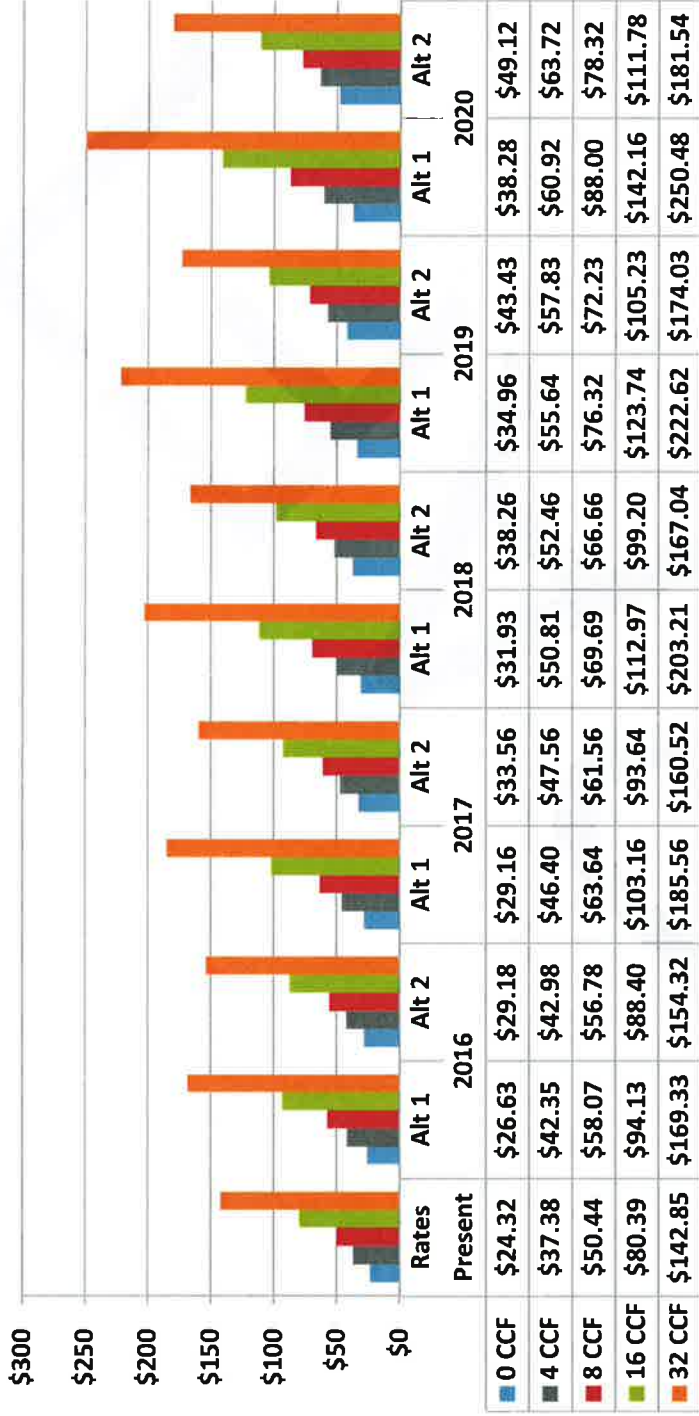
**Rate Schedule****Residential Rates - Deer Lodge Park**

	<i>Present Rates</i>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b><u>Monthly Fixed Fee</u></b>						
<i>3/4" or smaller</i>	\$24.32	\$26.63	\$29.16	\$31.93	\$34.96	\$38.28
<i>1"</i>	59.59	65.25	71.45	78.24	85.67	93.81
<i>1 1/2"</i>	119.17	130.49	142.89	156.46	171.32	187.60
<i>2"</i>	190.43	208.52	228.33	250.02	273.77	299.78
<b><u>Volume Charge</u></b>						
0-10 CCF	\$3.27	\$3.93	\$4.31	\$4.72	\$5.17	\$5.66
11+ CCF	3.90	4.70	5.15	5.64	6.18	6.77

**Rate Schedule****Residential Rates - Deer Lodge Park**

	<i>Present Rates</i>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b><u>Monthly Fixed Fee</u></b>						
<i>3/4" or smaller</i>	\$24.32	\$29.18	\$33.56	\$38.26	\$43.43	\$49.12
<i>1"</i>	59.59	71.51	82.24	93.75	106.41	120.35
<i>1 1/2"</i>	119.17	143.00	164.45	187.47	212.78	240.65
<i>2"</i>	190.43	228.52	262.80	299.59	340.03	384.57
<b><u>Volume Charge</u></b>						
0-10 CCF	\$3.27	\$3.45	\$3.50	\$3.55	\$3.60	\$3.65
11+ CCF	3.90	4.12	4.18	4.24	4.30	4.36

### Deer Lodge Park Residential Monthly Bill Impacts - 3/4" Meter



**Lake Arrowhead CSD  
Water Utility Rate Study  
Residential Rates - Arrowhead Woods - 3/4" or less  
Alternative 1: Year 1 - FY 2016**

Consumption (CCF)	Present Rates	Proposed Rates	Difference	
			Amount	Percent
0	\$34.38	\$35.93	\$1.55	4.51%
2	36.74	38.91	2.17	5.91%
4	39.10	41.89	2.79	7.14%
6	43.58	47.55	3.97	9.11%
8	48.06	53.21	5.15	10.72%
10	52.54	58.87	6.33	12.05%
12	57.02	64.53	7.51	13.17%
14	65.90	75.74	9.84	14.93%
16	79.18	92.50	13.32	16.82%
18	92.46	109.26	16.80	18.17%
20	105.74	126.02	20.28	19.18%
25	138.94	167.92	28.98	20.86%
32	199.82	244.78	44.96	22.50%
40	310.54	384.62	74.08	23.86%
50	448.94	559.42	110.48	24.61%

**PRESENT RATES**

<u>Monthly Fixed Fee</u>	<u>\$/Acct.</u>
3/4" or less	\$34.38

<u>Volume Charge</u>	<u>\$/CCF</u>
0-4 CCF	\$1.18
5-13 CCF	2.24
14-30 CCF	6.64
31+ CCF	13.84

**PROPOSED RATES**

<u>Monthly Fixed Fee</u>	<u>\$/Acct.</u>
3/4" or less	\$35.93

<u>Volume Charge</u>	<u>\$/CCF</u>
0-4 CCF	\$1.49
5-13 CCF	2.83
14-30 CCF	8.38
31+ CCF	17.48

**Lake Arrowhead CSD  
Water Utility Rate Study  
Residential Rates - Arrowhead Woods - 3/4" or less  
Alternative 2: Year 1 Rates - FY 2016**

Consumption (CCF)	Present Rates	Proposed Rates	Difference	
			Amount	Percent
0	\$34.38	\$38.16	\$3.78	11.00%
2	36.74	40.70	3.96	10.78%
4	39.10	43.24	4.14	10.59%
6	43.58	48.06	4.48	10.28%
8	48.06	52.88	4.82	10.03%
10	52.54	57.70	5.16	9.82%
12	57.02	62.52	5.50	9.65%
14	65.90	72.08	6.18	9.38%
16	79.18	86.38	7.20	9.09%
18	92.46	100.68	8.22	8.89%
20	105.74	114.98	9.24	8.74%
25	138.94	150.73	11.79	8.49%
32	199.82	216.28	16.46	8.24%
40	310.54	335.48	24.94	8.03%
50	448.94	484.48	35.54	7.92%

**PRESENT RATES**

<u>Monthly Fixed Fee</u>	<u>\$/Acct.</u>
3/4" or less	\$34.38

<u>Volume Charge</u>	<u>\$/CCF</u>
0-4 CCF	\$1.18
5-13 CCF	2.24
14-30 CCF	6.64
31+ CCF	13.84

**PROPOSED RATES**

<u>Monthly Fixed Fee</u>	<u>\$/Acct.</u>
3/4" or less	\$38.16

<u>Volume Charge</u>	<u>\$/CCF</u>
0-4 CCF	\$1.27
5-13 CCF	2.41
14-30 CCF	7.15
31+ CCF	14.90

**Lake Arrowhead CSD  
Water Utility Rate Study  
Commercial/Industrial Rates - Arrowhead Woods - 1" Meter  
Alternative 1: Year 1 - 2016**

Consumption (CCF)	Present Rates	Proposed Rates	Difference	
			Amount	Percent
0	\$84.23	\$88.02	\$3.79	4.50%
5	99.78	106.02	6.24	6.25%
10	115.33	124.02	8.69	7.53%
15	130.88	142.02	11.14	8.51%
20	146.43	160.02	13.59	9.28%
25	161.98	178.02	16.04	9.90%
35	193.08	214.02	20.94	10.85%
45	224.18	250.02	25.84	11.53%
55	255.28	286.02	30.74	12.04%
65	286.38	322.02	35.64	12.44%
75	326.78	368.79	42.01	12.86%
100	482.03	548.54	66.51	13.80%
125	637.28	728.29	91.01	14.28%
150	792.53	908.04	115.51	14.57%
250	1,413.53	1,627.04	213.51	15.10%

**PRESENT RATES**

<u>Monthly Fixed Fee</u>	<u>\$/Acct.</u>
1"	\$84.23

<u>Volume Charge</u>	<u>\$/CCF</u>
0-72 CCF	\$3.11
73-250 CCF	6.21
251+ CCF	12.93

**PROPOSED RATES**

<u>Monthly Fixed Fee</u>	<u>\$/Acct.</u>
1"	\$88.02

<u>Volume Charge</u>	<u>\$/CCF</u>
0-72 CCF	\$3.60
73-250 CCF	7.19
251+ CCF	14.97

**Lake Arrowhead CSD  
Water Utility Rate Study  
Residential Rates - Deer Lodge Park - 3/4" or smaller  
Alternative 2: Year 1 Rates - FY 2016**

Consumption (CCF)	Present Rates	Proposed Rates	Difference	
			Amount	Percent
0	\$24.32	\$29.18	\$4.86	19.98%
2	30.85	36.08	5.23	16.95%
4	37.38	42.98	5.60	14.98%
6	43.91	49.88	5.97	13.59%
8	50.44	56.78	6.34	12.57%
10	56.97	63.68	6.71	11.78%
12	64.78	71.92	7.14	11.02%
14	72.59	80.16	7.57	10.43%
16	80.39	88.40	8.01	9.96%
18	88.20	96.64	8.44	9.57%
20	96.01	104.88	8.87	9.24%
25	115.53	125.48	9.95	8.62%
32	142.85	154.32	11.47	8.03%
40	174.08	187.28	13.20	7.58%
50	213.12	228.48	15.36	7.21%

**PRESENT RATES**

**Monthly Fixed Fee**     **\$/Acct.**  
3/4" or smaller         \$24.32

**Volume Charge**         **\$/CCF**  
0-10 CCF                 \$3.27  
11+ CCF                    3.90

**PROPOSED RATES**

**Monthly Fixed Fee**     **\$/Acct.**  
3/4" or smaller         \$29.18

**Volume Charge**         **\$/CCF**  
0-10 CCF                 \$3.45  
11+ CCF                    4.12