

Exhibit

Schedule H-5

Page 12

Meter Size:

[illegible]

Meter Size: 5/8x3/4 Inch Resort - Piney Shores

Witness: Bourassa

Average Usage	10,834
Median Usage	739,439
Average # Customers	1

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 5/8x3/4 Inch Resort - Piney Shores

Exhibit

Schedule H-5

Page 12

Witness: Bourassa

Usage From:	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total <u>Year</u>	Cumul- ative <u>Billing</u>	Cumul- ative Gallons (in 1,000's)
Change in Number of Customers														-		

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Schedule H-5
Page 12
Witness: Bourassa

[illegible]

Meter Size: 5/8x3/4 Inch Resort - Piney Shores (133 Units)

Witness: Bourassa

[illegible]

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Schedule H-5

Page 12

Meter Size:

Average Usage	242,009
Median Usage	739,439
Average # Customers	2

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 5/8x3/4 Inch Resort - Piney Shores (133 Units)

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Schedule H-5

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Witness: Bourassa

Usage From:	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total <u>Year</u>	Cumul- ative <u>Billing</u>	Cumul- ative Gallons (in 1,000's)
										Change in Number of Customers				-		

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Witness: Bourassa

[illegible]

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[illegible]

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Meter Size:

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 5/8x3/4 Inch Resort - Hill Country

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Schedule H-5

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Witness: Bourassa

Usage From	Usage To	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total Year	Cumul- ative Billing	Cumul- ative Gallons (in 1,000's)
	-													-	-	-
	-													-	-	-
Totals		-	-	-	-	-	-	-	-	-	-	-	-	-		
														Average Usage	-	
														Median Usage	#DIV/0!	
														Average # Customers	-	
														Change in Number of Customers	-	

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Schedule H-5

Page 12

Witness: Bourassa

[illegible]

Exhibit

Schedule H-5

Page 12

Witness: Bourassa

Usage From:	Usage To:	Month of Jan-17	Month of Feb-17	Month of Mar-17	Month of Apr-17	Month of May-17	Month of Jun-17	Month of Jul-17	Month of Aug-17	Month of Sep-17	Month of Oct-17	Month of Nov-17	Month of Dec-17	Total Year	Cumul-ative Billing	Cumul-ative Gallons (in 1,000's)
39,001	40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
40,001	41,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
41,001	42,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
42,001	43,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
43,001	44,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
44,001	45,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
45,001	46,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
46,001	47,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
47,001	48,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
48,001	49,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
49,001	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
50,001	51,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
51,001	52,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
52,001	53,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
53,001	54,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
54,001	55,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
55,001	56,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
56,001	57,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
57,001	58,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
58,001	59,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
59,001	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
60,001	61,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
61,001	62,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
62,001	63,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
63,001	64,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
64,001	65,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
65,001	66,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
66,001	67,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
67,001	68,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
68,001	69,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
69,001	70,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
70,001	71,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
71,001	72,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
72,001	73,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
73,001	74,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
74,001	75,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
75,001	76,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
76,001	77,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
77,001	78,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552
78,001	79,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	552

Exhibit

Schedule H-5

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[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division
 Test Year Ended December 31, 2017
 Meter Size: 5/8x3/4 Inch Resort - Hill Country (6 Units)

Exhibit
 Schedule H-5
 Page 12
 Witness: Bourassa

Usage From:	Usage To:	Month of Jan-17	Month of Feb-17	Month of Mar-17	Month of Apr-17	Month of May-17	Month of Jun-17	Month of Jul-17	Month of Aug-17	Month of Sep-17	Month of Oct-17	Month of Nov-17	Month of Dec-17	Total Year	Cumul-ative Billing	Cumul-ative Gallons (in 1,000's)
	-													-	24	552
	-													-	24	552
Totals		2	2	2	2	2	2	2	2	2	2	2	2	24		
														Average Usage	23,001	
														Median Usage	#DIV/0!	
														Average # Customers	2	
														Change in Number of Customers	-	

Exhibit
Schedule H-5
Page 12
Witness: Bourassa

Usage From:	Usage To:	Month of Jan-17	Month of Feb-17	Month of Mar-17	Month of Apr-17	Month of May-17	Month of Jun-17	Month of Jul-17	Month of Aug-17	Month of Sep-17	Month of Oct-17	Month of Nov-17	Month of Dec-17	Total Year	Cumul-ative Billing	Cumul-ative Gallons (in 1,000's)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	1,000	1	1	1	1	1	1	1	1	1	1	1	1	12	12	6
1,001	2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
2,001	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
3,001	4,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
4,001	5,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
5,001	6,000	1	1	1	1	1	1	1	1	1	1	1	1	12	24	72
6,001	7,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
7,001	8,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
8,001	9,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
9,001	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
10,001	11,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
11,001	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
12,001	13,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
13,001	14,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
14,001	15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
15,001	16,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
16,001	17,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
17,001	18,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
18,001	19,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
19,001	20,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
20,001	21,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
21,001	22,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
22,001	23,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
23,001	24,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
24,001	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
25,001	26,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
26,001	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
27,001	28,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
28,001	29,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
29,001	30,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
30,001	31,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
31,001	32,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
32,001	33,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
33,001	34,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
34,001	35,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
35,001	36,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
36,001	37,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
37,001	38,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72
38,001	39,000	-	-	-	-	-	-	-	-	-	-	-	-	-	24	72

Exhibit

Schedule H-5

Page 12

Meter Size:

[illegible]

Exhibit

Schedule H-5

Page 12

Meter Size:

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division
 Test Year Ended December 31, 2017
 Meter Size: 5/8x3/4 Inch Resort - Hill Country (8 Units)

Exhibit
 Schedule H-5
 Page 12
 Witness: Bourassa

Usage From:	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total Year	Cumul- ative Billing	Cumul- ative Gallons (in 1,000's)
	-													-	48	1,282
	-													-	48	1,282
Totals		4	4	4	4	4	4	4	4	4	4	4	4	48		
														Average Usage	26,709	
														Median Usage	#DIV/0!	
														Average # Customers	4	
														Change in Number of Customers	-	

Exhibit

Schedule H-5

Page 12

Meter Size:

[illegible]

Exhibit

Schedule H-5

Page 12

Meter Size:

Usage	Usage	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Total	Cumul-	Cumul-
From:	To:	of	of	of	of	of	of	of	of	of	of	of	of	Year	ative	ative
		<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>		<u>Billing</u>	<u>Gallons</u>
																<u>(in 1,000's)</u>
39,001	40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	78	1,517
40,001	41,000	1	1	-	-	-	-	-	-	-	-	-	-	2	80	1,598
41,001	42,000	-	-	-	-	-	-	-	-	-	-	-	-	-	80	1,598
42,001	43,000	1	1	-	-	-	-	-	-	-	-	-	-	2	82	1,683
43,001	44,000	-	-	1	1	1	1	1	1	1	1	1	1	10	92	2,118
44,001	45,000	-	-	-	-	-	-	-	-	-	-	-	-	-	92	2,118
45,001	46,000	-	-	-	-	-	-	-	-	-	-	-	-	-	92	2,118
46,001	47,000	-	-	-	-	-	-	-	-	-	-	-	-	-	92	2,118
47,001	48,000	1	1	-	-	-	-	-	-	-	-	-	-	2	94	2,213
48,001	49,000	-	-	-	-	-	-	-	-	-	-	-	-	-	94	2,213
49,001	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	94	2,213
50,001	51,000	-	-	1	1	1	1	1	1	1	1	1	1	10	104	2,718
51,001	52,000	-	-	-	-	-	-	-	-	-	-	-	-	-	104	2,718
52,001	53,000	-	-	-	-	-	-	-	-	-	-	-	-	-	104	2,718
53,001	54,000	-	-	-	-	-	-	-	-	-	-	-	-	-	104	2,718
54,001	55,000	-	-	-	-	-	-	-	-	-	-	-	-	-	104	2,718
55,001	56,000	-	-	-	-	-	-	-	-	-	-	-	-	-	104	2,718
56,001	57,000	-	-	-	-	-	-	-	-	-	-	-	-	-	104	2,718
57,001	58,000	1	1	-	-	-	-	-	-	-	-	-	-	2	106	2,833
58,001	59,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
59,001	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
60,001	61,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
61,001	62,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
62,001	63,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
63,001	64,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
64,001	65,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
65,001	66,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
66,001	67,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
67,001	68,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
68,001	69,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
69,001	70,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
70,001	71,000	-	-	-	-	-	-	-	-	-	-	-	-	-	106	2,833
71,001	72,000	-	-	-												

Exhibit

Schedule H-5

Page 12

Meter Size:

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division
 Test Year Ended December 31, 2017
 Meter Size: 5/8x3/4 Inch Resort - Hill Country (12 Units)

Exhibit
 Schedule H-5
 Page 12
 Witness. Bourassa

Usage From:	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total <u>Year</u>	Cumul- ative <u>Billing</u>	Cumul- ative Gallons <u>(in 1,000's)</u>
	-													-	108	3,054
	-													-	108	3,054
Totals		9	9	9	9	9	9	9	9	9	9	9	9	108		
														Average Usage	28,279	
														Median Usage	#DIV/0!	
														Average # Customers	9	
														Change in Number of Customers	-	

Exhibit
Schedule H-5
Page 12
Witness: Bourassa

[illegible]

Exhibit
Schedule H-5
Page 12
Witness: Bourassa

[illegible]

Exhibit

Schedule H-5

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Witness: Bourassa

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 5/8x3/4 Inch Resort - Hill Country (220 Units)

Exhibit

Schedule H-5

Page 12

Witness: Bourassa

Usage From.	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total <u>Year</u>	Cumul- ative <u>Billing</u>	Cumul- ative Gallons (in 1,000's)
	-													-	36	1,854
	-													-	36	1,854
Totals		3	3	3	3	3	3	3	3	3	3	3	3	36		
														Average Usage	51,501	
														Median Usage	#DIV/0!	
														Average # Customers	3	
														Change in Number of Customers	-	

Exhibit

Schedule H-5

Page 12

Witness: Bourassa

		Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month		Cumul-	Cumul-
Usage	Usage	of	of	of	of	of	of	of	of	of	of	of	of	Total	ative	Gallons
From:	To:	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>	<u>Year</u>	<u>Billing</u>	<u>(in 1,000's)</u>
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,001	2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,001	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,001	4,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,001	5,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5,001	6,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6,001	7,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,001	8,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8,001	9,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9,001	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10,001	11,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11,001	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12,001	13,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13,001	14,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14,001	15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15,001	16,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16,001	17,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17,001	18,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18,001	19,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19,001	20,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20,001	21,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21,001	22,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22,001	23,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23,001	24,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24,001	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25,001	26,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26,001	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27,001	28,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28,001	29,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29,001	30,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30,001	31,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31,001	32,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32,001	33,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33,001	34,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34,001	35,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35,001	36,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36,001	37,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37,001	38,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38,001	39,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit

Schedule H-5

Page 12

Witness: Bourassa

		Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month		Cumul-	Cumul-
Usage	Usage	of	of	of	of	of	of	of	of	of	of	of	of	Total	ulative	ulative
From:	To:	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>	<u>Year</u>	<u>Billing</u>	<u>Gallons</u>
39,001	40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40,001	41,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41,001	42,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42,001	43,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43,001	44,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44,001	45,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45,001	46,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46,001	47,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47,001	48,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48,001	49,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49,001	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50,001	51,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51,001	52,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52,001	53,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53,001	54,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54,001	55,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55,001	56,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56,001	57,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57,001	58,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58,001	59,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59,001	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60,001	61,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61,001	62,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62,001	63,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63,001	64,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64,001	65,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65,001	66,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66,001	67,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67,001	68,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68,001	69,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69,001	70,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70,001	71,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71,001	72,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72,001	73,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73,001	74,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74,001	75,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75,001	76,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76,001	77,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77,001	78,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78,001	79,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit

Schedule H-5

Page 12

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division
Test Year Ended December 31, 2017
Meter Size: 5/8x3/4 Inch Resort - Hill Country (220 Units)

Exhibit
Schedule H-5
Page 12
Witness: Bourassa

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 5/8x3/4 Inch Resort - Hill Country (220 Units)

Exhibit

Schedule H-5

Page 12

Witness: Bourassa

Usage From	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total <u>Year</u>	Cumul- ative <u>Billing</u>	Cumul- ative Gallons <u>(in 1,000's)</u>
	-													-	12	12,214
	-													-	12	12,214
Totals		1	1	1	1	1	1	1	1	1	1	1	1	12		
														Average Usage	1,017,834	
														Median Usage	#DIV/0!	
														Average # Customers	1	
														Change in Number of Customers	-	

Test Year Ended December 31, 2017
Meter Size: 1 Inch Resort - Piney Shores

Schedule H-5
Page 14

[illegible]

Test Year Ended December 31, 2017
Meter Size: 1 Inch Resort - Piney Shores

Schedule H-5
Page 14

		Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of		Cumul- ative	Cumul- ative
Usage From:	Usage To:	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>	Total <u>Year</u>	<u>Billing</u>	Gallons <u>(in 1,000's)</u>
39,001	40,000													-	-	-
40,001	41,000													-	-	-
41,001	42,000													-	-	-
42,001	43,000													-	-	-
43,001	44,000													-	-	-
44,001	45,000													-	-	-
45,001	46,000													-	-	-
46,001	47,000													-	-	-
47,001	48,000													-	-	-
48,001	49,000													-	-	-
49,001	50,000													-	-	-
50,001	51,000													-	-	-
51,001	52,000													-	-	-
52,001	53,000													-	-	-
53,001	54,000													-	-	-
54,001	55,000													-	-	-
55,001	56,000													-	-	-
56,001	57,000													-	-	-
57,001	58,000													-	-	-
58,001	59,000													-	-	-
59,001	60,000													-	-	-
60,001	61,000													-	-	-
61,001	62,000													-	-	-
62,001	63,000													-	-	-
63,001	64,000													-	-	-
64,001	65,000													-	-	-
65,001	66,000													-	-	-
66,001	67,000													-	-	-
67,001	68,000													-	-	-
68,001	69,000													-	-	-
69,001	70,000													-	-	-
70,001	71,000													-	-	-
71,001	72,000													-	-	-
72,001	73,000													-	-	-
73,001	74,000													-	-	-
74,001	75,000													-	-	-
75,001	76,000													-	-	-
76,001	77,000													-	-	-
77,001	78,000													-	-	-
78,001	79,000													-	-	-

Meter Size: 1 Inch Resort - Piney Shores

Witness: Bourassa

[illegible]

Exhibit

Schedule H-5

Page 14

Witness: Bourassa

[illegible]

Meter Size: 1 Inch Resort - Hill Country

Witness: Bourassa

[illegible]

Meter Size: 1 Inch Resort - Hill Country

Witness: Bourassa

Usage From:	Usage To:	Month of Jan-17	Month of Feb-17	Month of Mar-17	Month of Apr-17	Month of May-17	Month of Jun-17	Month of Jul-17	Month of Aug-17	Month of Sep-17	Month of Oct-17	Month of Nov-17	Month of Dec-17	Total Year	Cumulative Billing	Cumulative Gallons (in 1,000's)
79,001	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
80,001	81,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
81,001	82,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
82,001	83,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
83,001	84,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
84,001	85,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
85,001	86,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
86,001	87,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
87,001	88,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
88,001	89,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
89,001	90,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
90,001	91,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
91,001	92,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
92,001	93,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
93,001	94,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
94,001	95,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
95,001	96,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
96,001	97,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
97,001	98,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
98,001	99,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
99,001	100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	6
	-													-	12	6
	-													-	12	6
	-													-	12	6
	-													-	12	6
	-													-	12	6
	-													-	12	6
	-													-	12	6
	-													-	12	6
Totals		1	1	1	1	1	1	1	1	1	1	1	1	12		
										Average Usage				501		
										Median Usage				-		
										Average # Customers				1		
										Change in Number of Customers				-		

Exhibit
Schedule H-5
Page 15
Witness: Bourassa

Schedule H-5

Page 15

[illegible]

Test Year Ended December 31, 2017
Meter Size: 1 1/2 Inch Resort - Piney Shores

Exhibit
Schedule H-5
Page 15
Witness: Bourassa

Usage From:	Usage To:	Month of Jan-17	Month of Feb-17	Month of Mar-17	Month of Apr-17	Month of May-17	Month of Jun-17	Month of Jul-17	Month of Aug-17	Month of Sep-17	Month of Oct-17	Month of Nov-17	Month of Dec-17	Total Year	Cumul-ative Billing	Cumul-ative Gallons (in 1,000's)
39,001	40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	10	245
40,001	41,000	-	-	-	-	-	-	-	-	-	-	-	-	-	10	245
41,001	42,000	-	-	-	-	-	-	-	-	-	-	-	-	-	10	245
42,001	43,000	-	-	-	-	-	-	-	-	-	-	-	-	-	10	245
43,001	44,000	-	-	-	-	-	-	-	-	-	-	-	-	-	10	245
44,001	45,000	1	1	-	-	-	-	-	-	-	-	-	-	2	12	334
45,001	46,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
46,001	47,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
47,001	48,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
48,001	49,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
49,001	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
50,001	51,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
51,001	52,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
52,001	53,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
53,001	54,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
54,001	55,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
55,001	56,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
56,001	57,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
57,001	58,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
58,001	59,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
59,001	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
60,001	61,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
61,001	62,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
62,001	63,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
63,001	64,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
64,001	65,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
65,001	66,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
66,001	67,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
67,001	68,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
68,001	69,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
69,001	70,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
70,001	71,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
71,001	72,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
72,001	73,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
73,001	74,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
74,001	75,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
75,001	76,000	-	-	-												

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 1 1/2 Inch Resort - Piney Shores

Exhibit

Schedule H-5

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Witness: Bourassa

Usage From:	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total <u>Year</u>	Cumul- ative <u>Billing</u>	Cumul- ative Gallons <u>(in 1,000's)</u>
79,001	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
80,001	81,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
81,001	82,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
82,001	83,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
83,001	84,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
84,001	85,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
85,001	86,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
86,001	87,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
87,001	88,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
88,001	89,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
89,001	90,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
90,001	91,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
91,001	92,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
92,001	93,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
93,001	94,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
94,001	95,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
95,001	96,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
96,001	97,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
97,001	98,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
98,001	99,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
99,001	100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	334
Totals		1	1	1	1	1	1	1	1	1	1	1	1	12		
														Average Usage	27,834	
														Median Usage	52,000	
														Average # Customers	1	
														Change in Number of Customers	-	

Exhibit

Schedule H-5

Page 15

Witness: Bourassa

[illegible]

Exhibit

Schedule H-5

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Witness: Bourassa

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 1 1/2 Inch Resort - Hill Country

Exhibit

Schedule H-5

Page 15

Witness: Bourassa

Usage	Usage	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Month of	Total	Cumul- ative	Cumul- ative
From:	To:	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>	<u>Year</u>	<u>Billing</u>	<u>(in 1,000's)</u>
79,001	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
80,001	81,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
81,001	82,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
82,001	83,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
83,001	84,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
84,001	85,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
85,001	86,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
86,001	87,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
87,001	88,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
88,001	89,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
89,001	90,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
90,001	91,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
91,001	92,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
92,001	93,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
93,001	94,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
94,001	95,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
95,001	96,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
96,001	97,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
97,001	98,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
98,001	99,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
99,001	100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	23
Totals		1	1	1	1	1	1	1	1	1	1	1	1	12		
														Average Usage	1,917	
														Median Usage	500	
														Average # Customers	1	
														Change in Number of Customers	-	

Test Year Ended December 31, 2017
Meter Size: 2 Inch Resort - Piney Shores

Exhibit
Schedule H-5
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Witness: Bourassa

[illegible]

Test Year Ended December 31, 2017

Meter Size: 2 Inch Resort - Piney Shores

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Witness: Bourassa

[illegible]

Test Year Ended December 31, 2017
Meter Size: 2 Inch Resort - Piney Shores

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Page 16
Witness: Bourassa

[illegible]

Usage From:	Usage To:	Month of Jan-17	Month of Feb-17	Month of Mar-17	Month of Apr-17	Month of May-17	Month of Jun-17	Month of Jul-17	Month of Aug-17	Month of Sep-17	Month of Oct-17	Month of Nov-17	Month of Dec-17	Total Year	Cumulative Billing	Cumulative Gallons (in 1,000's)
	-													-	24	194
Totals		2	2	2	2	2	2	2	2	2	2	2	2	24		
														Average Usage	8,084	
														Median Usage	-	
														Average # Customers	2	
														Change in Number of Customers	-	

Meter Size: 2 Inch Resort - Hill Country

Witness: Bourassa

[illegible]

Exhibit
Schedule H-5
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Witness: Bourassa

Schedule H-5

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[illegible]

Exhibit

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[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 2 Inch Resort - Hill Country

Exhibit

Schedule H-5

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Witness: Bourassa

Usage From	Usage To.	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total Year	Cumul- ative Billing	Cumul- ative Gallons (in 1,000's)
	-													-	12	16
Totals		1	1	1	1	1	1	1	1	1	1	1	1	12		
														Average Usage	1,334	
														Median Usage	-	
														Average # Customers	1	
														Change in Number of Customers	-	

Meter Size: 3 Inch Resort - Hill Country

Witness: Bourassa

[illegible]

Exhibit
Schedule H-5
Page 17
Witness: Bourassa

Schedule H-5

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[illegible]

Meter Size. 3 Inch Resort - Hill Country

Witness: Bourassa

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 3 Inch Resort - Hill Country

Exhibit

Schedule H-5

Page 17

Witness: Bourassa

Usage From:	Usage To:	Month of <u>Jan-17</u>	Month of <u>Feb-17</u>	Month of <u>Mar-17</u>	Month of <u>Apr-17</u>	Month of <u>May-17</u>	Month of <u>Jun-17</u>	Month of <u>Jul-17</u>	Month of <u>Aug-17</u>	Month of <u>Sep-17</u>	Month of <u>Oct-17</u>	Month of <u>Nov-17</u>	Month of <u>Dec-17</u>	Total Year	Cumul- ative Billing	Cumul- ative Gallons (in 1,000's)
										Average Usage				149,750		
										Median Usage				#DIV/0!		
										Average # Customers				2		
										Change in Number of Customers				-		

Test Year Ended December 31, 2017
Meter Size: 1 Inch Irrigation - Holly Ranch

Schedule H-5
Page 24
Witness: Bourassa

[illegible]

Exhibit

Schedule H-5

Page 24

Witness: Bourassa

[illegible]

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Test Year Ended December 31, 2017

Meter Size: 1 Inch Irrigation - Holly Ranch

Exhibit

Schedule H-5

Page 24

Witness: Bourassa

Usage	Usage	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Total	Cumul-	Cumul-
From:	To:	of	of	of	of	of	of	of	of	of	of	of	of	Year	ative	ative
		<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>		<u>Billing</u>	<u>Gallons</u>
																<u>(in 1,000's)</u>
79,001	80,000													-	-	-
80,001	81,000													-	-	-
81,001	82,000													-	-	-
82,001	83,000													-	-	-
83,001	84,000													-	-	-
84,001	85,000													-	-	-
85,001	86,000													-	-	-
86,001	87,000													-	-	-
87,001	88,000													-	-	-
88,001	89,000													-	-	-
89,001	90,000													-	-	-
90,001	91,000													-	-	-
91,001	92,000													-	-	-
92,001	93,000													-	-	-
93,001	94,000													-	-	-
94,001	95,000													-	-	-
95,001	96,000													-	-	-
96,001	97,000													-	-	-
97,001	98,000													-	-	-
98,001	99,000													-	-	-
99,001	100,000													-	-	-
-	-													-	-	-
Totals		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
														Average Usage	-	
														Median Usage	25,750	
														Average # Customers	-	
														Change in Number of Customers	-	

Exhibit
Schedule H-5
Page 29
Witness Bourassa

Schedule H-5

Page 29

Witness Bourassa

[illegible]

Meter Size: 5/8x3/4 Inch Fire

Witness: Bourassa

[illegible]

Meter Size: 5/8x3/4 Inch Fire

Witness: Bourassa

Totals	-	-	-	-	-	-	-	-	-	-	-
						Average Usage	-				
						Median Usage	-				
						Average # Customers	-				
						Change in Number of Customers	-				

[illegible]

Meter Size: 3/4 Inch Fire

Witness: Bourassa

[illegible]

Meter Size: 3/4 Inch Fire

Witness: Bourassa

Usage From:	Usage To:	Month of Jan-17	Month of Feb-17	Month of Mar-17	Month of Apr-17	Month of May-17	Month of Jun-17	Month of Jul-17	Month of Aug-17	Month of Sep-17	Month of Oct-17	Month of Nov-17	Month of Dec-17	Total Year	Cumulative Billing	Cumulative Gallons (in 1,000's)
80,000	80,000													-	-	-
81,000	81,000													-	-	-
82,000	82,000													-	-	-
83,000	83,000													-	-	-
84,000	84,000													-	-	-
85,000	85,000													-	-	-
86,000	86,000													-	-	-
87,000	87,000													-	-	-
88,000	88,000													-	-	-
89,000	89,000													-	-	-
90,000	90,000													-	-	-
91,000	91,000													-	-	-
92,000	92,000													-	-	-
93,000	93,000													-	-	-
94,000	94,000													-	-	-
95,000	95,000													-	-	-
96,000	96,000													-	-	-
97,000	97,000													-	-	-
98,000	98,000													-	-	-
99,000	99,000													-	-	-
100,000	100,000													-	-	-
-	-													-	-	-
Totals		-	-	-	-	-	-	-	-	-	-	-	-	-		
										Average Usage				-		
										Median Usage				-		
										Average # Customers				-		
										Change in Number of Customers				-		

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division
Bill Comparison Present and Proposed Rates

Meter Size:

1 Inch Fire

Exhibit
Schedule H-4
Page 31
Witness: Bourassa

<u>Usage</u>		<u>Present Bill</u>		<u>Proposed Bill</u>		<u>Dollar Increase</u>		<u>Percent Increase</u>	
-	\$	321.33	\$	319.99	\$	(1.34)		-0.42%	
1,000		324.98		324.27		(0.71)		-0.22%	
2,000		328.63		328.55		(0.08)		-0.02%	
3,000		332.28		332.84		0.56		0.17%	
4,000		335.93		337.12		1.19		0.35%	
5,000		339.58		341.40		1.82		0.54%	
6,000		343.23		345.69		2.46		0.72%	
7,000		346.88		349.97		3.09		0.89%	
8,000		350.53		354.25		3.72		1.06%	
9,000		354.18		358.54		4.36		1.23%	
10,000		357.83		362.82		4.99		1.39%	
12,000		365.13		371.38		6.25		1.71%	
14,000		372.43		379.95		7.52		2.02%	
16,000		379.73		388.52		8.79		2.31%	
18,000		387.03		397.08		10.05		2.60%	
20,000		394.33		405.65		11.32		2.87%	
25,000		412.58		427.07		14.49		3.51%	
30,000		430.83		448.48		17.65		4.10%	
35,000		449.08		469.90		20.82		4.64%	
40,000		467.33		491.31		23.98		5.13%	
45,000		485.58		512.73		27.15		5.59%	
50,000		503.83		534.15		30.32		6.02%	
60,000		540.33		576.98		36.65		6.78%	
70,000		576.83		619.81		42.98		7.45%	
80,000		613.33		662.64		49.31		8.04%	
90,000		649.83		705.47		55.64		8.56%	
100,000		686.33		748.31		61.98		9.03%	
Average Usage									
-	\$	321.33		319.99	\$	(1.34)		-0.42%	
Median Usage									
-	\$	321.33		319.99	\$	(1.34)		-0.42%	

Present Rates:

Monthly Minimum:	\$	321.33
Gallons in Minimum		-
Charge Per 1,000 Gallons		
Up to	99,999,999	\$ 3.6500
Over	99,999,999	

Proposed Rates:

Monthly Minimum:	\$	319.99
Gallons in Minimum		-
Charge Per 1,000 Gallons		
Up to	99,999,999	\$ 4.2832
Over	99,999,999	\$ 4.2832

Liberty Utilities (Silverleaf Water) Corp. - Sewer Division

Bill Comparison Present and Proposed Rates

Meter Size: 2 Inch Fire

Exhibit
Schedule H-4
Page 32
Witness: Bourassa
REVISED

<u>Usage</u>		<u>Present Bill</u>	<u>Proposed Bill</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>	
-	\$	1,028.24	\$ 1,023.96	\$ (4.28)	-0.42%	
1,000		1,031.89	1,028.24	(3.65)	-0.35%	Present Rates:
2,000		1,035.54	1,032.52	(3.02)	-0.29%	Monthly Minimum: \$ 1,028.24
3,000		1,039.19	1,036.81	(2.38)	-0.23%	Gallons in Minimum -
4,000		1,042.84	1,041.09	(1.75)	-0.17%	Charge Per 1,000 Gallons
5,000		1,046.49	1,045.37	(1.12)	-0.11%	Up to 99,999,999 \$ 3.6500
6,000		1,050.14	1,049.66	(0.48)	-0.05%	Over 99,999,999
7,000		1,053.79	1,053.94	0.15	0.01%	
8,000		1,057.44	1,058.22	0.78	0.07%	
9,000		1,061.09	1,062.50	1.41	0.13%	
10,000		1,064.74	1,066.79	2.05	0.19%	
12,000		1,072.04	1,075.35	3.31	0.31%	Proposed Rates:
14,000		1,079.34	1,083.92	4.58	0.42%	Monthly Minimum: \$ 1,023.96
16,000		1,086.64	1,092.49	5.85	0.54%	Gallons in Minimum -
18,000		1,093.94	1,101.05	7.11	0.65%	Charge Per 1,000 Gallons
20,000		1,101.24	1,109.62	8.38	0.76%	Up to 99,999,999 \$ 4.2832
25,000		1,119.49	1,131.04	11.55	1.03%	Over 99,999,999 \$ 4.2832
30,000		1,137.74	1,152.45	14.71	1.29%	
35,000		1,155.99	1,173.87	17.88	1.55%	
40,000		1,174.24	1,195.28	21.04	1.79%	
45,000		1,192.49	1,216.70	24.21	2.03%	
50,000		1,210.74	1,238.12	27.38	2.26%	
60,000		1,247.24	1,280.95	33.71	2.70%	
70,000		1,283.74	1,323.78	40.04	3.12%	
80,000		1,320.24	1,366.61	46.37	3.51%	
90,000		1,356.74	1,409.44	52.70	3.88%	
100,000		1,393.24	1,452.28	59.04	4.24%	
Average Usage						
-	\$	1,028.24	1,023.96	\$ (4.28)	-0.42%	
Median Usage						
-	\$	1,028.24	1,023.96	\$ (4.28)	-0.42%	

Company 1	<i>Liberty Utilities (Silverleaf Water) LLC</i>
Company 2	<i>Liberty Utilities (Silverleaf Water) LLC</i>
Company 3	
Witness	Witness: Bourassa
TestYear	

Exhibit COC TJB-1

**Liberty Utilities (Silverleaf Water) LLC
Summary of Results**

Table 1
Witness: Bourassa

<u>Line No.</u>		<u>Indicated Cost of Equity for Water Sample Group</u>	<u>Indicated Cost of Equity for Company¹</u>
1	DCF Constant Growth - Schedule D-4-7	9.9%	10.3%
2	Risk Premium Model - Schedule D-4.9	11.7%	12.1%
3	CAPM - Schedule D-4.11	10.3%	10.7%
4	Average	10.6%	11.0%
5	Financial Risk Adjustment - Schedule D-4.14		-0.2%
6	Adjusted Cost of Equity Estimate	10.6%	10.8%
7	Cost of Equity Recommendation		10.6%

Notes:

¹Estimates include an equity risk premium of 40 basis points based on risk study. See Testimony.

Liberty Utilities (Silverleaf Water) LLC
Selected Characteristics of Sample Group of Water Utilities

Table 2
Witness: Bourassa

Line No.	Company	Symbol	% Water Revenues ⁴	Operating Revenues (millions) ²	Net Plant (millions) ²	S&P Bond Rating ¹	Moody's Bond Rating ¹	Value Line Beta ²	Market Capitalization ²	Size Category ³
1	American States Water	AWR	69%	\$ 436.1	\$ 1,150.9	A+	A3	0.80	\$ 2,109.0	Low-Cap
2	Aqua America	WTR	86%	\$ 819.9	\$ 5,001.6	A+	NR	0.75	\$ 6,473.0	Mid cap
3	California Water	CWT	97%	\$ 609.4	\$ 1,859.3	A+	NR	0.80	\$ 2,081.4	Low-Cap
4	Connecticut Water	CTWS	100%	\$ 98.7	\$ 601.4	A	NR	0.65	\$ 635.4	Low-Cap
5	Middlesex	MSEX	83%	\$ 132.9	\$ 517.8	A	NR	0.80	\$ 633.4	Low-Cap
6	SJW Corp.	SJW	96%	\$ 339.7	\$ 1,146.4	A	NR	0.70	\$ 1,255.5	Low-Cap
7	York Water Company	YORW	100%	\$ 47.6	\$ 270.9	A-	NR	0.80	\$ 408.9	Micro-cap
8	Average		90%	\$ 354.9	\$ 1,506.9			0.76	\$ 1,942.4	
9	Liberty Utilities (Silverleaf Water) LLC		38%	\$ 4.6	\$ 12.5	NR	NR			

Notes:

¹AUS Utility Reports (September 2016)

²Value Line Analyzer Data (Weekly as of January 25, 2018)

³See Schedule D-4.15 for definitions of size category

⁴2016 Annual Reports and/or 10-K

**Liberty Utilities (Silverleaf Water) LLC
Capital Structures**

Table 3
Witness: Bourassa

Line No.	Company	Symbol	Book Value ¹		Market Value ¹	
			Long-Term Debt	Common Equity	Long-Term Debt	Common Equity
1	American States Water	AWR	39.3%	60.7%	13.2%	86.8%
2	Aqua America	WTR	48.4%	51.6%	21.2%	78.8%
3	California Water	CWT	44.6%	55.4%	20.3%	79.7%
4	Connecticut Water	CTWS	45.6%	54.4%	23.7%	76.3%
5	Middlesex	MSEX	38.1%	61.9%	17.5%	82.5%
6	SJW Corp.	SJW	50.6%	49.4%	25.7%	74.3%
7	York Water Company	YORW	42.5%	57.5%	17.1%	82.9%
8	Average		44.2%	55.8%	19.8%	80.2%
9	Liberty Utilities (Silverleaf Water) LLC	Proforma	30.0%	70.0%	N/A	N/A

¹ Value Line Analyzer Data (Weekly as of January 25, 2018)

Liberty Utilities (Silverleaf Water) LLC
Comparisons of Past and Future Estimates of Growth

Table 4
Witness: Bourassa

Line No.	Company	[1] Stock Price ¹	[2] Book Value ²	[3] EPS ²	[4] DPS ²	[5] Average Growth Col. 2-4	[6] Value Line Projected Growth ²	[7] Average of Historical and Proj. Grwth
		<u>Five-year historical average annual changes</u>						
1	American States Water	19.27%	5.00%	9.50%	10.50%	8.33%	6.50%	7.42%
2	Aqua America	14.04%	7.50%	11.00%	8.00%	8.83%	7.00%	7.92%
3	California Water	19.46%	5.00%	3.00%	2.00%	3.33%	10.00%	6.67%
4	Connecticut Water	14.03%	9.00%	12.00%	3.00%	8.00%	6.50%	7.25%
5	Middlesex	15.33%	3.00%	8.00%	1.50%	4.17%	9.00%	6.58%
6	SJW Corp.	19.13%	6.50%	20.50%	3.00%	10.00%	7.00%	8.50%
7	York Water Company	14.05%	3.50%	6.00%	3.00%	4.17%	9.50%	6.83%
8	GROUP AVERAGE	16.47%	5.64%	10.00%	4.43%	6.69%	7.93%	7.31%

Notes:

¹ Compound growth in stock prices ending December 31 through 2017. Data from Yahoo Finance website.

² Value Line Analyzer, weekly as of January 25, 2018.

Liberty Utilities (Silverleaf Water) LLC
Comparisons of Past and Future Estimates of Growth

Table 5
Witness: Bourassa

Line No.	Company	[1] Stock Price ¹	[2] Book Value ²	[3] EPS ²	[4] DPS ²	[5] Average Growth Col. 2-4	[6] Value Line Growth ²	[7] Average of Historical and Proj. Grwth
		Ten-year historical average annual changes						
1	American States Water	11.88%	5.50%	10.00%	7.00%	7.50%	6.50%	7.00%
2	Aqua America	8.75%	7.00%	8.50%	8.00%	7.83%	7.00%	7.42%
3	California Water	9.44%	5.00%	4.00%	1.50%	3.50%	10.00%	6.75%
4	Connecticut Water	9.31%	6.00%	8.00%	2.50%	5.50%	6.50%	6.00%
5	Middlesex	7.73%	4.00%	5.00%	1.50%	3.50%	9.00%	6.25%
6	SJW Corp.	6.29%	5.50%	8.00%	4.00%	5.83%	7.00%	6.42%
7	York Water Company	8.14%	5.00%	5.50%	3.50%	4.67%	9.50%	7.08%
8	GROUP AVERAGE	8.79%	5.43%	7.00%	4.00%	5.48%	7.93%	6.70%

Notes:

¹ Compound growth in stock prices ending December 31 through 2017. Data from Yahoo Finance website.

² Value Line Analyzer, weekly as of January 25, 2018.

Liberty Utilities (Silverleaf Water) LLC
Current Dividend Yields for Water Utility Sample Group

Table 6
Witness: Bourassa

		[1]	[2]	[3]	[4]
Line		Stock	Current	Current	Average
No.	Company	Price (P ₀) ¹	Dividend (D ₀) ¹	Dividend	Annual
				Yield (D ₀ /P ₀)	Dividend
					Yield (D ₀ /P ₀) ^{1,2}
1	American States Water	\$ 53.40	\$ 1.05	1.97%	2.20%
2	Aqua America	\$ 34.03	\$ 0.85	2.50%	2.35%
3	California Water	\$ 39.75	\$ 0.72	1.81%	2.30%
4	Connecticut Water	\$ 51.71	\$ 1.19	2.30%	2.31%
5	Middlesex	\$ 36.49	\$ 0.90	2.47%	2.28%
6	SJW Corp.	\$ 55.83	\$ 0.87	1.56%	2.01%
7	York Water Company	\$ 30.95	\$ 0.67	2.16%	2.09%
8	GROUP AVERAGE			2.11%	2.22%

Notes:

¹ Stock prices as of February 1, 2018. Indicated Dividend from Value Line Analyzer weekly as of January 25, 2018

² Average Annual Dividend is dividends declared per share for a year divided by the average annual price of the stock in the same year, expressed as a percentage. As report by Value Line Analyzer software. For comparison purposes only.

Liberty Utilities (Silverleaf Water) LLC
Discounted Cash Flow Analysis
DCF Constant Growth

Table 7
Page 1
Witness: Bourassa

Line No.		[1]	[2]	[3]		[4]
		Dividend Yield (D_0/P_0) ¹	Expected Dividend Yield (D_1/P_0) ²	Value Line Projected Growth (g) ³		Indicated Cost of Equity (COE) k=Div Yld + g (Cols 2+3)
1	1. American States Water	1.97%	2.20%	+	6.50%	= 8.7%
2	2. Aqua America	2.50%	2.67%	+	7.00%	= 9.7%
3	3. California Water	1.81%	1.99%	+	10.00%	= 12.0%
4	4. Connecticut Water	2.30%	2.45%	+	6.50%	= 9.0%
5	5. Middlesex	2.47%	2.69%	+	9.00%	= 11.7%
6	6. SJW Corp.	1.56%	1.67%	+	7.00%	= 8.7%
7	7. York Water Company	2.16%	2.37%	+	9.50%	= 11.9%
8	Average					10.2%
9	Adjusted Average ⁴					10.2%

Notes:

¹ Spot Dividend Yield = D_0/P_0 . See Table 6.

² Expected Dividend Yield = $D_1/P_0 = D_0/P_0 * (1+g)$.

³ Value Line Growth rate (g). See Table 5.

Liberty Utilities (Silverleaf Water) LLC
Discounted Cash Flow Analysis
DCF Constant Growth

Table 7
Page 2
Witness: Bourassa

Line No.		[1]	[2]		[3]		[4]
		Dividend Yield (D_0/P_0) ¹	Expected Dividend Yield (D_1/P_0) ²		Average of 5-yr Historical and Proj. Growth ³		Indicated Cost of Equity (COE) $k = \text{Div Yld} + g$ (Cols 2+3)
1	1. American States Water	1.97%	2.11%	+	7.42%	=	9.53%
2	2. Aqua America	2.50%	2.70%	+	7.92%	=	10.61%
3	3. California Water	1.81%	1.93%	+	6.67%	=	8.60%
4	4. Connecticut Water	2.30%	2.47%	+	7.25%	=	9.72%
5	5. Middlesex	2.47%	2.63%	+	6.58%	=	9.21%
6	6. SJW Corp.	1.56%	1.69%	+	8.50%	=	10.19%
7	7. York Water Company	2.16%	2.31%	+	6.83%	=	9.15%
8	Average						9.6%
9	Adjusted Average ⁴						9.6%

Notes:

¹ Spot Dividend Yield = D_0/P_0 . See Table 6.

² Expected Dividend Yield = $D_1/P_0 = D_0/P_0 * (1+g)$.

³ Historical Growth rate (g). See Table 5.

**Liberty Utilities (Silverleaf Water) LLC
Forecasts of Long-Term Interest Rates**

Table 8
Witness: Bourassa

<u>Line No.</u>		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Average</u>	<u>Forecast LT for CAPM and MRP</u>
1	Long-term Treasury Rates					
2	Blue Chip Consensus Forecasts ¹	3.2%	3.6%	4.2%	3.7%	
3	Value Line ²	3.9%	4.3%	4.4%	4.2%	
4	Average	3.6%	4.0%	4.3%	4.0%	3.6%
5	Aaa Corporate Bonds					
6	Blue Chip Consensus Forecasts ¹	4.1%	4.6%	5.2%		
7	Value Line ²	4.4%	4.8%	5.0%		
8	Average	4.3%	4.7%	5.1%	4.7%	4.3%
9	Baa Corporate Bonds					
10	Blue Chip Consensus Forecasts ¹	4.8%	5.3%	6.0%		
11	Value Line ²					
12	Average	4.8%	5.3%	6.0%	5.4%	4.8%

Notes:

¹ Blue Chip consensus forecasts (January 2017 and December 2017).

² Value Line Quarterly Forecasts (December 1, 2017).

Liberty Utilities (Silverleaf Water) LLC
Risk Premium Analysis Based on Total Returns

Table 9
Witness: Bourassa

Line No.		Annual Total Return ¹	Treasury Bond Yields ²	Annual Risk Premiums
1	1993	-9.21%	6.59%	-15.80%
2	1994	17.78%	7.37%	10.41%
3	1995	21.59%	6.88%	14.71%
4	1996	23.77%	6.71%	17.06%
5	1997	36.53%	6.61%	29.92%
6	1998	17.46%	5.58%	11.88%
7	1999	29.90%	5.87%	24.03%
8	2000	9.57%	5.94%	3.63%
9	2001	16.79%	5.49%	11.30%
10	2002	-3.46%	5.43%	-8.89%
11	2003	23.85%	5.05%	18.80%
12	2004	13.04%	5.12%	7.92%
13	2005	19.52%	4.56%	14.96%
14	2006	15.48%	4.91%	10.57%
15	2007	-2.55%	4.84%	-7.39%
16	2008	-1.93%	4.28%	-6.21%
17	2009	0.00%	4.08%	-4.08%
18	2010	15.37%	4.25%	11.12%
19	2011	1.36%	3.91%	-2.55%
20	2012	15.34%	2.92%	12.42%
21	2013	19.61%	3.45%	16.16%
22	2014	15.49%	3.34%	12.15%
23	2015	8.13%	2.84%	5.29%
24	2016	46.96%	2.59%	44.37%
25	2017	15.05%	2.90%	12.15%
26	25-year Average	14.6%	4.9%	9.8%
27	Current RP on Proxy Group ³			6.3%
28	Average historical and current RP			8.1%
29	Expected Long-term Treasury Bond Rate ⁴			3.6%
30	Projected Returns on Equity for Sample			11.7%

Notes:

¹ Computed Composite Total Returns from Yahoo Finance data.

² Average annual 30 Yr. U.S. Treasury Bond yields as reported by the Federal Reserve.

³ Computed RP using DCF average dividend yield, and projected EPS of the proxy group and subtracting the expected long-term Treasury bond rate.

⁴ See Table 8.

Liberty Utilities (Silverleaf Water) LLC
Estimation of Current Market Risk Premium
Using DCF Analysis

Table 10
Witness: Bourassa

Line		Dividend	Expected		Expected		Expected	Monthly Average		Expected
No.	Month	Yield (D_0/P_0) ¹	Dividend		Growth (g) ³	=	Market	30 Year	=	Market Risk
			Yield (D_1/P_0) ²	+			Return (k)	Treasury Rate ⁴		Premium (MRP)
1	Jan 2016	3.07%	3.33%	+	8.50%	=	11.83%	2.86%	=	8.97%
2	Feb	2.91%	3.16%	+	8.50%	=	11.66%	2.62%	=	9.04%
3	Mar	2.75%	2.97%	+	8.00%	=	10.97%	2.68%	=	8.29%
4	Apr	2.63%	2.84%	+	8.00%	=	10.84%	2.62%	=	8.22%
5	May	2.67%	2.89%	+	8.00%	=	10.89%	2.63%	=	8.26%
6	June	2.66%	2.88%	+	8.00%	=	10.88%	2.45%	=	8.43%
7	July	2.56%	2.77%	+	8.17%	=	10.93%	2.23%	=	8.70%
8	Aug	2.56%	2.77%	+	8.17%	=	10.93%	2.26%	=	8.67%
9	Sep	2.56%	2.77%	+	8.17%	=	10.93%	2.35%	=	8.58%
10	Oct	2.62%	2.84%	+	8.17%	=	11.00%	2.50%	=	8.50%
11	Nov	2.43%	2.62%	+	8.17%	=	10.79%	2.86%	=	7.93%
12	Dec	2.46%	2.66%	+	8.17%	=	10.82%	3.11%	=	7.71%
13	Jan 2017	2.43%	2.62%	+	8.17%	=	10.79%	3.02%	=	7.77%
14	Feb	2.42%	2.62%	+	8.00%	=	10.62%	3.03%	=	7.59%
15	Mar	2.47%	2.66%	+	7.83%	=	10.50%	3.08%	=	7.42%
16	Apr	2.46%	2.65%	+	7.83%	=	10.48%	2.94%	=	7.54%
17	May	2.50%	2.69%	+	7.83%	=	10.52%	2.96%	=	7.56%
18	June	2.51%	2.71%	+	8.00%	=	10.71%	2.80%	=	7.91%
19	July	2.49%	2.69%	+	8.00%	=	10.69%	2.88%	=	7.81%
20	Aug	2.62%	2.83%	+	8.00%	=	10.83%	2.80%	=	8.03%
21	Sep	2.46%	2.66%	+	8.17%	=	10.83%	2.78%	=	8.05%
22	Oct	2.46%	2.67%	+	8.17%	=	10.83%	2.88%	=	7.95%
23	Nov	2.42%	2.62%	+	8.17%	=	10.78%	2.80%	=	7.98%
24	Dec	2.40%	2.60%	+	8.17%	=	10.76%	2.77%	=	7.99%
25	Jan	2.68%	2.91%	+	8.50%	=	11.41%	2.88%	=	8.53%
26	Recommended	2.50%	2.71%	+	8.28%	=	10.99%	2.82%	=	8.17%
27	<u>Short-term Trends</u>									
28	Recent Twelve Months Avg	2.49%	2.69%	+	8.06%	=	10.75%	2.88%	=	7.86%
29	Recent Nine Months Avg	2.51%	2.71%	+	8.11%	=	10.82%	2.84%	=	7.98%
30	Recent Six Months Avg	2.51%	2.71%	+	8.19%	=	10.91%	2.82%	=	8.09%
31	Recent Three Months Avg	2.50%	2.71%	+	8.28%	=	10.99%	2.82%	=	8.17%

Notes:

¹ Average Dividend Yield (D_0/P_0) of dividend paying stocks. Data from Value Line Investment Analyzer Software Data - Value Line 1700 Stocks

² Expected Dividend Yield (D_1/P_0) equals current average dividend yield (D_0/P_0) times one plus growth rate(g).

³ Median of Projected EPS and Projected DPS Growth for VL 1700 stocks. Data from Value Line Investment Analyzer Software.

⁴ Monthly average 30 year U.S. Treasury. Federal Reserve.

**Liberty Utilities (Silverleaf Water) LLC
Capital Asset Pricing Model (CAPM)**

Table 11
Witness: Bourassa

Line No.		R_f^1	+	(	β^2	x	RP_M^3	)	=	k
1	Traditional CAPM	3.6%	+	(	0.76	x	7.60%	)	=	9.4%
2										
3		R_f^1			$RP_M^3 \times .25$	+	(	β^2	x	RP_M^3
4	Empirical CAPM	3.6%	+		7.60%	x	.25	+	(	0.76
5						x	7.60%	)	x	.75
6		R_f^1	+	(	β^2	x	RP_M^4	)	+	RP_s^5
7	Modified CAPM	3.6%	+	(	0.76	x	6.60%	)	+	3.23%
8										
9										
10	Average									10.3%

Notes:

¹ Forecasts of long-term treasury yields. See Table 8.

² Average Beta or Water Proxy Group. See Table 2.

³ Estimate of Current MRP. Average of historical MRP (1926-2016) and current MRP (using current VL 1700 average dividend yields and median projected book value, earnings, and dividend growth).

Historical MRP (1926-2016)	7.00%
Current MRP	8.17%
Average	7.60%

⁴ Estimate of Current MRP. Average of historical MRP (1963-2016) and current MRP (using current VL 1700 average dividend yields and median projected book value, earnings, and dividend growth).

Historical MRP (1963-2016)	5.00%
Current MRP	8.17%
Average	6.60%

⁵ Average water proxy group adjusted company size risk premium Duff & Phelps Size Study and Risk Study. See Testimony.

Liberty Utilities (Silverleaf Water) LLC
Financial Risk Computation
Unlevered Beta

Table 12
Witness: Bourassa

Line
No.

		VL	Raw	Tax	MV	MV	Unlevered
		Beta	Beta	Rate	Debt	Equity	Raw Beta
	<u>Company</u>	<u>β_L¹</u>	<u>Raw β_L²</u>	<u>t³</u>	<u>D⁴</u>	<u>E⁴</u>	<u>β_U⁵</u>
5	1. American Water Works	0.80	0.70	36.8%	13.2%	86.8%	0.64
6	2. Aqua America	0.75	0.63	8.2%	21.2%	78.8%	0.51
7	3. California Water	0.80	0.70	35.5%	20.3%	79.7%	0.60
8	4. Connecticut Water	0.65	0.48	9.9%	23.7%	76.3%	0.38
9	5. Middlesex	0.80	0.70	34.0%	17.5%	82.5%	0.61
10	6. SJW Corp.	0.70	0.55	38.8%	25.7%	74.3%	0.45
11	7. York Water	0.80	0.70	31.3%	17.1%	82.9%	0.61
12							
13	Sample Water Utilities	0.76	0.64	27.8%	19.8%	80.2%	0.54

¹ Value Line Investment Analyzer data. See Schedule D-4.1.

Value Line uses the historical data of the stock, but assumes that a security's beta moves toward the market average over time. The formula is as follows:

Adjusted beta = .33 + (.67) * Raw beta

² Raw Beta = (VL beta - .33)/(.67)

³ Effective tax rates for year ended December 31, 2016.

⁴ See Table 2.

⁵ Raw B_U = Raw B_L / (1+ (1-t)*D/E)

Liberty Utilities (Silverleaf Water) LLC
Financial Risk Computation
Relevered Beta

Table 13
Witness: Bourassa

Line No.		Unlevered Raw Beta β_U^1	MV Book Debt BD^2	MV Equity Capital EC^2	Tax Rate t^3	Relevered Raw Beta $\beta_{RL} = \beta_U (1 + (1-t)BD/EC)$	VL Adjusted Relevered Beta $.33 + .67(Raw Beta)$
1							
2							
3							
4							
5	Liberty Utilities (Silverleaf Water) LLC	0.54	12.3%	87.7%	19.79%	0.60	0.73
6							
7							
8							
9							
10							
11							
12							
13	¹ Unlevered Beta from Unlevered Beta tab in WP						
14	² Recommended Pro forma <u>Capital Structure of Company</u>						
15							
16			Company (in Thousands)	Market-to Book Ratio		MV (in Thousands)	MV %
17	Long-term Debt		\$ 30	1.00		\$ 30	12.30%
18	Preferred Stock		\$ -	1.00		-	0.0%
19	Common Stock		\$ 70	3.07	(a)	215	87.7%
20	Total Capital		\$ 100			\$ 245	100.0%
21							
22	(a) Current market-to-book ratio of sample water utilities See work papers						
23							
24	³ Current Tax rate based on test year.						
25							
26							

**Liberty Utilities (Silverleaf Water) LLC
Traditional Capital Asset Pricing Model (CAPM)**

Table 14
Witness: Bourassa

Line No.		R_f^1	+	(	β^2	x	RP_M^3	)	=	k
1	Traditional CAPM	3.6%	+	(	0.76	x	7.60%	)	=	9.4%
2										
3		R_f^1			RP_M^3	x .25 + (	β^2	x RP_M^3) x .75	=	k
4	Empirical CAPM	3.6%	+		7.60%	x .25 + (	0.76	x 7.60%) x .75	=	9.8%
5										
6		R_f^1	+	(	β^2	x	RP_M^4	) + RP_s^5	=	k
7	Modified CAPM	3.6%	+	(	0.76	x	6.60%	) + 3.23%	=	11.8%
8										
9										
10	Average									10.3%
11										
12					Relevered					
13		R_f^1	+	(	β^6	x	RP_M^3	)	=	k
14	Traditional CAPM	3.6%	+	(	0.73	x	7.60%	)	=	9.1%
15										
16					Relevered					
17		R_f^1			RP_M^3	x .25 + (	β^6	x RP_M^3) x .75	=	k
18	Empirical CAPM	3.6%	+		7.60%	x .25 + (	0.73	x 7.60%) x .75	=	9.7%
19										
20					Relevered					
21		R_f^1	+	(	β^6	x	RP_M^4	) + RP_s^5	=	k
22	Modified CAPM	3.6%	+	(	0.73	x	6.60%	) + 3.23%	=	11.6%
23										
24										
25	Average									10.1%
26										
27	Indicated Financial Risk Adjustment									-0.2%

Notes:

¹ Forecasts of long-term treasury yields. See Table 8.

² Average Beta or Water Proxy Group

³ Estimate of current MRP. Average of historical MRP (1926-2016) and current MRP (using current VL 1700 average dividend yields and median projected book value, earnings, and dividend growth).

⁴ Current expected MRP from Duff&Phelps for use with their data.

⁵ Average water proxy group adjusted company specific risk premium developed from Duff & Phelps data. See Testimony

⁶ Relevered Beta. See Table 13.

Liberty Utilities (Silverleaf Water) LLC
Risk Premium¹

Table 15
Witness: Bourassa

Line No.		Beta(β)	Size Premium	Risk Premium for Small Water Utilities ⁷
1	Mid-Cap Companies ²	1.12	1.02%	
2	Low-Cap Companies ³	1.22	1.75%	
3	Micro-Cap Companies ⁴	1.35	3.67%	
4	Decile 10 ⁵	1.39	5.59%	3.94%
				<u>Risk Premium for Small Water Utilities</u>
5	Estimated Risk Premium for small utilities ⁶			0.99%
6	Estimated Risk Premium for Company ⁸		0.40%	to 0.50%

¹ Data from Table 4-7 of Duff & Phelps, 2017 Valuation Handbook Guide to Cost of Capital

² Mid-Cap companies includes companies with market capitalization between \$2,392.6 million and \$10,711 million

³ Low-Cap companies includes companies with market capitalization between \$569,279 million and \$2,390.9 million

⁴ Micro-Cap companies includes companies with market capitalization less than \$567.8 million

⁵ Decile 10 includes companies with market capitalization less than \$262.8 million.

⁶ From Table 2, Thomas M. Zepp, "Utility Stocks and the Size Effect Revisited," *The Quarterly Review of Economics and Finance*, 43 (2003), 578-582

⁷ Computed as the weighted differences between the Micro-Cap risk premium and the indicated risk premiums for the sample water utilities as shown below. Excludes risk due to differences in beta

	Market Cap (Millions)	Class	Size Premium	Difference to Decile 10	Weight	Weighted Size Premium
1	American States \$ 2,109	Low-Cap	1.75%	3.84%	0.14285714	0.55%
2	Aqua America \$ 6,473	Mid-Cap	1.02%	4.57%	0.14285714	0.65%
3	California Water \$ 2,081	Low-Cap	1.75%	3.84%	0.14285714	0.55%
4	Connecticut Water \$ 635	Low-Cap	1.75%	3.84%	0.14285714	0.55%
5	Middlesex \$ 633	Low-Cap	1.75%	3.84%	0.14285714	0.55%
6	SJW Corp \$ 1,256	Low-Cap	1.75%	3.84%	0.14285714	0.55%
7	York Water Company \$ 409	Low-Cap	1.75%	3.84%	0.14285714	0.55%
	Average		1.65%	Wghtd Size Prem		for Small Utilities 3.94%

⁸ Results of Comparative Risk Study. See work papers.

WATER COMPANIES

COMPANY	PER SHARE DATA (\$)					PERCENT (%)					DIV/BOOK (2)	PRICE/EARN MULT	TOTAL REV \$ MILL (3)	REG WATER REV \$ MILL (4)	NET PLANT \$ MILL (5)	NET PLANT REV \$ MILL (6)	S&P BOND RATING (7)	MOODY'S BOND RATING (8)	COMMON EQUITY RATIO (9)	% RETURN ON BOOK VALUE		REGULATION	
	LATEST 12 MONTHS EARNINGS AVAILABLE	CURRENT ANNUAL DIVIDEND	BOOK VALUE (1)	STOCK PRICE 3/16/2015	COMMON SHARES O/S MILL	DIV PAYOUT	DIV YIELD	MKT/BOOK	COMMON EQUITY (10)	TOTAL CAPITAL (11)										ALLOWED ROE	ORDER DATE		
1 American States Water Co (NYSE-AWR)	6/15	1.60	0.68	13.04	40.02	36.6	55	2.2	306.9	6.7	25.0	448.6	71	1,107.1	2.47	A+	A2	55.3	12.5	9.7	9.43	1/1/2013	
2 American Water Works Co., Inc (NYSE-AWK)	9/16	2.74	1.52	28.37	75.53	181.6	55	2.0	288.2	5.4	27.6	3,248.2	86	14,317.0	4.41	A+/A	A3/Baa1	42.9	9.6	6.9	9.75	12/12/2012	
3 Aqua America, Inc (NYSE-WTR)	6/16	1.16	0.75	10.10	31.25	177.3	55	2.4	306.5	7.5	26.9	814.6	97	4,823.5	5.92	AA-	NR	48.3	11.9	8.1	9.79	5/2/2014	
4 Artesian Resources Corp (NDQ-ARTNA)	6/16	1.25	0.88	16.46	26.40	8.2	70	3.0	178.6	5.3	23.5	77.4	94	413.5	5.35	NR	NR	55.2	8.7	2.4	10.00	6/2/2014	
5 California Water Service Group (NYSE-CWT)	6/16	0.92	0.68	13.27	30.91	48.0	74	2.2	232.9	5.1	33.6	595.1	97	1,785.1	2.99	AA-	NR	50.0	7.0	6.0	9.43	1/1/2013	
6 Connecticut Water Service, Inc (NDQ-CTWS)	6/16	2.16	1.12	20.59	49.04	11.2	52	2.3	238.2	5.4	22.7	100.6	98	565.4	5.65	AA-	NR	51.7	10.7	7.4	9.63	3/25/2014	
7 Middlesex Water Company (NDQ-MSEX)	6/16	1.33	0.80	13.03	35.35	16.3	80	2.3	271.3	6.1	26.8	128.9	87	497.1	3.86	A	NR	58.5	10.6	7.8	9.75	8/19/2014	
8 SJW Corporation (NYSE-SJW)	9/16	2.23	0.80	19.37	38.99	20.4	36	2.1	201.3	4.1	17.5	318.6	103	1,086.7	3.35	A	NR	47.8	12.1	8.6	9.43	1/1/2013	
9 York Water Company (NDQ-YORW)	6/16	0.97	0.64	8.70	28.08	12.9	65	2.3	322.8	7.4	28.9	47.1	100	263.7	5.60	A-	NR	57.0	11.3	9.0	NM	2/28/2014	
AVERAGE							59	2.3	258.6	5.9	26.8							52.0	10.5	7.8	9.65		

Series Des Market yield on U.S. Treasury securities at 30-year constant maturity, quoted on investment basis

Unit. Percent._Per_Year

Multiplier: 1

Currency: NA

Unique Ide H15/H15/RIFLGFCY30_N.M

Time Perio RIFLGFCY30_N.M

1977-02	7.75
1977-03	7.8
1977-04	7.73
1977-05	7.8
1977-06	7.64
1977-07	7.64
1977-08	7.68
1977-09	7.64
1977-10	7.77
1977-11	7.85
1977-12	7.94
1978-01	8.18
1978-02	8.25
1978-03	8.23
1978-04	8.34
1978-05	8.43
1978-06	8.5
1978-07	8.65
1978-08	8.47
1978-09	8.47
1978-10	8.67
1978-11	8.75
1978-12	8.88
1979-01	8.94
1979-02	9
1979-03	9.03
1979-04	9.08
1979-05	9.19
1979-06	8.92
1979-07	8.93
1979-08	8.98
1979-09	9.17
1979-10	9.85
1979-11	10.3
1979-12	10.12
1980-01	10.6
1980-02	12.13
1980-03	12.34
1980-04	11.4
1980-05	10.36
1980-06	9.81
1980-07	10.24
1980-08	11
1980-09	11.34
1980-10	11.59
1980-11	12.37
1980-12	12.4
1981-01	12.14
1981-02	12.8
1981-03	12.69
1981-04	13.2
1981-05	13.6
1981-06	12.96
1981-07	13.59
1981-08	14.17
1981-09	14.67
1981-10	14.68
1981-11	13.35
1981-12	13.45
1982-01	14.22
1982-02	14.22
1982-03	13.53
1982-04	13.37
1982-05	13.24
1982-06	13.92
1982-07	13.55
1982-08	12.77
1982-09	12.07
1982-10	11.17
1982-11	10.54
1982-12	10.54

1983-01	10.63
1983-02	10.88
1983-03	10.63
1983-04	10.48
1983-05	10.53
1983-06	10.93
1983-07	11.4
1983-08	11.82
1983-09	11.63
1983-10	11.58
1983-11	11.75
1983-12	11.88
1984-01	11.75
1984-02	11.95
1984-03	12.38
1984-04	12.65
1984-05	13.43
1984-06	13.44
1984-07	13.21
1984-08	12.54
1984-09	12.29
1984-10	11.98
1984-11	11.56
1984-12	11.52
1985-01	11.45
1985-02	11.47
1985-03	11.81
1985-04	11.47
1985-05	11.05
1985-06	10.45
1985-07	10.5
1985-08	10.56
1985-09	10.61
1985-10	10.5
1985-11	10.06
1985-12	9.54
1986-01	9.4
1986-02	8.93
1986-03	7.96
1986-04	7.39
1986-05	7.52
1986-06	7.57
1986-07	7.27
1986-08	7.33
1986-09	7.62
1986-10	7.7
1986-11	7.52
1986-12	7.37
1987-01	7.39
1987-02	7.54
1987-03	7.55
1987-04	8.25
1987-05	8.78
1987-06	8.57
1987-07	8.64
1987-08	8.97
1987-09	9.59
1987-10	9.61
1987-11	8.95
1987-12	9.12
1988-01	8.83
1988-02	8.43
1988-03	8.63
1988-04	8.95
1988-05	9.23
1988-06	9
1988-07	9.14
1988-08	9.32
1988-09	9.06
1988-10	8.89
1988-11	9.02
1988-12	9.01
1989-01	8.93
1989-02	9.01
1989-03	9.17
1989-04	9.03
1989-05	8.83

1989-06	8.27
1989-07	8.08
1989-08	8.12
1989-09	8.15
1989-10	8
1989-11	7.9
1989-12	7.9
1990-01	8.26
1990-02	8.5
1990-03	8.56
1990-04	8.76
1990-05	8.73
1990-06	8.46
1990-07	8.5
1990-08	8.86
1990-09	9.03
1990-10	8.86
1990-11	8.54
1990-12	8.24
1991-01	8.27
1991-02	8.03
1991-03	8.29
1991-04	8.21
1991-05	8.27
1991-06	8.47
1991-07	8.45
1991-08	8.14
1991-09	7.95
1991-10	7.93
1991-11	7.92
1991-12	7.7
1992-01	7.58
1992-02	7.85
1992-03	7.97
1992-04	7.96
1992-05	7.89
1992-06	7.84
1992-07	7.6
1992-08	7.39
1992-09	7.34
1992-10	7.53
1992-11	7.61
1992-12	7.44
1993-01	7.34
1993-02	7.09
1993-03	6.82
1993-04	6.85
1993-05	6.92
1993-06	6.81
1993-07	6.63
1993-08	6.32
1993-09	6
1993-10	5.94
1993-11	6.21
1993-12	6.25
1994-01	6.29
1994-02	6.49
1994-03	6.91
1994-04	7.27
1994-05	7.41
1994-06	7.4
1994-07	7.58
1994-08	7.49
1994-09	7.71
1994-10	7.94
1994-11	8.08
1994-12	7.87
1995-01	7.85
1995-02	7.61
1995-03	7.45
1995-04	7.36
1995-05	6.95
1995-06	6.57
1995-07	6.72
1995-08	6.86
1995-09	6.55
1995-10	6.37

1995-11	6.26
1995-12	6.06
1996-01	6.05
1996-02	6.24
1996-03	6.6
1996-04	6.79
1996-05	6.93
1996-06	7.06
1996-07	7.03
1996-08	6.84
1996-09	7.03
1996-10	6.81
1996-11	6.48
1996-12	6.55
1997-01	6.83
1997-02	6.69
1997-03	6.93
1997-04	7.09
1997-05	6.94
1997-06	6.77
1997-07	6.51
1997-08	6.58
1997-09	6.5
1997-10	6.33
1997-11	6.11
1997-12	5.99
1998-01	5.81
1998-02	5.89
1998-03	5.95
1998-04	5.92
1998-05	5.93
1998-06	5.7
1998-07	5.68
1998-08	5.54
1998-09	5.2
1998-10	5.01
1998-11	5.25
1998-12	5.06
1999-01	5.16
1999-02	5.37
1999-03	5.58
1999-04	5.55
1999-05	5.81
1999-06	6.04
1999-07	5.98
1999-08	6.07
1999-09	6.07
1999-10	6.26
1999-11	6.15
1999-12	6.35
2000-01	6.63
2000-02	6.23
2000-03	6.05
2000-04	5.85
2000-05	6.15
2000-06	5.93
2000-07	5.85
2000-08	5.72
2000-09	5.83
2000-10	5.8
2000-11	5.78
2000-12	5.49
2001-01	5.54
2001-02	5.45
2001-03	5.34
2001-04	5.65
2001-05	5.78
2001-06	5.67
2001-07	5.61
2001-08	5.48
2001-09	5.48
2001-10	5.32
2001-11	5.12
2001-12	5.48
2002-01	5.45
2002-02	5.4
2002-03	ND

2002-04	ND
2002-05	ND
2002-06	ND
2002-07	ND
2002-08	ND
2002-09	ND
2002-10	ND
2002-11	ND
2002-12	ND
2003-01	ND
2003-02	ND
2003-03	ND
2003-04	ND
2003-05	ND
2003-06	ND
2003-07	ND
2003-08	ND
2003-09	ND
2003-10	ND
2003-11	ND
2003-12	ND
2004-01	ND
2004-02	ND
2004-03	ND
2004-04	ND
2004-05	ND
2004-06	ND
2004-07	ND
2004-08	ND
2004-09	ND
2004-10	ND
2004-11	ND
2004-12	ND
2005-01	ND
2005-02	ND
2005-03	ND
2005-04	ND
2005-05	ND
2005-06	ND
2005-07	ND
2005-08	ND
2005-09	ND
2005-10	ND
2005-11	ND
2005-12	ND
2006-01	ND
2006-02	4.54
2006-03	4.73
2006-04	5.06
2006-05	5.2
2006-06	5.15
2006-07	5.13
2006-08	5
2006-09	4.85
2006-10	4.85
2006-11	4.69
2006-12	4.68
2007-01	4.85
2007-02	4.82
2007-03	4.72
2007-04	4.87
2007-05	4.9
2007-06	5.2
2007-07	5.11
2007-08	4.93
2007-09	4.79
2007-10	4.77
2007-11	4.52
2007-12	4.53
2008-01	4.33
2008-02	4.52
2008-03	4.39
2008-04	4.44
2008-05	4.6
2008-06	4.69
2008-07	4.57
2008-08	4.5

2008-09	4.27
2008-10	4.17
2008-11	4
2008-12	2.87
2009-01	3.13
2009-02	3.59
2009-03	3.64
2009-04	3.76
2009-05	4.23
2009-06	4.52
2009-07	4.41
2009-08	4.37
2009-09	4.19
2009-10	4.19
2009-11	4.31
2009-12	4.49
2010-01	4.6
2010-02	4.62
2010-03	4.64
2010-04	4.69
2010-05	4.29
2010-06	4.13
2010-07	3.99
2010-08	3.8
2010-09	3.77
2010-10	3.87
2010-11	4.19
2010-12	4.42
2011-01	4.52
2011-02	4.65
2011-03	4.51
2011-04	4.5
2011-05	4.29
2011-06	4.23
2011-07	4.27
2011-08	3.65
2011-09	3.18
2011-10	3.13
2011-11	3.02
2011-12	2.98
2012-01	3.03
2012-02	3.11
2012-03	3.28
2012-04	3.18
2012-05	2.93
2012-06	2.7
2012-07	2.59
2012-08	2.77
2012-09	2.88
2012-10	2.9
2012-11	2.8
2012-12	2.88
2013-01	3.08
2013-02	3.17
2013-03	3.16
2013-04	2.93
2013-05	3.11
2013-06	3.4
2013-07	3.61
2013-08	3.76
2013-09	3.79
2013-10	3.68
2013-11	3.8
2013-12	3.89
2014-01	3.77
2014-02	3.66
2014-03	3.62
2014-04	3.52
2014-05	3.39
2014-06	3.42
2014-07	3.33
2014-08	3.2
2014-09	3.26
2014-10	3.04
2014-11	3.04
2014-12	2.83
2015-01	2.46

2015-02	2.57	
2015-03	2.63	
2015-04	2.59	
2015-05	2.96	
2015-06	3.11	
2015-07	3.07	
2015-08	2.86	
2015-09	2.95	2.8
2015-10	2.89	
2015-11	3.03	
2015-12	2.97	
2016-01	2.86	
2016-02	2.62	
2016-03	2.68	
2016-04	2.62	
2016-05	2.63	
2016-06	2.45	
2016-07	2.23	
2016-08	2.26	2.54375
2016-09	2.35	
2016-10	2.5	
2016-11	2.86	
2016-12	3.11	
2017-01	3.02	
2017-02	3.03	
2017-03	3.08	
2017-04	2.94	
2017-05	2.96	
2017-06	2.8	
2017-07	2.88	
2017-08	2.8	
2017-09	2.78	
2017-10	2.88	
2017-11	2.8	
2017-12	2.77	
2018-01	2.88	

Series Description: Market yield on U.S. Treasury securities at 30-year constant maturity, quoted on investment basis

Unit: Percent; Per Year

Multiplier: 1

Currency: NA

Unique Identifier: H15/H15/RIFLGFCY30_N.A

Time Period: RIFLGFCY30_N.A

1977	7.75	
1978	8.49	
1979	9.28	
1980	11.27	
1981	13.45	
1982	12.76	
1983	11.18	
1984	12.41	
1985	10.79	
1986	7.78	
1987	8.59	
1988	8.96	
1989	8.45	
1990	8.61	
1991	8.14	
1992	7.67	
1993	6.59	
1994	7.37	
1995	6.88	
1996	6.71	
1997	6.61	
1998	5.58	
1999	5.87	
2000	5.94	
2001	5.49	
2002	5.43	
2003	ND	
2004	ND	
2005	ND	
2006	4.91	
2007	4.84	
2008	4.28	
2009	4.08	
2010	4.25	
2011	3.91	
2012	2.92	
2013	3.45	
2014	3.34	
2015	2.84	3.292
2016	2.59	3.882
2017	2.895	

Series Des Market yield on U.S. Treasury securities at 20-year constant maturity, quoted on investment basis
Unit: Percent:_Per_Year
Multiplier: 1
Currency: NA
Unique Ide H15/H15/RIFLGFCY20_N.M
Time Perio RIFLGFCY20_N M

1953-04	3.08
1953-05	3.18
1953-06	3.21
1953-07	3.12
1953-08	3.1
1953-09	3.07
1953-10	2.95
1953-11	2.95
1953-12	2.89
1954-01	2.8
1954-02	2.72
1954-03	2.61
1954-04	2.6
1954-05	2.66
1954-06	2.64
1954-07	2.57
1954-08	2.58
1954-09	2.6
1954-10	2.61
1954-11	2.65
1954-12	2.67
1955-01	2.75
1955-02	2.83
1955-03	2.84
1955-04	2.85
1955-05	2.87
1955-06	2.86
1955-07	2.94
1955-08	3.01
1955-09	3
1955-10	2.93
1955-11	2.93
1955-12	2.98
1956-01	2.94
1956-02	2.91
1956-03	2.99
1956-04	3.14
1956-05	3.06
1956-06	3
1956-07	3.08
1956-08	3.22
1956-09	3.28
1956-10	3.26
1956-11	3.37
1956-12	3.45
1957-01	3.41
1957-02	3.3
1957-03	3.32
1957-04	3.4
1957-05	3.49
1957-06	3.65
1957-07	3.72
1957-08	3.75
1957-09	3.73
1957-10	3.76
1957-11	3.61
1957-12	3.38
1958-01	3.27
1958-02	3.31
1958-03	3.29
1958-04	3.17
1958-05	3.17
1958-06	3.23
1958-07	3.39
1958-08	3.65
1958-09	3.8
1958-10	3.81

1958-11	3.76
1958-12	3.86
1959-01	3.95
1959-02	3.96
1959-03	3.99
1959-04	4.06
1959-05	4.13
1959-06	4.14
1959-07	4.16
1959-08	4.15
1959-09	4.29
1959-10	4.19
1959-11	4.2
1959-12	4.33
1960-01	4.42
1960-02	4.28
1960-03	4.14
1960-04	4.23
1960-05	4.2
1960-06	4.04
1960-07	3.91
1960-08	3.84
1960-09	3.86
1960-10	3.92
1960-11	3.96
1960-12	3.91
1961-01	3.9
1961-02	3.84
1961-03	3.81
1961-04	3.81
1961-05	3.74
1961-06	3.89
1961-07	3.93
1961-08	4.04
1961-09	4.04
1961-10	4.01
1961-11	4
1961-12	4.07
1962-01	4.1
1962-02	4.12
1962-03	4.04
1962-04	3.93
1962-05	3.92
1962-06	3.96
1962-07	4.05
1962-08	4.01
1962-09	4
1962-10	3.94
1962-11	3.93
1962-12	3.92
1963-01	3.93
1963-02	3.97
1963-03	3.98
1963-04	4.03
1963-05	4.02
1963-06	4.02
1963-07	4.06
1963-08	4.03
1963-09	4.09
1963-10	4.12
1963-11	4.16
1963-12	4.19
1964-01	4.19
1964-02	4.17
1964-03	4.22
1964-04	4.24
1964-05	4.2
1964-06	4.17
1964-07	4.16
1964-08	4.18
1964-09	4.2
1964-10	4.2
1964-11	4.17

1964-12	4 18
1965-01	4 19
1965-02	4 21
1965-03	4 2
1965-04	4 2
1965-05	4.21
1965-06	4 21
1965-07	4 21
1965-08	4.25
1965-09	4 3
1965-10	4 32
1965-11	4.4
1965-12	4 5
1966-01	4 52
1966-02	4 71
1966-03	4 72
1966-04	4 65
1966-05	4 69
1966-06	4 73
1966-07	4 84
1966-08	4.95
1966-09	4.94
1966-10	4 83
1966-11	4.87
1966-12	4.76
1967-01	4 51
1967-02	4 61
1967-03	4.56
1967-04	4.64
1967-05	4 9
1967-06	4.99
1967-07	5.01
1967-08	5.12
1967-09	5.16
1967-10	5.36
1967-11	5.66
1967-12	5 59
1968-01	5 39
1968-02	5 38
1968-03	5 59
1968-04	5 46
1968-05	5.55
1968-06	5.4
1968-07	5 29
1968-08	5 23
1968-09	5.28
1968-10	5.44
1968-11	5 56
1968-12	5.88
1969-01	5 99
1969-02	6.11
1969-03	6.22
1969-04	6.03
1969-05	6.11
1969-06	6.28
1969-07	6.27
1969-08	6.22
1969-09	6.55
1969-10	6.49
1969-11	6.74
1969-12	6.91
1970-01	6.92
1970-02	6.67
1970-03	6 72
1970-04	6.85
1970-05	7.24
1970-06	7.34
1970-07	6.92
1970-08	7 07
1970-09	6.88
1970-10	6 88
1970-11	6 58
1970-12	6 28

1971-01	6.18
1971-02	6.14
1971-03	5.94
1971-04	6
1971-05	6.32
1971-06	6.38
1971-07	6.38
1971-08	6.27
1971-09	6.05
1971-10	5.92
1971-11	5.86
1971-12	6
1972-01	6.01
1972-02	6.06
1972-03	6.06
1972-04	6.16
1972-05	6.07
1972-06	6.01
1972-07	6.01
1972-08	5.94
1972-09	6.05
1972-10	6
1972-11	5.79
1972-12	5.96
1973-01	6.78
1973-02	6.88
1973-03	6.91
1973-04	6.86
1973-05	6.99
1973-06	7.06
1973-07	7.29
1973-08	7.61
1973-09	7.25
1973-10	7.18
1973-11	7.3
1973-12	7.29
1974-01	7.47
1974-02	7.46
1974-03	7.73
1974-04	8.01
1974-05	8.14
1974-06	8.1
1974-07	8.26
1974-08	8.6
1974-09	8.59
1974-10	8.37
1974-11	7.98
1974-12	7.91
1975-01	7.88
1975-02	7.71
1975-03	7.99
1975-04	8.36
1975-05	8.22
1975-06	8.04
1975-07	8.17
1975-08	8.5
1975-09	8.57
1975-10	8.35
1975-11	8.28
1975-12	8.23
1976-01	8.01
1976-02	8.03
1976-03	7.97
1976-04	7.86
1976-05	8.13
1976-06	8.03
1976-07	8
1976-08	7.91
1976-09	7.78
1976-10	7.7
1976-11	7.64
1976-12	7.3
1977-01	7.48

1977-02	7.64
1977-03	7.73
1977-04	7.67
1977-05	7.74
1977-06	7.64
1977-07	7.6
1977-08	7.64
1977-09	7.57
1977-10	7.71
1977-11	7.76
1977-12	7.87
1978-01	8.14
1978-02	8.22
1978-03	8.21
1978-04	8.32
1978-05	8.44
1978-06	8.53
1978-07	8.69
1978-08	8.45
1978-09	8.47
1978-10	8.69
1978-11	8.75
1978-12	8.9
1979-01	8.98
1979-02	9.03
1979-03	9.08
1979-04	9.12
1979-05	9.21
1979-06	8.91
1979-07	8.92
1979-08	8.97
1979-09	9.21
1979-10	9.99
1979-11	10.37
1979-12	10.18
1980-01	10.65
1980-02	12.21
1980-03	12.49
1980-04	11.42
1980-05	10.44
1980-06	9.89
1980-07	10.32
1980-08	11.07
1980-09	11.47
1980-10	11.75
1980-11	12.44
1980-12	12.49
1981-01	12.29
1981-02	12.98
1981-03	12.94
1981-04	13.46
1981-05	13.82
1981-06	13.2
1981-07	13.92
1981-08	14.52
1981-09	15.07
1981-10	15.13
1981-11	13.56
1981-12	13.73
1982-01	14.57
1982-02	14.48
1982-03	13.75
1982-04	13.57
1982-05	13.46
1982-06	14.18
1982-07	13.76
1982-08	12.91
1982-09	12.16
1982-10	10.97
1982-11	10.57
1982-12	10.62
1983-01	10.78
1983-02	11.03

1983-03	10.8
1983-04	10.63
1983-05	10.67
1983-06	11.12
1983-07	11.59
1983-08	11.96
1983-09	11.82
1983-10	11.77
1983-11	11.92
1983-12	12.02
1984-01	11.82
1984-02	12
1984-03	12.45
1984-04	12.65
1984-05	13.43
1984-06	13.54
1984-07	13.36
1984-08	12.71
1984-09	12.42
1984-10	12.04
1984-11	11.66
1984-12	11.64
1985-01	11.58
1985-02	11.7
1985-03	12.06
1985-04	11.69
1985-05	11.19
1985-06	10.57
1985-07	10.68
1985-08	10.73
1985-09	10.8
1985-10	10.67
1985-11	10.24
1985-12	9.75
1986-01	9.59
1986-02	9.08
1986-03	8.09
1986-04	7.5
1986-05	7.81
1986-06	7.69
1986-07	7.29
1986-08	7.28
1986-09	7.56
1986-10	7.61
1986-11	7.42
1986-12	7.28
1987-01	NC
1987-02	NC
1987-03	NC
1987-04	NC
1987-05	NC
1987-06	NC
1987-07	NC
1987-08	NC
1987-09	NC
1987-10	NC
1987-11	NC
1987-12	NC
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1988-05	NC
1988-06	NC
1988-07	NC
1988-08	NC
1988-09	NC
1988-10	NC
1988-11	NC
1988-12	NC
1989-01	NC
1989-02	NC
1989-03	NC

1989-04	NC
1989-05	NC
1989-06	NC
1989-07	NC
1989-08	NC
1989-09	NC
1989-10	NC
1989-11	NC
1989-12	NC
1990-01	NC
1990-02	NC
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1990-04	NC
1990-05	NC
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1990-10	NC
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1991-03	NC
1991-04	NC
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1991-12	NC
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1992-03	NC
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1992-05	NC
1992-06	NC
1992-07	NC
1992-08	NC
1992-09	NC
1992-10	NC
1992-11	NC
1992-12	NC
1993-01	NC
1993-02	NC
1993-03	NC
1993-04	NC
1993-05	NC
1993-06	NC
1993-07	NC
1993-08	NC
1993-09	NC
1993-10	6.07
1993-11	6.38
1993-12	6.4
1994-01	6.39
1994-02	6.57
1994-03	7
1994-04	7.4
1994-05	7.54
1994-06	7.51
1994-07	7.67
1994-08	7.62
1994-09	7.87
1994-10	8.08
1994-11	8.2
1994-12	7.99
1995-01	7.97
1995-02	7.73
1995-03	7.57
1995-04	7.45

1995-05	7 01
1995-06	6 59
1995-07	6.74
1995-08	6.92
1995-09	6.65
1995-10	6.45
1995-11	6.33
1995-12	6.12
1996-01	6.11
1996-02	6.3
1996-03	6.74
1996-04	6 98
1996-05	7.11
1996-06	7.22
1996-07	7 14
1996-08	6.97
1996-09	7.17
1996-10	6.9
1996-11	6.58
1996-12	6 65
1997-01	6.91
1997-02	6.77
1997-03	7 05
1997-04	7.2
1997-05	7 02
1997-06	6.84
1997-07	6.56
1997-08	6 65
1997-09	6.56
1997-10	6 38
1997-11	6.2
1997-12	6 07
1998-01	5.88
1998-02	5.96
1998-03	6 01
1998-04	6
1998-05	6 01
1998-06	5.8
1998-07	5.78
1998-08	5.66
1998-09	5 38
1998-10	5 3
1998-11	5.48
1998-12	5.36
1999-01	5.45
1999-02	5.66
1999-03	5 87
1999-04	5.82
1999-05	6.08
1999-06	6.36
1999-07	6.28
1999-08	6 43
1999-09	6.5
1999-10	6 66
1999-11	6.48
1999-12	6 69
2000-01	6.86
2000-02	6.54
2000-03	6.38
2000-04	6.18
2000-05	6 55
2000-06	6.28
2000-07	6.2
2000-08	6 02
2000-09	6.09
2000-10	6.04
2000-11	5 98
2000-12	5.64
2001-01	5 65
2001-02	5.62
2001-03	5 49
2001-04	5.78
2001-05	5.92