CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
3	[redacted]				
5,000	**3/4" Meter**				
	Total	$ 57 49	$ 58 54	$ 60 29	$ 62.10
	Dollar Inc	1 79	1 05	1 76	1 81
	Percent Inc	3 2%	1 8%	3 0%	3 0%
10,000	**3/4" Meter**				
	Total	95 44	96 49	99 38	102 36
	Dollar Inc	2 54	1 05	2 89	2 98
	Percent Inc	2 7%	1 1%	3 0%	3 0%
20,000	**3/4" Meter**				
	Total	210 34	211 39	217 73	224 26
	Dollar Inc	5 84	1 05	6 34	6 53
	Percent Inc	2 9%	0 5%	3 0%	3 0%
4	[redacted]				
30,000 Gallons -- 1 1/2" Meter					
	Total	304 62	313 76	323 17	332 87
	Dollar Inc	6 40	9 14	9 41	9 70
	Percent Inc	2 1%	3 0%	3 0%	3.0%
60,000 Gallons -- 1 1/2" Meter					
	Total	695 22	716 08	737 56	759 69
	Dollar Inc	25 00	20 86	21 48	22 13
	Percent Inc	3 7%	3 0%	3 0%	3 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
5	[redacted]					
5,000 Gallons -- 3/4" Meter						
	Total		$ 39 02	$ 40 96	$ 44 64	$ 48 66
	Dollar Inc		1 23	1 94	3 69	4 02
	Percent Inc		3 3%	5 0%	9.0%	9 0%
10,000 Gallons -- 3/4" Meter						
	Total		68 22	77 11	84 04	91 61
	Dollar Inc		1 78	8 89	6 94	7 56
	Percent Inc		2 7%	13 0%	9 0%	9 0%
15,000 Gallons -- 3/4" Meter						
	Total		91 58	106 03	115 57	125 97
	Dollar Inc		2 22	14 45	9 54	10 40
	Percent Inc		2 5%	15 8%	9 0%	9 0%
20,000 Gallons -- 3/4" Meter						
	Total		91 58	106 03	115 57	125 97
	Dollar Inc		2 22	14 45	9 54	10 40
	Percent Inc		2 5%	15 8%	9 0%	9 0%
6	[redacted]					
30,000 Gallons -- 1 1/2" Meter						
	Total	1 1/2"	$ 253 65	$ 276 48	$ 301 36	$ 328 48
	Dollar Inc		3 08	22 83	24 88	27 12
	Percent Inc		1 2%	9 0%	9 0%	9 0%
60,000 Gallons -- 1 1/2" Meter						
	Total	1 1/2"	640 65	698 31	761 16	829 66
	Dollar Inc		132 08	57 66	62 85	68 50
	Percent Inc		26 0%	9 0%	9 0%	9 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

Summary

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

5 [redacted]

		Effective Jan-18	[redacted]	[redacted]
5,000 Gallons Water, 5,000 Gallons WW -- 3/4" Meter				
Total	$	77 35 $	80 43 $	85 31 $	90 54
Dollar Inc		2 43	3 08	4 87	5 24
Percent Inc		3 2%	4 0%	6 1%	6 1%
10,000 Gallons Water, 10,000 Gallons WW -- 3/4" Meter				
Total		131 85	142 64	151 55	161 14
Dollar Inc		3 48	10 79	8 91	9 59
Percent Inc		2 7%	8 2%	6 2%	6 3%
20,000 Gallons Water, 14,000 Gallons WW -- 3/4" Meter				
Total		231 81	250 46	264 34	279 20
Dollar Inc		6 12	18 65	13 88	14.86
Percent Inc		2 7%	8 0%	5 5%	5 6%
30,000 Gallons Water, 14,000 Gallons WW -- 3/4" Meter				
Total		322 01	343 37	360 03	377 77
Dollar Inc		9 52	21.36	16 66	17 73
Percent Inc		3 0%	6 6%	4 9%	4 9%

6 [redacted]

30,000 Gallons Water, 30,000 Gallons WW -- 1 1/2" Meter				
Total	- $	558 27 $	590 24 $	624 53 $	661 35
Dollar Inc		9.48	31 97	34 30	36 82
Percent Inc		1 7%	5 7%	5 8%	5 9%
60,000 Gallons Water, 60,000 Gallons WW -- 1 1/2" Meter				
Total	-	1,335 87	1,414 39	1,498 72	1,589 35
Dollar Inc		157 08	78 52	84 33	90 63
Percent Inc		13 3%	5 9%	6 0%	6 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 2 -- WW Inverted Block**

1 [redacted]

[redacted]

[redacted]

Monthly Minimum Charge

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3/4"	$ 22 25	$ 23 15	$ 23 84	$ 24 56	$ 25 30	$ 26 06	$ 26 84	$ 27 37	$ 27 92	$ 28 48	$ 29 05
1"	38 93	38 93	40 10	41 30	42 54	43 82	45 13	46 03	46 95	47 89	48 85
1 1/2"	77 87	77 87	80 21	82 61	85 09	87 64	90 27	92 08	93 92	95 80	97 71
2"	124 59	124 59	128 33	132 18	136 14	140 23	144 43	147 32	150 27	153 27	156 34
3"	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
2,001	10,000	4 96	5 06	5 21	5 37	5 53	5 70	5 87	5 98	6 10	6 22	6 35
10,001	20,000	7 44	7 66	7 89	8 13	8 37	8 62	8 88	9 06	9 24	9 42	9 61
20,001	30,000	8 68	9 02	9 29	9 57	9 86	10 15	10 46	10 67	10 88	11 10	11 32
30,001	Above	12 40	13 02	13 41	13 81	14 23	14 65	15 09	15 40	15 70	16 02	16 34
-	-	-	-	-	-	-	-	-	-	-	-	-

[redacted]

Monthly Minimum Charge

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3/4"	$ 33 38	$ 34 72	$ 35 77	$ 36 84	$ 37 94	$ 39 08	$ 40 26	$ 41 06	$ 41 88	$ 42 72	$ 43 57
1"	58 40	58 40	58 40	60 15	61 95	63 81	65 72	67 70	69 05	70 43	71 84
1 1/2"	116 81	116 81	116 81	120 31	123 92	127 64	131 47	135 41	138 12	140 88	143 70
2"	186 89	186 89	186 89	192 49	198 27	204 21	210 34	216 65	220 98	225 40	229 91
3"	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
2,001	10,000	7 44	7 59	7 59	7 82	8 05	8 29	8 54	8 80	8 97	9 15	9 34
10,001	20,000	11 16	11 49	11 49	11 83	12 19	12 56	12 93	13 32	13 59	13 86	14 14
20,001	30,000	13 02	13 53	13 53	13 94	14 35	14 78	15 23	15 68	16 00	16 32	16 65
30,001	Above	18 60	19 53	19 53	20 12	20 72	21 34	21 98	22 64	23 09	23 56	24 03
-	-	-	-	-	-	-	-	-	-	-	-	-

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 2 -- WW Inverted Block**

[redacted]

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
Monthly Minimum Charge											
3/4"		$ 27 81	$ 27 81	$ 28 64	$ 29 50	$ 30 39	$ 31 30	$ 32 24	$ 32 88	$ 33 54	$ 34 21	$ 34 90
1"		48 67	48 67	50 13	51 63	53 18	54 78	56 42	57 55	58 70	59 88	61 07
1 1/2"		97 34	97 34	100 26	103 27	106 37	109 56	112 84	115 10	117 40	119 75	122 15
2"		155 74	155 74	160 41	165 22	170 18	175 29	180 55	184 16	187 84	191 60	195 43
3"		233 60	233 60	240 61	247 83	255 26	262 92	270 81	276 22	281 75	287 38	293 13
4"		389 34	389 34	401 02	413 05	425 44	438 21	451 35	460 38	469 59	478 98	488 56
6"		-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-
Volume Rate/1,000 Gal											
2,001	10,000	4 96	5 06	5 21	5 37	5 53	5 70	5 87	5 98	6 10	6 22	6 35
10,001	20,000	7 44	7 66	7 89	8 13	8 37	8 62	8 88	9 06	9 24	9 42	9 61
20,001	30,000	8 68	9 02	9 29	9 57	9 86	10 15	10 46	10 67	10 88	11 10	11 32
30,001	Above	12 40	13 02	13 41	13 81	14 23	14 65	15 09	15 40	15 70	16 02	16 34
-	-	-	-	-	-	-	-	-	-	-	-	-

[redacted]

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
Monthly Minimum Charge											
3/4"		$ 41 72	$ 41 72	$ 42 97	$ 44 26	$ 45 58	$ 46 95	$ 48 36	$ 49 33	$ 50 31	$ 51 32	$ 52 35
1"		73 01	73 01	75 20	77 45	79 77	82 17	84 63	86 33	88 05	89 81	91 61
1 1/2"		146 01	146 01	150 39	154 90	159 55	164 34	169 27	172 65	176 10	179 63	183 22
2"		233 61	233 61	240 62	247 84	255 27	262 93	270 82	276 23	281 76	287 39	293 14
3"		350 40	350 40	360 91	371 74	382 89	394 38	406 21	414 33	422 62	431 07	439 69
4"		584 01	584 01	601 53	619 58	638 16	657 31	677 03	690 57	704 38	718 47	732 84
6"		-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-
Volume Rate/1,000 Gal											
2,001	10,000	7 44	7 59	7 82	8 05	8 29	8 54	8 80	8 97	9 15	9 34	9 52
10,001	20,000	11 16	11 49	11 83	12 19	12 56	12 93	13 32	13 59	13 86	14 14	14 42
20,001	30,000	13 02	13 53	13 94	14 35	14 78	15 23	15 68	16 00	16 32	16 65	16 98
30,001	Above	18 60	19 53	20 12	20 72	21 34	21 98	22 64	23 09	23 56	24 03	24 51

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 2 -- WW Inverted Block**

2 [redacted]

[redacted]

Monthly Minimum Charge

3/4"	$ 20 60	$ 21 50	$ 23 44	$ 25 54	$ 27 84	$ 30 35	$ 33 08	$ 34 07	$ 35 10	$ 36 15	$ 37 23
1"	38 63	38 63	42 11	45 90	50 03	54 53	59 44	61 22	63 06	64 95	66 90
1 1/2"	72 10	72 10	78 59	85 66	93 37	101 78	110 93	114 26	117 69	121 22	124 86
2"	123 60	123 60	134 72	146 85	160 07	174 47	190 17	195 88	201 76	207 81	214 04
3"	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

2,001	5,000	5 73	5 84	5 84	6 37	6 94	7 56	8 24	8 49	8 75	9 01	9 28
5,001	14,000	5 73	5 84	7 23	7 88	8 59	9 36	10 21	10 51	10 83	11 15	11 49

[redacted]

Monthly Minimum Charge

3/4"	30 90	32 25	35 15	38 32	41 76	45 52	49 62	51 11	52 64	54 22	55 85
1"	57 95	57 95	63 16	68 84	75 04	81 79	89 16	91 83	94 59	97 42	100 35
1 1/2"	108 15	108 15	117 88	128 49	140 06	152 66	166 40	171 39	176 54	181 83	187 29
2"	185 40	185 40	202 09	220 27	240 10	261 71	285 26	293 82	302 63	311 71	321 06
3"	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

2,001	5,000	8 60	12 90	12 90	14 06	15 33	16 71	18 21	18 76	19 32	19 90	20 49
5,001	14,000	8 60	12 90	15 97	17 41	18 97	20 68	22 54	23 22	23 92	24 63	25 37

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 2 -- WW Inverted Block**

[redacted]

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective [illegible]	Effective Jan-24	Effective [illegible]	Effective [illegible]	Effective [illegible]
Monthly Minimum Charge												
	3/4"	25 75	25 75	28 07	30 59	33 35	36 35	39 62	40 81	42 03	43 29	44 59
	1"	48 29	48 29	52 64	57 37	62 54	68 17	74 30	76 53	78 83	81 19	83 63
	1 1/2"	90 13	90 13	98 24	107 08	116 72	127 23	138 68	142 84	147 12	151 54	156 08
	2"	154 50	154 50	168 41	183 56	200 08	218 09	237 72	244 85	252 19	259 76	267 55
	3"	-	-	-	-	-	-	-	-	-	-	-
	4"	386 25	386 25	421 01	458 90	500 20	545 22	594 29	612 12	630 49	649 40	668 88
	6"	-	-	-	-	-	-	-	-	-	-	-
	8"	-	-	-	-	-	-	-	-	-	-	-
Volume Rate/1,000 Gal												
2,001	Above	5 73	5 84	6 37	6 94	7 56	8 24	8 99	9 26	9 53	9 82	10 11
-	-	-	-	-	-	-	-	-	-	-	-	-

[redacted]

Monthly Minimum Charge												
	3/4"	38 63	38 63	42 10	45 89	50 02	54 52	59 43	61 21	63 05	64 94	66 89
	1"	72 44	72 44	78 95	86 06	93 81	102 25	111 45	114 79	118 24	121 78	125 44
	1 1/2"	135 20	135 20	147 36	160 63	175 08	190 84	208 01	214 25	220 68	227 30	234 12
	2"	231 75	231 75	252 61	275 34	300 12	327 13	356 58	367 27	378 29	389 64	401 33
	3"	-	-	-	-	-	-	-	-	-	-	-
	4"	579 38	579 38	631 52	688 36	750 31	817 84	891 44	918 18	945 73	974 10	1,003 32
	6"	-	-	-	-	-	-	-	-	-	-	-
	8"	-	-	-	-	-	-	-	-	-	-	-
Volume Rate/1,000 Gal												
2,001	Above	8 60	12 90	14 06	15 33	16 71	18 21	19 85	20 44	21 06	21 69	22 34
-	-	-	-	-	-	-	-	-	-	-	-	-

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 2 -- WW Inverted Block**

3 [redacted]

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective [redacted]	Effective [redacted]	Effective [redacted]
5,000 Gallons -- 3/4" Meter											
Total	$ 37 13	$ 38 33	$ 39 48	$ 40 66	$ 41 88	$ 43 14	$ 44 43	$ 45 32	$ 46 23	$ 47 15	$ 48 10
Dollar Inc		1 20	1 15	1 18	1 22	1 26	1 29	0 89	0 91	0 92	0 94
Percent Inc		3 2%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
10,000 Gallons -- 3/4"" Meter											
Total	61 93	63 63	65 54	67 51	69 53	71 62	73 76	75 24	76 74	78 28	79 85
Dollar Inc		1 70	1 91	1 97	2 03	2 09	2 15	1 48	1 50	1 53	1 57
Percent Inc		2 7%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
20,000 Gallons -- 3/4" Meter											
Total	136 33	140 23	144 44	148 77	153 23	157 83	162 57	165 82	169 13	172 52	175 97
Dollar Inc		3 90	4 21	4 33	4 46	4 60	4 73	3 25	3 32	3 38	3 45
Percent Inc		2 9%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
30,000 Gallons -- 3/4" Meter											
Total	223 13	230 43	237 34	244 46	251 80	259 35	267 13	272 47	277 92	283 48	289 15
Dollar Inc		7 30	6 91	7 12	7 33	7 55	7 78	5 34	5 45	5 56	5 67
Percent Inc		3 3%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 2 -- WW Inverted Block**

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3 [redacted]											
5,000 Gallons -- 3/4" Meter											
Total	$ 55 70	$ 57 49	$ 58 54	$ 60 29	$ 62 10	$ 63 96	$ 65 88	$ 67 46	$ 68 81	$ 70 18	$ 71 59
Dollar Inc		1 79	1 05	1 76	1 81	1 86	1 92	1 57	1 35	1 38	1 40
Percent Inc		3 2%	1 8%	3 0%	3 0%	3 0%	3 0%	2 4%	2 0%	2 0%	2 0%
10,000 Gallons -- 3/4"" Meter											
Total	92 90	95 44	96 49	99 38	102 36	105 43	108 60	111 45	113 68	115 95	118 27
Dollar Inc		2 54	1 05	2 89	2 98	3 07	3 16	2 86	2 23	2 27	2 32
Percent Inc		2 7%	1 1%	3 0%	3 0%	3 0%	3 0%	2 6%	2 0%	2 0%	2 0%
20,000 Gallons -- 3/4" Meter											
Total	204 50	210 34	211 39	217 73	224 26	230 99	237 92	244 65	249 55	254 54	259 63
Dollar Inc		5 84	1 05	6 34	6 53	6 73	6 93	6 73	4 89	4 99	5 09
Percent Inc		2 9%	0 5%	3 0%	3 0%	3 0%	3 0%	2 8%	2 0%	2 0%	2 0%
4 [redacted]											
30,000 Gallons -- 1 1/2" Meter											
Total	298 22	304 62	313 76	323 17	332 87	342 85	353 14	360 20	367 40	374 75	382 25
Dollar Inc		6 40	9 14	9 41	9 70	9 99	10 29	7 06	7 20	7 35	7 50
Percent Inc		2 1%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
60,000 Gallons -- 1 1/2" Meter											
Total	670 22	695 22	716 08	737 56	759 69	782 48	805 95	822 07	838 51	855 28	872 39
Dollar Inc		25 00	20 86	21 48	22 13	22 79	23 47	16 12	16 44	16 77	17 11
Percent Inc		3 7%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 2 -- WW Inverted Block**

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
5	[redacted]											
5,000 Gallons -- 3/4" Meter												
Total		$ 37 79	$ 39 02	$ 40 96	$ 44 64	$ 48 66	$ 53 04	$ 57 81	$ 59 55	$ 61 33	$ 63 17	$ 65 07
Dollar Inc			1 23	1 94	3 69	4 02	4 38	4 77	1 73	1 79	1 84	1 90
Percent Inc			3 3%	5 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
10,000 Gallons -- 3/4" Meter												
Total		66 44	68 22	77 11	84 04	91 61	99 85	108 84	112 11	115 47	118 93	122 50
Dollar Inc			1 78	8 89	6 94	7 56	8 24	8 99	3 27	3 36	3 46	3 57
Percent Inc			2 7%	13 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
20,000 Gallons -- 3/4" Meter												
Total		89 36	91 58	106 03	115 57	125 97	137 31	149 66	154 15	158 78	163 54	168 45
Dollar Inc			2 22	14 45	9 54	10 40	11 34	12 36	4 49	4 62	4 76	4 91
Percent Inc			2 5%	15 8%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
30,000 Gallons -- 3/4" Meter												
Total		89 36	91 58	106 03	115 57	125 97	137 31	149 66	154 15	158 78	163 54	168 45
Dollar Inc			2 22	14 45	9 54	10 40	11 34	12 36	4 49	4 62	4 76	4 91
Percent Inc			2 5%	15 8%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
6	[redacted]											
30,000 Gallons -- 1 1/2" Meter												
Total	1 1/2"	$ 250 57	$ 253 65	$ 276 48	$ 301 36	$ 328 48	$ 358 05	$ 390 27	$ 401 98	$ 414 04	$ 426 46	$ 439 25
Dollar Inc			3 08	22 83	24 88	27 12	29 56	32 22	11 71	12 06	12 42	12 79
Percent Inc			1 2%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
60,000 Gallons -- 1 1/2" Meter												
Total	1 1/2"	422 47	428 85	467 45	509 52	555 37	605 36	659 84	679 63	700 02	721 02	742 65
Dollar Inc			6 38	38 60	42 07	45 86	49 98	54 48	19 80	20 39	21 00	21 63
Percent Inc			1 5%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

1 [redacted]

[redacted]

[redacted]

Monthly Minimum Charge					
	3/4"	$ 23 84	$ 24 56	$	25 30
	1"	40 10	41 30		42 54
	1 1/2"	80 21	82 61		85 09
	2"	128.33	132 18		136.14
Volume Rate/1,000 Gal					
2,001	10,000	$ 5 21	$ 5 37	$	5 53
10,001	20,000	7 89	8 13		8 37
20,001	30,000	9 29	9 57		9 86
30,001	Above	13 41	13 81		14 23

[redacted]

Monthly Minimum Charge					
	3/4"	$ 35 77	$ 36 84	$	37 94
	1"	58 40	60 15		61 95
	1 1/2"	116 81	120 31		123 92
	2"	186 89	192 49		198 27
Volume Rate/1,000 Gal					
2,001	10,000	$ 7 82	$ 8 05	$	8 29
10,001	20,000	11 83	12 19		12 56
20,001	30,000	13 94	14 35		14 78
30,001	Above	20 12	20 72		21 34

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

[redacted]

			Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge					
	3/4"	$	28 64	$ 29 50	$ 30 39
	1"		50 13	51 63	53 18
	1 1/2"		100 26	103 27	106 37
	2"		160 41	165 22	170 18
	3"		240 61	247 83	255 26
	4"		401 02	413 05	425 44
Volume Rate/1,000 Gal					
2,001	10,000	$	5 21	$ 5 37	$ 5 53
10,001	20,000		7 89	8 13	8 37
20,001	30,000		9 29	9 57	9 86
30,001	Above		13 41	13 81	14 23

[redacted]

Monthly Minimum Charge					
	3/4"	$	42 97	$ 44 26	$ 45 58
	1"		75 20	77 45	79 77
	1 1/2"		150 39	154 90	159 55
	2"		240 62	247 84	255 27
	3"		360 91	371 74	382 89
	4"		601 53	619 58	638 16
Volume Rate/1,000 Gal					
2,001	10,000	$	7 82	$ 8 05	$ 8 29
10,001	20,000		11 83	12 19	12 56
20,001	30,000		13 94	14 35	14 78
30,001	Above		20 12	20 72	21 34

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

2 [redacted]

[redacted]

			Effective Jan-19	Effective [redacted]	Effective [redacted]
Monthly Minimum Charge					
	3/4"	$	23 44	$ 25 54	$ 27 84
	1"		42 11	45 90	50 03
	1 1/2"		78 59	85 66	93 37
	2"		134 72	146 85	160 07
Volume Rate/1,000 Gal					
2,001	5,000		5 84	6 37	6 94
5,001	Maximum		7 23	7 88	8 59
	Maximum Gallons		13 000	12,000	11,000

[redacted]

Monthly Minimum Charge					
	3/4"		35 15	38 32	41.76
	1"		63 16	68 84	75 04
	1 1/2"		117 88	128 49	140.06
	2"		202 09	220 27	240 10
Volume Rate/1,000 Gal					
2,001	5,000		12 90	14 06	15 33
5,001	Maximum		15 97	17 41	18 97
	Maximum Gallons		13,000	12,000	11 000

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

			Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge					
		3/4"	28 07	30 59	33 35
		1"	52 64	57 37	62 54
		1 1/2"	98 24	107 08	116 72
		2"	168 41	183.56	200 08
		4"	421 01	458 90	500 20
Volume Rate/1,000 Gal					
	2,001	Above	6 37	6 94	7 56
Monthly Minimum Charge					
		3/4"	42 10	45 89	50 02
		1"	78 95	86 06	93 81
		1 1/2"	147 36	160 63	175 08
		2"	252 61	275 34	300 12
		4"	631 52	688 36	750 31
Volume Rate/1,000 Gal					
	2,001	Above	14 06	15 33	16 71

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

1 [redacted]

[redacted]

[redacted]

Monthly Minimum Charge

	3/4"	$ 23 15	$ 23 84	$ 24 56	$ 25 30	
	1"	38 93	40 10	41 30	42 54	
	1 1/2"	77 87	80 21	82.61	85 09	
	2"	124 59	128 33	132 18	136 14	

Volume Rate/1,000 Gal

2,001	10,000	$ 5 06	$ 5 21	$ 5 37	$ 5 53
10,001	20,000	7 66	7 89	8 13	8 37
20,001	30,000	9 02	9 29	9 57	9 86
30,001	Above	13 02	13 41	13 81	14 23

[redacted]

Monthly Minimum Charge

3/4"	$ 34 72	$ 35 77	$ 36 84	$ 37 94	
1"	58 40	58 40	60 15	61 95	
1 1/2"	116 81	116 81	120.31	123 92	
2"	186 89	186 89	192 49	198 27	

Volume Rate/1,000 Gal

2,001	10,000	$ 7 59	$ 7 82	$ 8 05	$ 8 29
10,001	20,000	11 49	11 83	12 19	12 56
20,001	30,000	13 53	13 94	14 35	14 78
30,001	Above	19 53	20 12	20 72	21 34

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

W3 Commercial

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge					
	3/4"	$ 27 81	$ 28 64	$ 29 50	$ 30 39
	1"	48 67	50 13	51 63	53 18
	1 1/2"	97 34	100 26	103 27	106 37
	2"	155 74	160 41	165 22	170 18
	3"	233 60	240 61	247 83	255 26
	4"	389 34	401 02	413 05	425 44
Volume Rate/1,000 Gal					
2,001	10,000	$ 5 06	$ 5 21	$ 5 37	$ 5 53
10,001	20,000	7 66	7 89	8 13	8 37
20,001	30,000	9 02	9 29	9 57	9 86
30,001	Above	13 02	13 41	13 81	14 23

W4 Commercial Outside

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge					
	3/4"	$ 41 72	$ 42 97	$ 44 26	$ 45 58
	1"	73 01	75 20	77 45	79 77
	1 1/2"	146 01	150 39	154 90	159 55
	2"	233 61	240 62	247 84	255 27
	3"	350 40	360 91	371 74	382 89
	4"	584 01	601 53	619 58	638 16
Volume Rate/1,000 Gal					
2,001	10,000	$ 7 59	$ 7 82	$ 8 05	$ 8 29
10,001	20,000	11 49	11 83	12 19	12 56
20,001	30,000	13 53	13 94	14 35	14 78
30,001	Above	19 53	20 12	20 72	21 34

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

2 [redacted]

[redacted]

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge						
		3/4"	$ 21 50	$ 23 44	$ 25 54	$ 27 84
		1"	38 63	42 11	45 90	50 03
		1 1/2"	72 10	78 59	85 66	93 37
		2"	123 60	134 72	146 85	160 07
Volume Rate/1,000 Gal						
	2,001	Maximum	5 84	6 37	6 94	7 56
		Maximum Gallons	14,000	13,000	12,000	11,000

[redacted]

Monthly Minimum Charge						
		3/4"	32 25	35 15	38 32	41 76
		1"	57 95	63 16	68 84	75 04
		1 1/2"	108 15	117 88	128 49	140 06
		2"	185 40	202 09	220 27	240 10
Volume Rate/1,000 Gal						
	2,001	Maximum	12 90	14 06	15 33	16 71
		Maximum Gallons	14,000	13 000	12,000	11,000

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge						
		3/4"	25 75	28 07	30 59	33 35
		1"	48 29	52 64	57 37	62 54
		1 1/2"	90 13	98 24	107 08	116 72
		2"	154 50	168 41	183 56	200 08
		4"	386 25	421 01	458 90	500 20
Volume Rate/1,000 Gal						
	2,001	Above	5 84	6 37	6 94	7 56
Monthly Minimum Charge						
		3/4"	38 63	42 10	45 89	50 02
		1"	72 44	78 95	86 06	93 81
		1 1/2"	135 20	147 36	160 63	175 08
		2"	231 75	252 61	275 34	300 12
		4"	579 38	631 52	688 36	750 31
Volume Rate/1,000 Gal						
	2,001	Above	12 90	14 06	15 33	16 71

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

1 [redacted]

[redacted]

[redacted]

Monthly Minimum Charge

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
3/4"		$ 23 15	$ 23 84	$ 24 56	$ 25 30
1"		38 93	40 10	41 30	42 54
1 1/2"		77.87	80 21	82 61	85 09
2"		124 59	128 33	132 18	136 14

Volume Rate/1,000 Gal

2,001	10,000	$ 5.06	$ 5 21	$ 5 37	$ 5 53
10,001	20,000	7 66	7 89	8 13	8 37
20,001	30,000	9 02	9 29	9 57	9 86
30,001	Above	13 02	13 41	13 81	14 23

[redacted]

Monthly Minimum Charge

3/4"		$ 34 72	$ 35 77	$ 36.84	$ 37 94
1"		58 40	58.40	60 15	61 95
1 1/2"		116 81	116 81	120 31	123 92
2"		186 89	186 89	192 49	198 27

Volume Rate/1,000 Gal

2,001	10,000	$ 7 59	$ 7 59	$ 7 82	$ 8 05
10,001	20,000	11 49	11 49	11 83	12 19
20,001	30,000	13 53	13 53	13 94	14 35
30,001	Above	19 53	19 53	20 12	20 72

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

[redacted]

Monthly Minimum Charge

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
	3/4"	$ 27 81	$ 28 64	$ 29 50	$ 30 39
	1"	48 67	50 13	51 63	53 18
	1 1/2"	97 34	100 26	103 27	106 37
	2"	155 74	160 41	165 22	170 18
	3"	233 60	240 61	247 83	255 26
	4"	389 34	401 02	413 05	425 44

Volume Rate/1,000 Gal

2,001	10,000	$ 5 06	$ 5 21	$ 5 37	$ 5 53
10,001	20,000	7 66	7 89	8 13	8 37
20,001	30,000	9 02	9 29	9 57	9 86
30,001	Above	13 02	13 41	13 81	14 23

[redacted]

Monthly Minimum Charge

	3/4"	$ 41 72	$ 42 97	$ 44 26	$ 45 58
	1"	73 01	75 20	77 45	79 77
	1 1/2"	146 01	150 39	154 90	159.55
	2"	233 61	240 62	247 84	255 27
	3"	350 40	360 91	371 74	382 89
	4"	584 01	601 53	619 58	638 16

Volume Rate/1,000 Gal

2,001	10,000	$ 7 59	$ 7 82	$ 8 05	$ 8 29
10,001	20,000	11 49	11 83	12 19	12 56
20,001	30,000	13 53	13 94	14 35	14 78
30,001	Above	19 53	20 12	20 72	21 34

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

2 [redacted]

[redacted]

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge						
	3/4"	$	21 50	$ 23 44	$ 25 54	$ 27 84
	1"		38 63	42 11	45 90	50 03
	1 1/2"		72 10	78 59	85 66	93 37
	2"		123 60	134 72	146 85	160 07
Volume Rate/1,000 Gal						
2,001	5,000		5 84	5 84	6 37	6 94
5,001	Maximum		5 84	7 23	7 88	8 59
	Maximum Gallons		14,000	13,000	12 000	11,000

[redacted]

Monthly Minimum Charge						
	3/4"		32 25	35 15	38 32	41 76
	1"		57 95	63 16	68 84	75 04
	1 1/2"		108 15	117 88	128.49	140 06
	2"		185 40	202 09	220 27	240 10
Volume Rate/1,000 Gal						
2,001	5,000		12 90	12.90	14 06	15 33
5,001	Maximum		12 90	15 97	17.41	18.97
	Maximum Gallons		14 000	13,000	12,000	11,000

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 2 -- WW Inverted Block**

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge						
		3/4"	25 75	28 07	30 59	33 35
		1"	48 29	52 64	57 37	62 54
		1 1/2"	90 13	98 24	107 08	116 72
		2"	154 50	168 41	183 56	200 08
		4"	386 25	421 01	458 90	500 20
Volume Rate/1,000 Gal						
	2,001	Above	5 84	6 37	6 94	7 56
Monthly Minimum Charge						
		3/4"	38 63	42 10	45 89	50 02
		1"	72 44	78 95	86 06	93 81
		1 1/2"	135 20	147 36	160 63	175 08
		2"	231 75	252 61	275 34	300 12
		4"	579 38	631 52	688 36	750 31
Volume Rate/1,000 Gal						
	2,001	Above	12 90	14 06	15 33	16 71

CITY OF CELINA | TEXAS

2018

Water and Wastewater Rate Analysis and Long Term Financial Plan

WILLDAN

CITY OF CELINA
WATER AND WASTEWATER RATE STUDY
TABLE OF CONTENTS

Acknowledgements

During the course of this rate study, several City of Celina employees expended considerable time and effort in assisting the project team. These employees included the Mayor and Council, Mr. Jason Laumer, Mr. Paul DeBuff, Ms. Amy Kuehn, Mr. Jay Toutounchain, Ms. Kimberly Brawner, and Mr. Alan Fourmentin. The project team owes a debt of gratitude to the hard work, dedication and professionalism of these individuals, without whom this project would not have been successfully completed.

The project team has relied upon the extensive data supplied by the City of Celina. Thus, the integrity of the study is largely dependent upon the accuracy of this financial and customer data. Every effort has been made by the project team to validate and confirm the information contained herein prior to the preparation of the final study documents; however we cannot guarantee the reliability of data supplied to us by the City. **This report presents no assurance or guarantee that the forecast contained herein will be consistent with actual results or performances**. These represent forecasts based on a series of assumptions about future behavior and are not guarantees. Any changes in assumptions or actual events may result in significant revisions to the forecast and its conclusions. The cash flow projections and debt service coverage calculations are not intended to present overall financial positions, results of operations, and/or cash flows for the periods indicated, which is in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants.

Executive Summary

Background

In April 2018, the City of Celina, Texas (the "City") engaged **Willdan Financial Services** to conduct a water and wastewater rate study and long-term financial plan. The City was interested in developing a comprehensive rate plan for FY 2018 and beyond. The objective of this study is to develop a long-term rate plan that will enable the City to recover sufficient funds to meet operating expenses, capital outlays, debt service and coverage requirements, while at the same time to the best extent possible minimizing the impact of any adjustments on ratepayers.

The City identified numerous objectives for this study, including but not limited to the following:

- A comprehensive analysis and evaluation of the water and wastewater systems' current cost of service and revenue requirements.
- A forecast of operating expenses over the next decade, taking into consideration salient factors such as cost of water and wastewater treatment, inflation, and system growth.
- A review and analysis of the impact of forecast cost increases from Upper Trinity Regional Water District ("UTRWD"), the City's primary water and wastewater wholesale service provider, on the City's retail rates.
- A thorough review of the water and wastewater systems' known capital improvement needs, as well as a determination of the need for funding capital requirements through the issuance of long-term debt.
- An estimate of current and forecast accounts, volumes and billing units for the ten-year forecast period.
- An analysis of alternative rate structures for water and wastewater rates that will recover sufficient revenues and will distribute costs equitably.
- A detailed analysis and comparison of the City's current and proposed rates to rates in other surrounding communities.

Water and Wastewater Rate Comparison

Table ES-1 compares the City's monthly water and wastewater charges to nearby cities in Texas. Volumes of 5,000 gallons for water and 5,000 gallons for wastewater were used for the residential comparison as it represents typical usage levels for an average household. The rate data is based on published rates and ordinances posted by each

municipality on their website. These rates do not include sales tax, activation or other charges beyond the basic minimum and volume charges. The following points are notable:

- Celina's residential monthly charges are average when compared to the surveyed communities.
- Celina's residential charges are approximately the same as the state average.
- It should be noted that according to US governmental statistics, as many as 30% of water and wastewater utilities charge rates that do not cover their costs. So if a utility has low rates, this does not necessarily translate into low costs.

TABLE ES-1

CITY OF CELINA

[illegible]

	Water	Wastewater	Total
Celina	**$ 37.13**	**$ 37.79**	**$ 74.92**
Allen	31.97	32.74	64.71
Frisco	29.21	41.52	70.73
Mustang SUD	44.05	51.60	95.65
Prosper	31.90	46.12	78.02
Colleyville	33.06	25.27	58.33
Coppell	33 60	31.36	64 96
University Park	29.13	33.60	62.73
Rockw all	35.72	34.90	70.62
Fairview	35.42	37.08	72.50
Keller	40.84	35.35	76 19
Murphy	46.38	38.87	85.25
McKinney	37.45	39.85	77.30
Southlake	54.17	43.21	97.38
Little Elm	40.76	42.29	83 05
Merillee SUD	47.40	37.79	85 19
Sample Average	**38.01**	**38.08**	**76.10**
2018 State Average*	38.21	35.99	74.21

Source: Cities' Website ; US Census Bureau & municipal w ebsites

Water and Wastewater Customers and Usage – Test Year & Forecast

Table ES-2 and **Table ES-3** present total historical and forecast water accounts for the City. For each of the historical years, the average number of accounts for the year is shown and the growth reflects the difference from one fiscal year to the next. The charts reveal that in 2016 and 2017 the City experienced growth in excess of 810 water accounts. The project team is forecasting that account growth will continue in future years, tapering down from 23% in FY 2019 to 6% in 2027. The forecast projects that the test year 2018 total of **5,090** will increase to **12,795** by 2027.

The charts further reveal that residential accounts represent the largest water customer class, at 3,611 accounts in the test year 2018.

TABLE ES-2

CITY OF CELINA

Fiscal Year	Residential	Residential Outside	Commercial	Commercial Outside	Total
FY 2015	2,477	593	219	24	**3,313**
FY 2016	2,760	892	223	24	**3,899**
FY 2017	3,320	1,131	239	27	**4,717**
12 Mo Apr '18	3,611	1,211	241	28	**5,090**
FY 2019	4,418	1,481	295	34	**6,228**
FY 2020	5,308	1,779	354	40	**7,482**
FY 2021	5,901	1,978	394	45	**8,318**
FY 2022	6,495	2,177	433	49	**9,155**
FY 2023	7,076	2,372	472	54	**9,974**
FY 2024	7,629	2,558	509	58	**10,754**
FY 2025	8,141	2,729	543	62	**11,476**
FY 2026	8,596	2,882	574	65	**12,117**
FY 2027	9,077	3,043	606	69	**12,795**

TABLE ES-3

CITY OF CELINA

FORECAST TOTAL CUSTOMERS

WASTEWATER Customer Classes

	Residential	Residential Outside	Commercial	Commercial Outside	Total
FY 2015	2,540	1	131	1	**2,673**
FY 2016	3,118	1	129	1	**3,249**
FY 2017	3,930	1	130	1	**4,062**
12 Mo Apr '18	4,208	1	146	1	**4,356**
FY 2019	5,148	1	179	1	**5,329**
FY 2020	6,184	1	215	1	**6,401**
FY 2021	6,876	1	239	1	**7,116**
FY 2022	7,568	1	263	1	**7,832**
FY 2023	8,244	1	286	1	**8,533**
FY 2024	8,890	1	308	1	**9,200**
FY 2025	9,486	1	329	1	**9,817**
FY 2026	10,016	1	348	1	**10,366**
FY 2027	10,576	1	367	1	**10,945**

Table ES-4 presents consumption by rate classification for the City for the past three fiscal years and the forecast growth over the next ten years.

TABLE ES-4

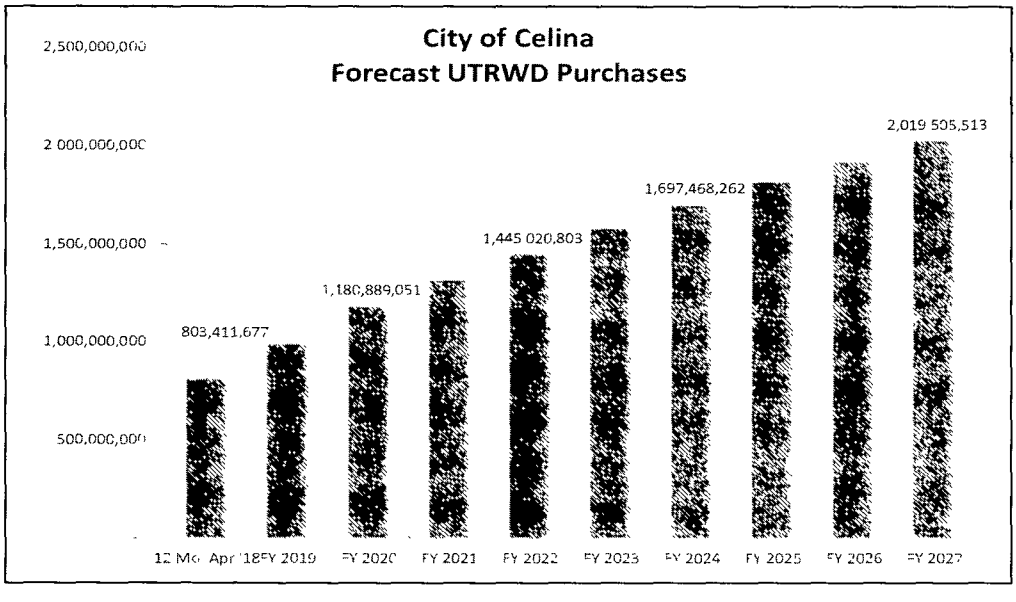
CITY OF CELINA

FORECAST BILLED CONSUMPTION

	Residential	Residential Outside	Commercial	Commercial Outside	Total
FY 2015	206,962,840	41,836,504	73,571,984	10,199,400	**332,570,728**
FY 2016	226,356,251	69,370,331	86,881,720	10,076,400	**392,684,702**
FY 2017	258,818,532	85,140,618	101,681,500	26,425,200	**472,065,850**
12 Mo Apr '18	308,850,184	100,247,428	104,120,104	22,390,069	**535,607,785**
FY 2019	377,909,858	122,663,003	127,401,620	27,396,544	**655,371,026**
FY 2020	453,961,289	147,347,983	153,040,209	32,909,886	**787,259,368**
FY 2021	504,714,730	163,821,671	170,150,296	36,589,253	**875,275,950**
FY 2022	555,499,694	180,305,592	187,271,011	40,270,905	**963,347,202**
FY 2023	605,184,143	196,432,305	204,020,718	43,872,775	**1,049,509,940**
FY 2024	652,546,384	211,805,269	219,987,558	47,306,296	**1,131,645,508**
FY 2025	696,319,686	226,013,326	234,744,488	50,479,638	**1,207,557,138**
FY 2026	735,244,392	238,647,612	247,866,852	53,301,482	**1,275,060,338**
FY 2027	776,345,014	251,988,163	261,722,764	56,281,068	**1,346,337,009**

Chart ES-5 presents forecast increase in water purchases (gallons) from UTRWD for the period FY 2019 through FY 2027. The chart reveals that under current circumstances, and assuming no changes to the current UTRWD contractual methodology, the City water purchases are forecast to increase significantly over the next decade.

CHART ES-5



Net Revenue Requirement

Table ES-6 presents the City's forecast Net Revenue Requirement for the ten-year period FY 2018 through FY 2027. Details behind these calculations can be found in the rate model contained in **Appendix A**. This forecast is based on the following set of assumptions:

- Most operating costs are expected to increase at an annual rate of 3%, which is approximately equivalent to the rate of inflation.
- Certain expenses will increase at above-inflation rates, to reflect the rapid rate of increase of these costs. These expenses include chemicals, workers' compensation, Medicare and insurance.
- The City of Celina staff provided guidance on inflation factors used in their budgetary forecasts and these same factors were then applied within the rate model.
- An additional eight employees are anticipated by the City at this time. Two utility billing personnel; two water department personnel; and four wastewater department personnel.
- Utility Billing Costs are distributed to water, solid waste and wastewater based on FY 2018 revenue budgeted for each department.
- The forecast includes an annual transfer to General Fund for General and Administrative services. These transfers are forecast to increase either at the inflation rate.
- As shown in these charts, UTRWD charges are by far the largest annual operating expense paid by Celina's water and wastewater utilities. The project team utilized UTRWD's most recent budgeted rate forecast as the basis for the UTRWD cost estimates. **Any changes in UTRWD forecast rate estimates used in determining the City's water and wastewater revenue requirement for this rate study could require significant changes to the rate plan presented in this report.**
- The City has developed a comprehensive capital improvement plan ("CIP") for its water and wastewater system. The plan includes estimates for infrastructure capital improvements for the ten-year (2018 – 2027) rate study financial planning period. This plan includes an aggressive list of projects required to meet utility service needs for communities like Celina with high growth forecasts in number of accounts and water/wastewater demands. The water CIP includes storage, pumps and distribution lines expansion, repairs and upgrades. The wastewater CIP includes wastewater treatment and collection system expansion and upgrades to infrastructure. In developing a ten-year financial forecast, the project team used the totals provided by the City to determine an overall estimate for capital spending needs for the decade. This total CIP for the next ten years is **$164,283,000**.
- To fund the long-term capital improvement plan, the City is forecast to issue $161,000,000 in water and wastewater long-term debt over the next decade. This includes $112,000,000 of debt between FY 2019 and FY 2023, and $49,000,000 in debt between FY 2024 and FY 2028. The debt service and coverage requirements are major factors in the City's long-term debt plan.
- Non-rate revenues, particularly revenues from connection and impact fees, are forecast to partially offset the need for rate adjustments in the next decade.

Table ES-6 reveals that the total revenue requirement is expected to increase from **$7,472,142** in FY 2018 to **$27,273,073** in FY 2027. The City's utility fund is forecast to be able to meet projected capital and operating expenses in the test year under the recommended rate plan without assistance from the City's General Fund. However, this forecast is highly dependent on the assumptions contained in this study, and any material changes to any of these assumptions may result in significant changes to the revenue requirement.

TABLE ES-6

CITY OF CELINA

CURRENT AND FORECAST NET REVENUE REQUIREMENT

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

	Operating Expenses	Capital Outlays	Debt Service	Transfers & Contingencies	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
2018	$ 4,139,331	$ 181,823	$ 1,313,274	$ 359,415	**$ 5,993,844**	$ 1,675,083	**$ 4,318,761**
2019	4,943,924	181,823	2,507,185	370,198	**8,003,129**	1,675,083	**6,328,046**
2020	5,513,776	181,823	2,509,427	381,304	**8,586,330**	1,793,131	**6,793,199**
2021	5,959,027	181,823	4,486,450	392,743	**11,020,043**	1,366,001	**9,654,041**
2022	6,903,399	181,823	4,487,564	404,525	**11,977,310**	1,366,534	**10,610,777**
2023	7,343,750	181,823	5,343,325	416,661	**13,285,559**	1,347,952	**11,937,606**
2024	7,794,602	181,823	5,348,069	429,160	**13,753,654**	1,308,744	**12,444,910**
2025	8,810,788	181,823	5,555,847	442,035	**14,990,493**	1,248,149	**13,742,344**
2026	9,303,199	181,823	5,558,157	455,296	**15,498,475**	1,166,286	**14,332,189**
2027	9,826,129	181,823	5,685,162	468,955	**16,162,070**	1,203,024	**14,959,046**
	WASTEWATER Revenue Requirement						
2018	3,164,382	117,911	907,720	167,585	**4,357,598**	1,204,217	**3,153,381**
2019	3,442,607	117,911	1,835,781	172,612	**5,568,911**	1,204,217	**4,364,694**
2020	3,770,518	117,911	1,837,331	177,791	**5,903,551**	1,294,424	**4,609,127**
2021	4,073,256	117,911	2,825,364	183,124	**7,199,656**	968,032	**6,231,624**
2022	4,415,011	117,911	2,826,134	188,618	**7,547,675**	968,439	**6,579,235**
2023	4,807,977	117,911	4,276,380	194,277	**9,396,546**	954,240	**8,442,305**
2024	5,092,088	117,911	4,279,659	200,105	**9,689,764**	924,279	**8,765,484**
2025	5,382,040	117,911	5,865,215	206,108	**11,571,275**	877,975	**10,693,300**
2026	5,664,143	117,911	5,866,812	212,291	**11,861,158**	815,419	**11,045,739**
2027	5,967,805	117,911	6,853,144	218,660	**13,157,520**	843,493	**12,314,027**
	TOTAL Revenue Requirement						
2018	7,303,713	299,734	2,220,995	527,000	**10,351,442**	2,879,300	**7,472,142**
2019	8,386,530	299,734	4,342,966	542,810	**13,572,040**	2,879,300	**10,692,740**
2020	9,284,294	299,734	4,346,759	559,094	**14,489,881**	3,087,555	**11,402,325**
2021	10,032,283	299,734	7,311,814	575,867	**18,219,698**	2,334,034	**15,885,665**
2022	11,318,410	299,734	7,313,698	593,143	**19,524,985**	2,334,973	**17,190,012**
2023	12,151,728	299,734	9,619,706	610,937	**22,682,105**	2,302,193	**20,379,912**
2024	12,886,690	299,734	9,627,729	629,266	**23,443,418**	2,233,024	**21,210,394**
2025	14,192,829	299,734	11,421,062	648,144	**26,561,769**	2,126,124	**24,435,644**
2026	14,967,342	299,734	11,424,969	667,588	**27,359,633**	1,981,705	**25,377,928**
2027	15,793,934	299,734	12,538,306	687,615	**29,319,589**	2,046,516	**27,273,073**

Water and Wastewater Rate Recommendations

During the course of this study, the project team evaluated several alternative rate plans for the City. After several meetings with staff and Council, it was determined that there would be two alternative rate plans to be presented for consideration. Both rate plans are considered to be revenue neutral, in that each is forecast to recover an equivalent amount of revenue per year. Further, each of the alternative rate plans developed by the project team includes the following objectives:

- Each plan will ensure that water rates will cover the water cost of service and wastewater rates will cover the wastewater cost of service
- Each plan is intended to allow the City to increase its operating reserves from 40 days to 60 days in three years
- Each rate plan presents a forecast of rates for three years. City staff and the project team discussed the adoption of rate plan, with rates to be automatically implemented on January 1st of each year beginning with January 2019 and ending in January 2021
- Given the continued residential and Commercial growth in the City and potential for unexpected events, the project team recommends that the City not commit itself to a rate plan beyond three years. Further, the project team recommends that the City review these rates annually, to incorporate any unanticipated changes to costs, volumes or growth assumptions that may occur during that time.
- The most significant impact on rates will be the cost of UTRWD treated water and wastewater treatment and debt issued to fund the CIP. **Should UTRWD make material changes to its rate forecasts and/or the City changes its forecast of future debt, the City should undertake an immediate review of its rate plan.**

Rate Plan Alternative 1 – Status Quo

Table ES-7 presents a summary of the first alternative water and wastewater rate plan proposed for Residential and Commercial customers. **Table ES-8** presents the impact on monthly charges of both the water and wastewater rate adjustments for representative Residential and Commercial accounts.

As previously mentioned, this alternative retains the basic rate structure for water and wastewater currently in place for the City. It requires a series of annual percentage rate adjustments in January of each year.

In lieu of changing to a winter averaging method for billing residential sewer accounts (Alternative #1), the staff chose to "ratchet" down the 14,000 gallons monthly cap by 1,000 gallons each of the three-year rate plan. The ultimate goal is to reach 9,000 gallons, but that will require a timeframe that extends beyond the three years of this rate plan. Since the average monthly use by residential customers never exceeded 10,000 gallons over the twelve-month test year used in the rate study, 9,000 gallons is considered an appropriate cap for the City residential customers.

In addition, the staff decided that instead of changing ¾" meter monthly charge to equal 1" meter monthly charge they will grandfather the ¾" meter monthly charge. The City is no longer installing ¾" meters for residential customers. 1" is the smallest meter the City will install.

A full exhibit of the 3-year rate plan is presented in **Appendix A** of this report. Appendix A further forecasts rates for a 10-year period. However, beyond FY 2021 the recommended rates should be considered as trends and general

guidelines. Because of the significant volume of and volatility of future growth forecasts, **the project team strongly recommends that the rate plan be reviewed every year to ensure that revenues are consistent with forecasts and are adequate to fund all the costs of providing service**

TABLE ES-7

CITY OF CELINA

PROPOSED WATER AND WASTEWATER RATE PLAN

Scenario: 2018 11 14 Scenario 1 -- Status Quo

Effective [redacted]

		Jan-18	Jan-19	Jan-20	Jan-21
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
	3/4"	$ 23.15	$ 23.84	$ 24.56	$ 25.30
	1"	38.93	40.10	41.30	42.54
	1 1/2"	77.87	80.21	82.61	85.09
	2"	124.59	128.33	132.18	136.14
Volume Rate Per 1,000 Gal					
2,001	10,000	5.06	5.21	5.37	5.53
10,001	20,000	7.66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13 02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
	3/4"	$ 27.81	$ 28.64	$ 29.50	$ 30.39
	1"	48.67	50.13	51.63	53.18
	1 1/2"	97.34	100.26	103.27	106.37
	2"	155 74	160.41	165.22	170.18
	3"	233.60	240.61	247.83	255.26
	4"	389.34	401.02	413.05	425.44
Volume Rate Per 1,000 Gal					
2,001	10,000	5 06	5.21	5.37	5.53
10,001	20,000	7.66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13.02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
	3/4"	$ 21.50	$ 23.44	$ 25.54	$ 27.84
	1"	38.63	42.11	45.90	50.03
	1 1/2"	72.10	78.59	85.66	93.37
	2"	123.60	134.72	146.85	160.07
Volume Rate/1,000 Gal (2,001 to 14,000)		5.84	6.37	6.94	7.56
Residential Usage Cap (gallons)		14,000	13,000	12,000	11,000
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
	3/4"	$ 25.75	$ 28.07	$ 30.59	$ 33.35
	1"	48.29	52.64	57.37	62.54
	1 1/2"	90 13	98.24	107.08	116.72
	2"	154.50	168.41	183.56	200.08
	3"	-	-	-	-
	4"	386.25	421.01	458.90	500.20
Volume Rate/1,000 Gal		5.84	6.37	6.94	7.56

TABLE ES-8

CITY OF CELINA

IMPACT OF RATE PLAN ON MONTHLY CHARGES

		Scenario:	2018 11 14 Scenario 1 -- Status Quo			
		Effective				
		Jan-18	Jan-19	Jan-20	Jan-21
Residential Monthly Charges -- 3/4"					
5,000 Water	5,000 WW	$ 77.35	$ 82.01	$ 87.02	$ 92.42
	Increase -- $		**4.66**	**5.01**	**5.39**
	Increase -- %		6.0%	6.1%	6.2%
10,000 Water	10,000 WW	131.85	139.90	148.56	157.88
	Increase -- $		**8.05**	**8.66**	**9.32**
	Increase -- %		6.1%	6.2%	6.3%
20,000 Water	14,000 WW	231.81	244.26	257.58	271.83
	Increase -- $		**12.45**	**13.32**	**14.26**
	Increase -- %		5.4%	5.5%	5.5%
Commercial Monthly Charges -- 1 1/2"					
30,000 Water	30,000 WW	$ 558.27	$ 590.24	$ 624.53	$ 661.35
	Increase -- $		**31.97**	**34.30**	**36.82**
			5.7%	5.8%	5.9%
60,000 Water	60,000 WW	1,124.07	1,183.52	1,247.08	1,315.06
	Increase -- $		**59.45**	**63.55**	**67.98**
	Increase -- %		5.3%	5.4%	5.5%

Rate Plan Alternative 2 – Wastewater Inverted Block

Table ES-9 presents a summary of the second alternative water and wastewater rate plan proposed for Residential and Commercial customers. **Table ES-10** presents the impact on monthly charges of both the water and wastewater rate adjustments for representative Residential and Commercial accounts.

As previously mentioned, this alternative retains the basic rate structure for water and wastewater currently in place for the City. It requires a series of annual percentage rate adjustments in January of each year. However, while water rates are unchanged from Alternative #1, wastewater rates are converted into an inverted block for residential wastewater customers.

This alternative also includes the ratcheting down of the wastewater usage cap, as well as the grandfathering of ¾" water meters.

A full exhibit of the 3-year rate plan is presented in **Appendix B** of this report. Appendix B further forecasts rates for a 10-year period. However, beyond FY 2021 the recommended rates should be considered as trends and general guidelines. Because of the significant volume of and volatility of future growth forecasts, **the project team strongly recommends that the rate plan be reviewed every year to ensure that revenues are consistent with forecasts and are adequate to fund all the costs of providing service.**

TABLE ES-9

CITY OF CELINA

PROPOSED WATER AND WASTEWATER RATE PLAN

Scenario: 2018 11 14 Scenario 2 -- WW Inverted Block

Effective [redacted]

		Jan-18	Jan-19	Jan-20	Jan-21
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 23.15	$ 23.84	$ 24.56	$ 25.30
1"		38.93	40.10	41.30	42.54
1 1/2"		77.87	80.21	82.61	85.09
2"		124.59	128.33	132.18	136.14
Volume Rate Per 1,000 Gal					
2,001	10,000	5.06	5.21	5.37	5.53
10,001	20,000	7.66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13.02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 27.81	$ 28.64	$ 29.50	$ 30.39
1"		48.67	50.13	51.63	53.18
1 1/2"		97.34	100.26	103.27	106.37
2"		155.74	160.41	165.22	170.18
3"		233.60	240.61	247.83	255.26
4"		389.34	401.02	413.05	425.44
Volume Rate Per 1,000 Gal					
2,001	10,000	5.06	5.21	5.37	5.53
10,001	20,000	7.66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13.02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 21.50	$ 23.44	$ 25.54	$ 27.84
1"		38.63	42.11	45.90	50.03
1 1/2"		72.10	78.59	85.66	93.37
2"		123.60	134.72	146.85	160.07
Volume Rate/1,000 Gal (2,001 to 5,000)		5.84	5.84	6.37	6.94
Volume Rate/1,000 Gal (5,001 to 14,000)		5 84	7.23	7.88	8.59
Residential Usage Cap (gallons)		14,000	13,000	12,000	11,000
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 25.75	$ 28.07	$ 30.59	$ 33.35
1"		48 29	52.64	57.37	62.54
1 1/2"		90.13	98.24	107.08	116.72
2"		154.50	168.41	183.56	200.08
3"		-	-	-	-
4"		386.25	421.01	458.90	500.20
Volume Rate/1,000 Gal		5 84	6.37	6.94	7.56

TABLE ES-10

CITY OF CELINA

IMPACT OF RATE PLAN ON MONTHLY CHARGES

Scenario: 2018 11 14 Scenario 2 -- WW Inverted Block

Effective [redacted]

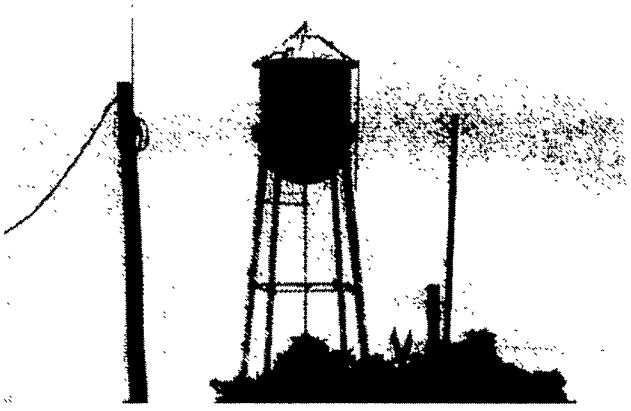
		Jan-18	Jan-19	Jan-20	Jan-21
Residential Monthly Charges -- 3/4"					
5,000 Water	5,000 WW	$ 77.35	$ 80.43	$ 85.31	$ 90.54
	Increase -- $		**3.08**	**4.87**	**5.24**
	Increase -- %		4.0%	6.1%	6.1%
10,000 Water	10,000 WW	131.85	142.64	151.55	161.14
	Increase -- $		**10.79**	**8.91**	**9.59**
	Increase -- %		8.2%	6.2%	6.3%
20,000 Water	14,000 WW	231.81	250.46	264.34	279.20
	Increase -- $		**18.65**	**13.88**	**14.86**
	Increase -- %		8.0%	5.5%	5.6%
Commercial Monthly Charges -- 1 1/2"					
30,000 Water	30,000 WW	$ 558.27	$ 590.24	$ 624.53	$ 661.35
	Increase -- $		**31.97**	**34.30**	**36.82**
			5.7%	5.8%	5.9%
60,000 Water	60,000 WW	1,124.07	1,183.52	1,247.08	1,315.06
	Increase -- $		**59.45**	**63.55**	**67.98**
	Increase -- %		5.3%	5.4%	5.5%

Section I

SECTION I

Introduction and Demographic Profile

Background



In April 2018, the City of Celina, Texas (the "City") engaged **Willdan Financial Services** to conduct a water and wastewater rate study and long-term financial plan. The City was interested in developing a comprehensive rate plan for FY 2018 and beyond. The objective of this study is to develop a long-term rate plan that will enable the City to recover sufficient funds to meet operating expenses, capital outlays, debt service and coverage requirements, while at the same time to the best extent possible minimizing the impact of any adjustments on ratepayers.

The City identified numerous objectives for this study, including but not limited to the following:

- A comprehensive analysis and evaluation of the water and wastewater systems' current cost of service and revenue requirements.
- A forecast of operating expenses over the next ten years, taking into consideration such factors as inflation, system growth, and increases in staffing levels.
- A review and analysis of the impact of forecast cost increases from Upper Trinity Regional Water District ("UTRWD"), the City's primary water and wastewater wholesale service provider, on the City's retail rates.
- A thorough review of the water and wastewater systems' known capital improvement needs, as well as a determination of the need for funding capital requirements through the issuance of long-term debt for the existing identified capital improvements.
- An estimate of current and forecast accounts, volumes and billing units for the forecast period.
- An analysis of alternative multi-year water and wastewater rate plans that will achieve the City's objectives while ensuring that the cost of service is fully recovered.
- A detailed analysis and comparison of the City's current and proposed rates to rates in other surrounding communities.

Report Organization

This report is organized into the following sections:

Section I – Introduction and Demographic Profile - outlines the background, objectives and scope of this rate study and long-term financial plan. It also presents the City's current rate structure and a community profile of the City of Celina. This includes a comparison of the City's water and wastewater charges with other Texas cities.

Section II – Water and Wastewater Test Year and Forecast Volumes – analyzes the City's customer base, total accounts and current volumes of treated water and wastewater. This section presents totals for the current year and a forecast ten years into the future.

Section III – Water and Wastewater Test Year and Forecast Revenue Requirement – outlines the process of analyzing the City's current water and wastewater utility cost structure. The total current or "test year" revenue requirements are developed, and costs are functionalized between treatment, distribution/collection, administration and customer billing. Using the test year as a basis, costs are forecast for a ten-year period.

Section IV – Water and Wastewater Rate Design – presents the Council-preferred rate recommendations for the City of Celina. Each plan is intended to be revenue neutral and will allow for the City to recover its full cost of service. This section also presents an analysis of the impact of each rate plan on residential and Commercial customers.

Appendix A – presents a hard copy printout of the interactive Microsoft Excel spreadsheet model summary developed for the City of Celina to calculate water and wastewater current and future revenue requirements. The model automatically generates all calculations based on a set of defined user inputs and has an executive dashboard for users to develop real-time "what-if" scenarios.

City Overview

The City of Celina, Texas is located approximately 30 miles north of Dallas. The City has seen tremendous growth over the past 15 years, but the growth rate is expected to begin tapering off toward the end of this study's financial planning period. The City encompasses approximately 14 square miles and has a 2017 population of 9,836. The City is situated primarily in Collin County with a limited amount of territory in neighboring Denton County.

The City of Celina has a Council-Manager form of government in which the elected Mayor and City Council Members establish policy. Those policies are then implemented by the City Manager who is appointed by, and reports to, the City Council. The Celina City Council consists of six Council Members and the Mayor. All Council members and the Mayor are elected at large. The City Manager operates in much the same manner as a Chief Executive Officer of a corporation. The City Manager's Office is responsible for the day-to-day administration of Celina's City government, including managing the City's budget, the City's departments and operations, and communicating with residents and employees.

Water and Wastewater Current Rates

Table I-1 summarizes the City of Celina's current water and wastewater rate structure. The City last adjusted its rates in January 2018.

TABLE I-1

CITY OF CELINA

[redacted]

[redacted]

Minimum Charge by Meter Size	3/4"	$ 23 15
(Includes 2,000 Gallons in Base	1"	38.93
	1 1/2"	77.87
	2"	124.59

Volume Rate (per 1,000 Gallons)

2,001	10,000	$ 5.06
10,001	20,000	7 66
20,001	30,000	9 02
30,001	Above	13 02

[redacted]

Minimum Charge by Meter Size	3/4"	$ 27 81
(Includes 2,000 Gallons in Base	1"	48.67
	1 1/2"	97.34
	2"	155 74
	3"	233.60
	4"	389 34

Volume Rate (per 1,000 Gallons)

2,001	10,000	$ 5.06
10,001	20,000	7 66
20,001	30,000	9.02
30,001	Above	13.02

[redacted]

Minimum Charge by Meter Size	3/4"	$ 34 72
(Includes 2,000 Gallons in Base	1"	58 40
	1 1/2"	116 81
	2"	186 89

Volume Rate (per 1,000 Gallons)

2,001	10,000	$ 7 59
10,001	20,000	11 49
20,001	30,000	13.53
30,001	Above	19 53

[redacted]

Minimum Charge by Meter Size	3/4"	$ 41 72
(Includes 2,000 Gallons in Base	1"	73 01
	1 1/2"	146 01
	2"	233 61
	3"	350 40
	4"	584 01

Volume Rate (per 1,000 Gallons)

2,001	10,000	$ 7.59
10,001	20,000	11 49
20,001	30,000	13 53
30,001	Above	19.53

Wastewater Rates

Residential Rates

Minimum Charge	3/4"	$ 21 50
(Includes 2,000 Gallons in Base	1"	38 63
	1 1/2"	72.10
	2"	123.60

Volume Rate (per 1,000 Gallons) $ 5 84

* Volumes are capped at 14,000 monthly water use

Commercial Rates

Minimum Charge by Meter Size	3/4"	$ 25 75
(Includes 2,000 Gallons in Base	1"	48.29
	1 1/2"	90 13
	2"	154 50
	4"	386 25

Volume Rate (per 1,000 Gallons) $ 5 84

Outside Residential Rates

Minimum Charge	3/4"	$ 32.25
(Includes 2,000 Gallons in Base	1"	57 95
	1 1/2"	108.15
	2"	185 40

Volume Rate (per 1,000 Gallons) $ 12 90

* Volumes are capped at 14,000 monthly water use

Outside Commercial Rates

Minimum Charge by Meter Size	3/4"	$ 38.63
(Includes 2,000 Gallons in Base	1"	72.44
	1 1/2"	135.20
	2"	231.75
	4"	579.38

Volume Rate (per 1,000 Gallons) $ 12.90

Water accounts served by Celina are classified as Residential, Commercial and Outside City Residential/Commercial. The water rate structure assesses a base charge by meter size. All customer classes include a 2,000-gallon allowance in the base charge. Consumption volume is billed based on tiered rates per 1,000 gallons. The tiered rates differ nominally for each customer class.

Residential and Commercial wastewater rates are assessed a base charge by meter size. All customer classes include a 2,000-gallon allowance in the base charge. A volume charge is based on metered water consumption. Residential customers' bills are capped at 14,000 gallons per month. Both Residential and Commercial wastewater accounts are assessed a uniform volume charge per 1,000 gallons for all recorded water consumption.

Water and Wastewater Rate Comparison

Chart I-2 and Table I-3 compare the City's monthly water and wastewater charges to nearby cities and water systems in Texas. Volumes of 5,000 gallons for water and 5,000 gallons for wastewater were used for the residential comparison as it represents typical usage levels for an average household.

The rate data is based on published rates and ordinances posted by each municipality on their website. These rates do not include sales tax, activation or other charges beyond the basic minimum and volume charges.

The following points are notable:

- Among residential accounts Celina's charges for monthly water and wastewater service is in the mid-range of water system charges in the Dallas-Fort Worth metroplex.
- For 5,000 gallons of water and wastewater usage, Celina's residential charges are approximately $1 below the state average.
- It should be noted that according to US governmental statistics, as many as 30% of water and wastewater utilities charge rates that do not cover their costs. So if a utility has low rates, this does not necessarily translate into low costs.

CHART I-2

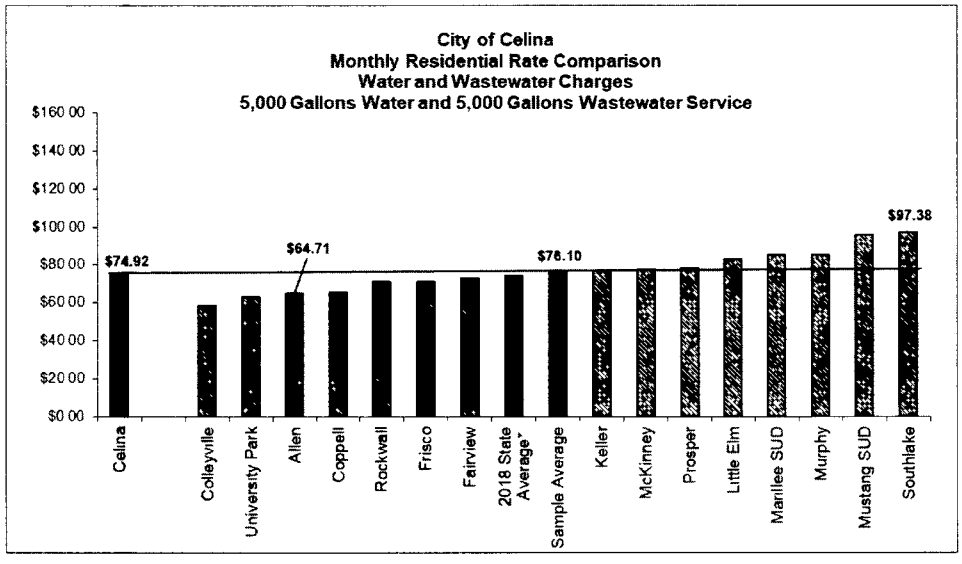
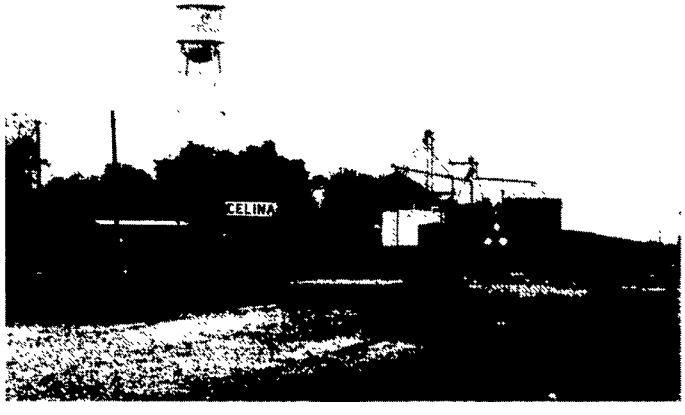


TABLE I-3

CITY OF CELINA

	Water	Wastewater	Total
Celina	**$ 37.13**	**$ 37.79**	**$ 74.92**
Allen	31.97	32.74	64.71
Frisco	29.21	41.52	70.73
Mustang SUD	44.05	51.60	95.65
Prosper	31.90	46.12	78.02
Colleyville	33.06	25.27	58.33
Coppell	33.60	31.36	64.96
University Park	29.13	33.60	62.73
Rockwall	35.72	34.90	70.62
Fairview	35.42	37.08	72.50
Keller	40.84	35.35	76.19
Murphy	46.38	38.87	85.25
McKinney	37.45	39.85	77.30
Southlake	54.17	43.21	97.38
Little Elm	40.76	42.29	83.05
Marillee SUD	47.40	37.79	85.19
Sample Average	**38.01**	**38.08**	**76.10**
2018 State Average*	38.21	35.99	74.21

Source: Cities' Website ; US Census Bureau & municipal w ebsites



Section II

SECTION II

Water & Wastewater Test Year and Forecast Volumes

In order to accurately forecast future revenues and expenses, it is necessary to examine current water and wastewater utility conditions. The first step in developing cost of service rates is to analyze patterns of usage, both for the system as a whole, and for specified customer classes.

For the City of Celina, monthly water and wastewater records were reviewed for the period of October 2014 through April 2018. These records provided summary information on the monthly water volumes distributed system-wide as well as the number of accounts for each period by defined customer class and the associated revenues. Additionally, these records provided the number of accounts and revenues monthly for all classifications of wastewater customers.

According to standard utility ratemaking methodology, in order to allocate revenue requirements equitably among system users, customers must be classified into relatively homogeneous groups with similar usage characteristics or service demands. Costs are then allocated to the customer classes in proportion to the usage characteristics of each class. For the water system, costs are typically allocated to customers based on their average and peak water demands. For the wastewater system, costs are allocated to customers based on their estimated wastewater flows, and in some cases, based on wastewater strengths.

After thoroughly examining volume and customer data, the project team made no revisions to the City's existing customer classifications. The project team finds these customer class distinctions to be reasonable and appropriate, meeting the criteria of homogenous groups with similar usage patterns.

In this section, the City's functional customer classes and test year usage patterns will be thoroughly analyzed. A five-year projection of customers and usage will also be presented. These forecasts, along with the revenue requirements, will form the basis of the proposed rate designs.

Population – Current and Projected

Like many other North Texas communities, the City of Celina has experienced a high rate of growth for the past 15 - 20 years. The City is not expected to reach build-out in the next decade. **Chart II-1** presents actual and forecast population for the period 2010 through 2030. The chart reveals that as of 2010 the City's population was approximately 6,028. According to the US Census, as of 2015 the population had reached 7,690. According to the City's staff, the population is estimated to exceed 25,000 in 2020. By 2030 the City's Comprehensive plan projects that the City's population will reach 48,000.

CHART II-1

CITY OF CELINA

Historical and Forecast Population

	Population	Increase	Ave Annual Percent
2010 [1]	6,028		
2015 [1]	7,690	1,662	5.0%
2020 [2]	25,868	18,178	27.5%
2030 [3]	48,000	22,132	6.4%

[1] - US Census
[2] - Per Staff
[3] - Celina 2013 Comprehensive Plan

It is important to note that these projections are always subject to shifts due to multiple factors beyond the City's control.

Water and Wastewater Customers and Meters – Test Year & Ten-Year Forecast

Table II-2 and **Chart II-3** present total historical and forecast water accounts for the City. For each of the historical years, the average number of accounts for the year is shown and the growth reflects the difference from one fiscal year end to the next. The charts reveal that in 2016 and 2017 the City experienced growth of approximately 590 and 820 accounts, respectively. The project team is forecasting that account growth will continue in future years but at a lesser rate. The forecast projects that the test year 2018 total of **5,090** total water accounts will increase to **12,795** total water accounts by 2027.

The charts further reveal that residential accounts represent the largest water customer class, at 3,611 accounts in the test year 2018.

TABLE II-2

CITY OF CELINA

FORECAST TOTAL CUSTOMERS

Fiscal Year	Residential	Residential Outside	Commercial	Commercial Outside	Total
FY 2015	2,477	593	219	24	**3,313**
FY 2016	2,760	892	223	24	**3,899**
FY 2017	3,320	1,131	239	27	**4,717**
12 Mo. Apr '18	3,611	1,211	241	28	**5,090**
FY 2019	4,418	1,481	295	34	**6,228**
FY 2020	5,308	1,779	354	40	**7,482**
FY 2021	5,901	1,978	394	45	**8,318**
FY 2022	6,495	2,177	433	49	**9,155**
FY 2023	7,076	2,372	472	54	**9,974**
FY 2024	7,629	2,558	509	58	**10,754**
FY 2025	8,141	2,729	543	62	**11,476**
FY 2026	8,596	2,882	574	65	**12,117**
FY 2027	9,077	3,043	606	69	**12,795**
FY 2016	283	299	4	-	**586**
FY 2017	560	239	16	3	**818**
12 Mo. Apr '18	291	80	2	1	**373**
FY 2019	807	271	54	6	**1,138**
FY 2020	889	298	59	7	**1,253**
FY 2021	593	199	40	5	**836**
FY 2022	594	199	40	5	**837**
FY 2023	581	195	39	4	**819**
FY 2024	554	186	37	4	**781**
FY 2025	512	172	34	4	**721**
FY 2026	455	153	30	3	**641**
FY 2027	481	161	32	4	**677**

CHART II-3

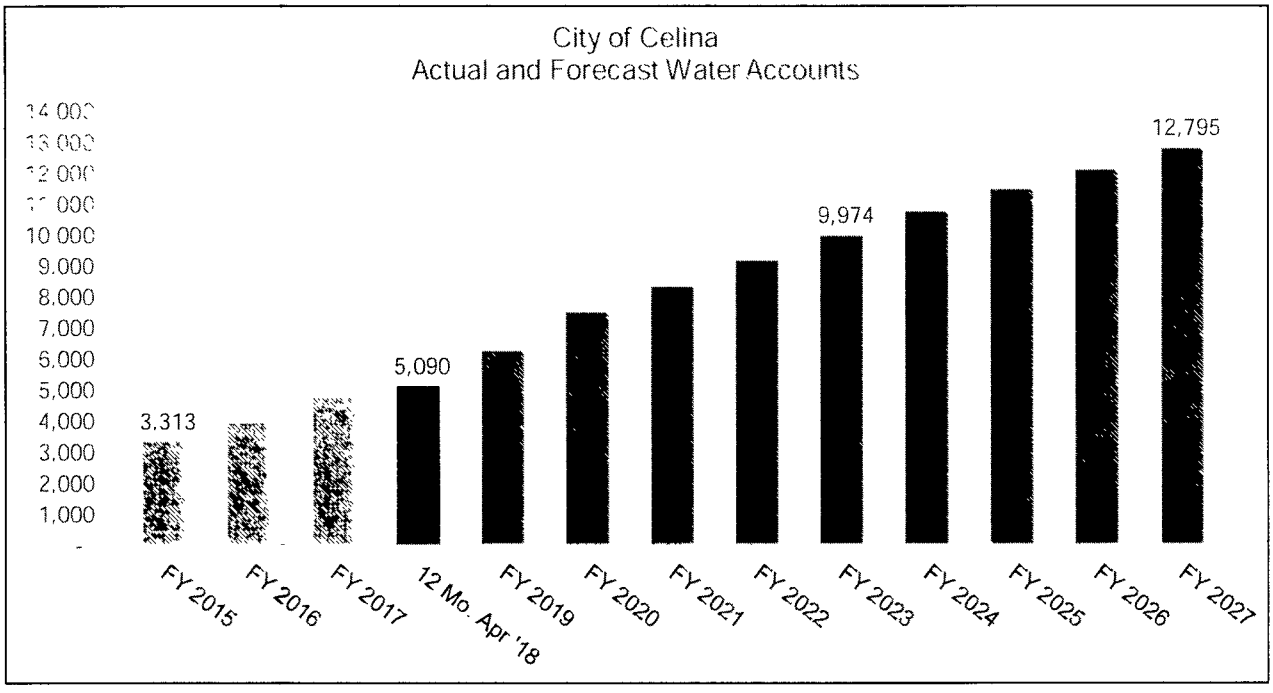


Table II-4 and **Chart II-5** present wastewater accounts and classifications for the City for the past three fiscal years and the forecast growth over the next ten years. The tables reveal that the City's total wastewater accounts of **4,356** in FY 2018 are forecast to increase to **10,945** by FY 2027.

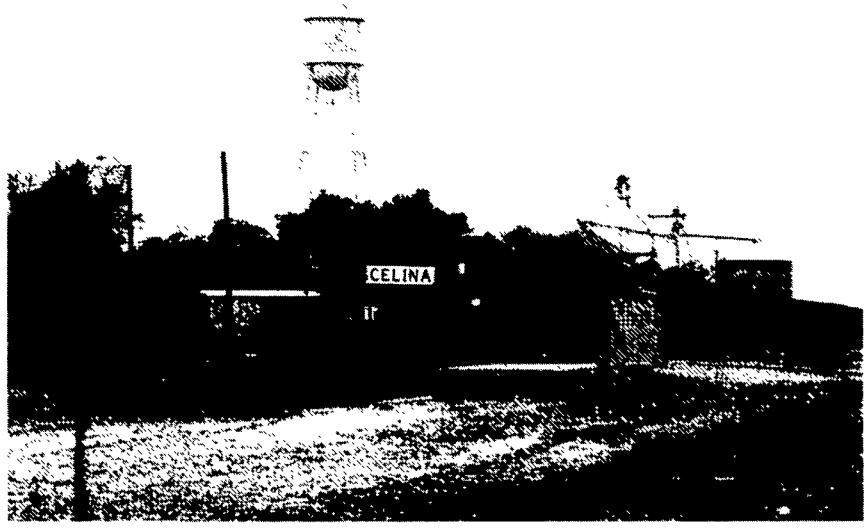


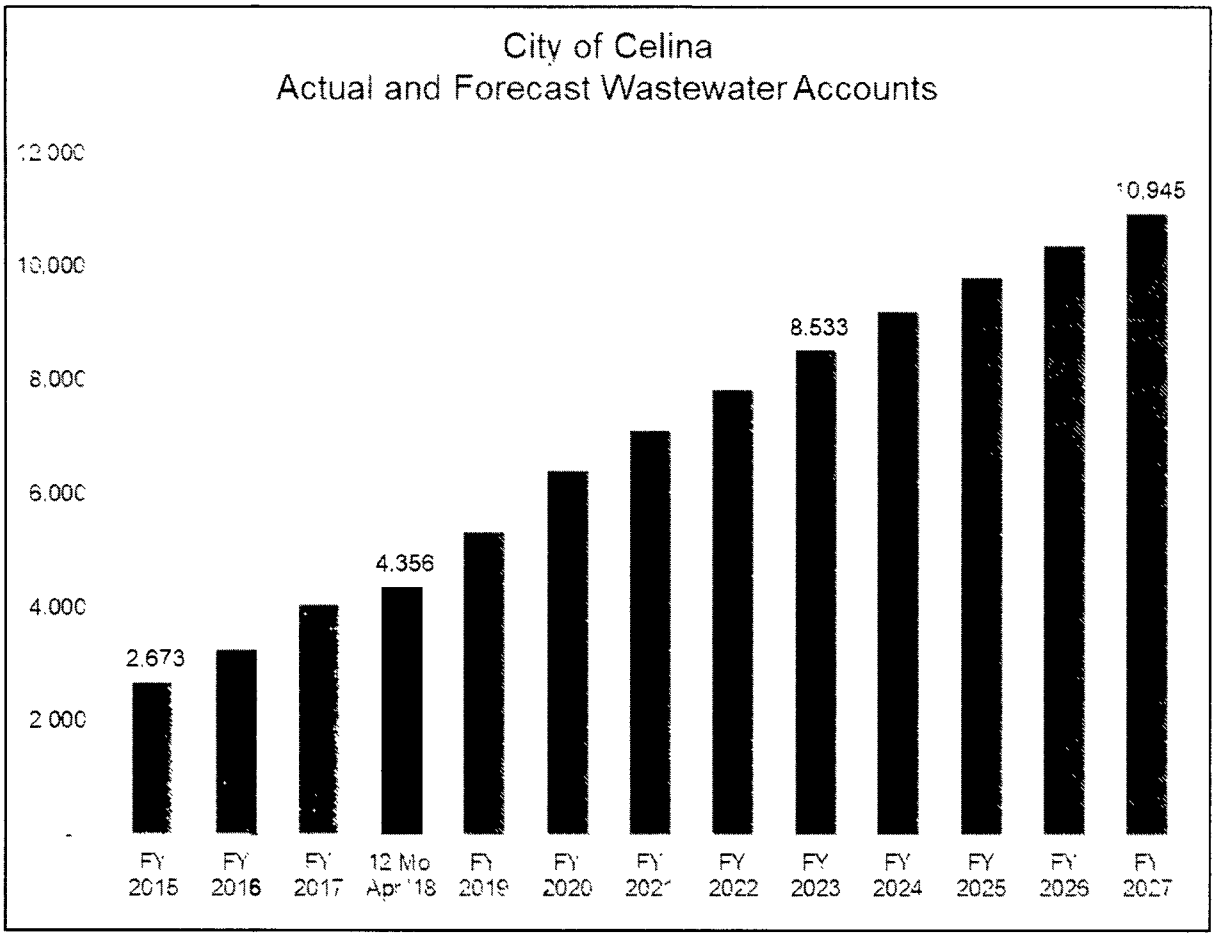
TABLE II-4

CITY OF CELINA

FORECAST TOTAL CUSTOMERS
WASTEWATER Customer Classes

	Residential	Residential Outside	Commercial	Commercial Outside	Total
WASTEWATER Total Customers					
FY 2015	2,540	1	131	1	**2,673**
FY 2016	3,118	1	129	1	**3,249**
FY 2017	3,930	1	130	1	**4,062**
12 Mo. Apr '18	4,208	1	146	1	**4,356**
FY 2019	5,148	1	179	1	**5,329**
FY 2020	6,184	1	215	1	**6,401**
FY 2021	6,876	1	239	1	**7,116**
FY 2022	7,568	1	263	1	**7,832**
FY 2023	8,244	1	286	1	**8,533**
FY 2024	8,890	1	308	1	**9,200**
FY 2025	9,486	1	329	1	**9,817**
FY 2026	10,016	1	348	1	**10,366**
FY 2027	10,576	1	367	1	**10,945**
WASTEWATER Annual New Customers					
FY 2016	578	-	(2)	-	**576**
FY 2017	812	-	1	-	**813**
12 Mo. Apr '18	278	-	16	-	**294**
FY 2019	941	-	33	-	**973**
FY 2020	1,036	-	36	-	**1,072**
FY 2021	691	-	24	-	**715**
FY 2022	692	-	24	-	**716**
FY 2023	677	-	23	-	**700**
FY 2024	645	-	22	-	**668**
FY 2025	596	-	21	-	**617**
FY 2026	530	-	18	-	**549**
FY 2027	560	-	19	-	**579**

CHART II-5



Historical and Forecast Water Consumption

Total water system consumption data was analyzed over the same period as customer data. The project team prepared a ten-year forecast of water usage based on the same principles on which customer accounts were projected.

Chart II-6 presents test year water consumption by defined customer class. Residential presents the highest percentage of usage (approximately 58%), but the City's outside residential and commercial class accounts make up approximately 40% (19% each) of the total gallons sold.

Chart II-7 presents the average monthly consumption by customer class in the Test Year. Residential customers' water usage averages approximately 6,700 gallons per month.

Chart II-6

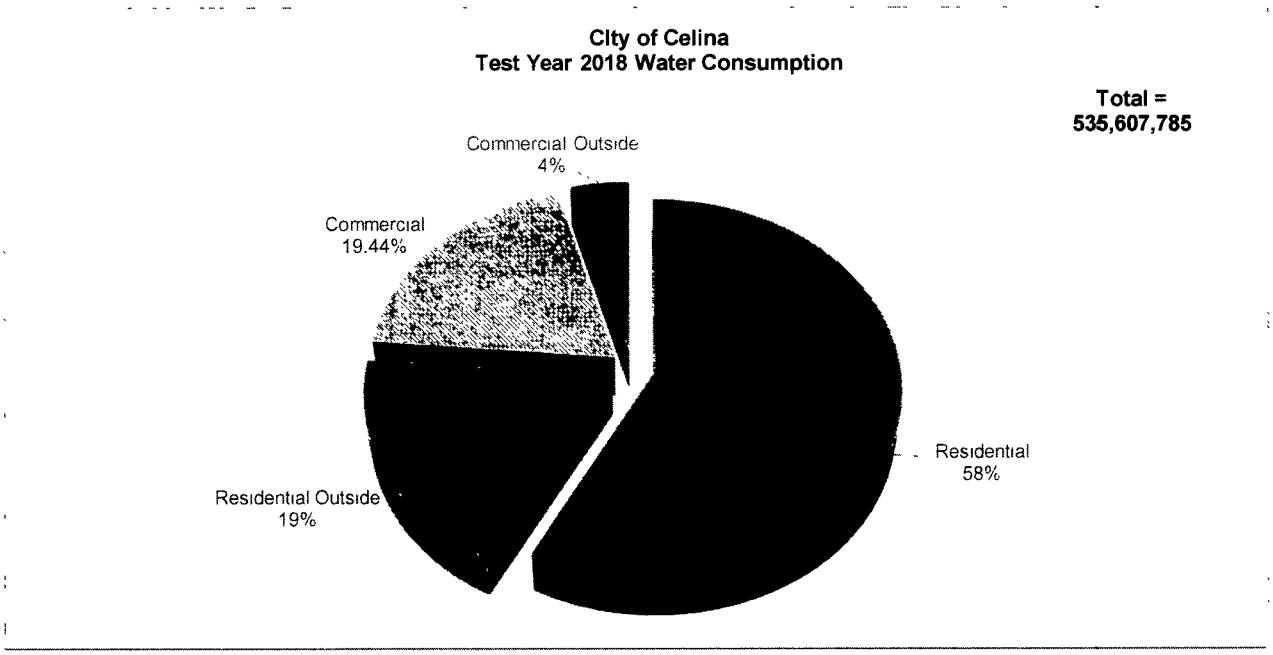


CHART II-7

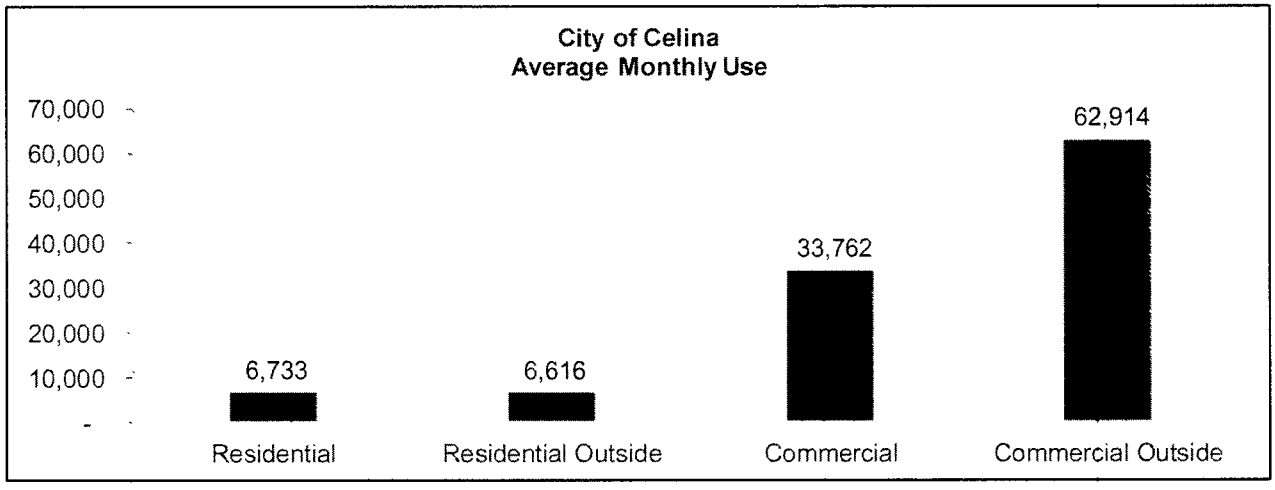


Table II-8 and **Chart II-9** which present consumption by rate classification for the City for the past three fiscal years and the forecast growth over the next ten years.

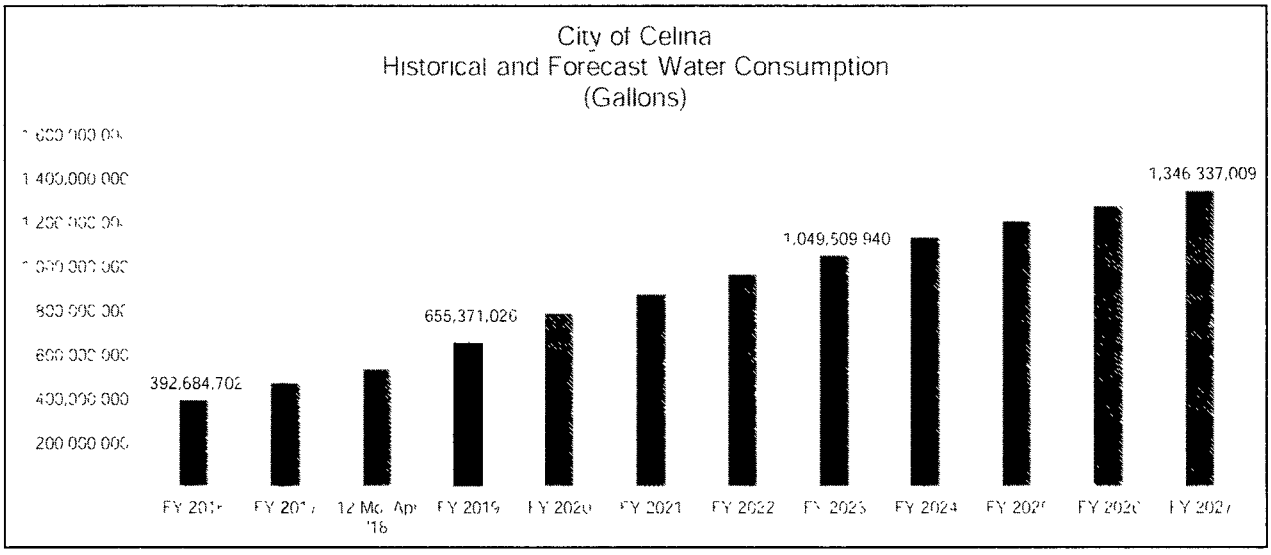
TABLE II-8

CITY OF CELINA

FORECAST BILLED CONSUMPTION

	Residential	Residential Outside	Commercial	Commercial Outside	Total
FY 2015	206,962,840	47,836,504	73,571,984	10,199,400	**332,570,728**
FY 2016	226,356,251	69,370,331	86,681,720	10,076,400	**392,684,702**
FY 2017	258,318,532	85,140,618	101,681,500	26,425,200	**472,065,850**
12 Mo Apr '18	308,850,184	100,247,428	104,120,104	22,390,069	**535,607,785**
FY 2019	377,909,858	122,663,003	127,401,620	27,396,544	**655,371,026**
FY 2020	453,961,289	147,347,983	153,040,209	32,909,886	**787,259,368**
FY 2021	504,714,730	163,821,671	170,150,296	36,589,253	**875,275,950**
FY 2022	555,499,694	180,305,592	187,271,011	40,270,905	**963,347,202**
FY 2023	605,184,143	196,432,305	204,020,718	43,872,775	**1,049,509,940**
FY 2024	652,546,384	211,805,269	219,987,558	47,306,296	**1,131,645,508**
FY 2025	696,319,686	226,013,326	234,744,488	50,479,638	**1,207,557,138**
FY 2026	735,244,392	238,647,612	247,866,852	53,301,482	**1,275,060,338**
FY 2027	776,345,014	251,988,163	261,722,764	56,281,068	**1,346,337,009**

CHART II-9



Peaking Factors

The cost of providing water to customers depends not only on the amount of water each class uses, but also on how that usage occurs over time. The maximum-day and maximum-hour peaking requirements of a water utility's customers are an important influence on the utility's costs. Because water utilities attempt to meet all the demands of their customers, water systems are sized to meet customers' peak requirements. Therefore, during off-peak periods, there are usually significant costs associated with the unused capacity of the system. These costs must be

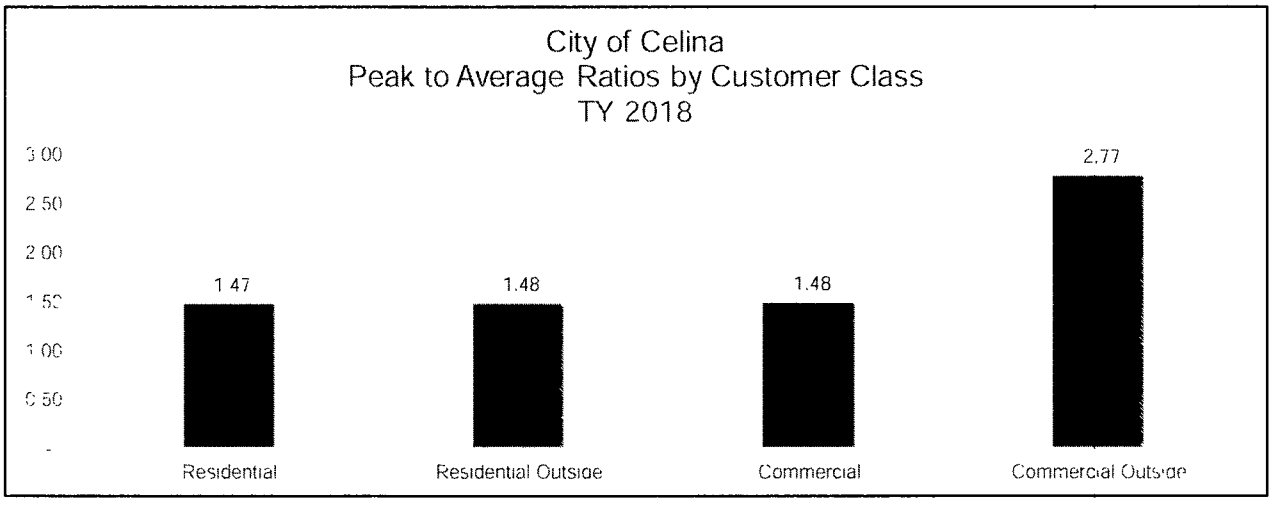
allocated to customers in proportion to the contribution of each customer class to the system peak, to develop equitable cost-based rates. Thus, it is necessary to determine the peak rate of use relative to the average rate of use for each class. This ratio is called a ***Peaking Factor***.

The consumption data by class provided by the City was utilized in the rate model to calculate the peak day factor and peaking factors for individual rate classes.

The calculation of peaking factors for individual classes relies on available pumping and consumption information as well as professional judgment. If customer meters could record daily flow rates for each customer, more refined information could be obtained on peaking factors. This is not feasible because of the enormous cost that would be imposed on the utility. Therefore, it is accepted practice in the water industry to develop peaking factor estimates based on standard formulas using system peak day information and monthly customer class usage records. This is a conservative methodology, since customer class peaking factors based on peak months will inevitably be lower than the system-wide peaking factor, which is based on the peak day.

Based on AWWA guidelines, the customer class peaking factors calculated in this study are for non-coincidental peaks. The peaking factors developed for this analysis are based on the annualized water consumption by customer class for the months of May 2017 through April 2018. The calculations of the peaking factors by class are presented graphically in **Chart II-10**.

CHART II-10



A general ratemaking rule is that **the higher the peak to average ratio, the higher the unit cost of service for a given customer class.** While this is not an absolute rule, it is a good general indicator as to which customer classes are incurring the greatest costs to provide service. This principle will be examined more thoroughly in Section III.

The chart reveals that the highest peak to average ratio is for the **Commercial Outside** customer class. Also, it is notable that at this time the residential and commercial peak to average ratios are equivalent. This may change as more commercial development enters the City in the coming decade.

Historical and Forecast Wastewater Flows

The City currently calculates wastewater charges for all customers based on their total volume of water consumption. The wastewater charges for Single-Family Residential customer class is capped at 14,000 gallons water consumption per month.

As with water billed consumption, the project team prepared a ten-year forecast of wastewater billing units. Since individual customer wastewater flow is not metered, it is derived from the water consumption figures for each customer class. The billing unit forecast is derived using anticipated growth in accounts as depicted in Table II-4. The results of the forecast are presented in **Table II-11** and **Chart II-12**.

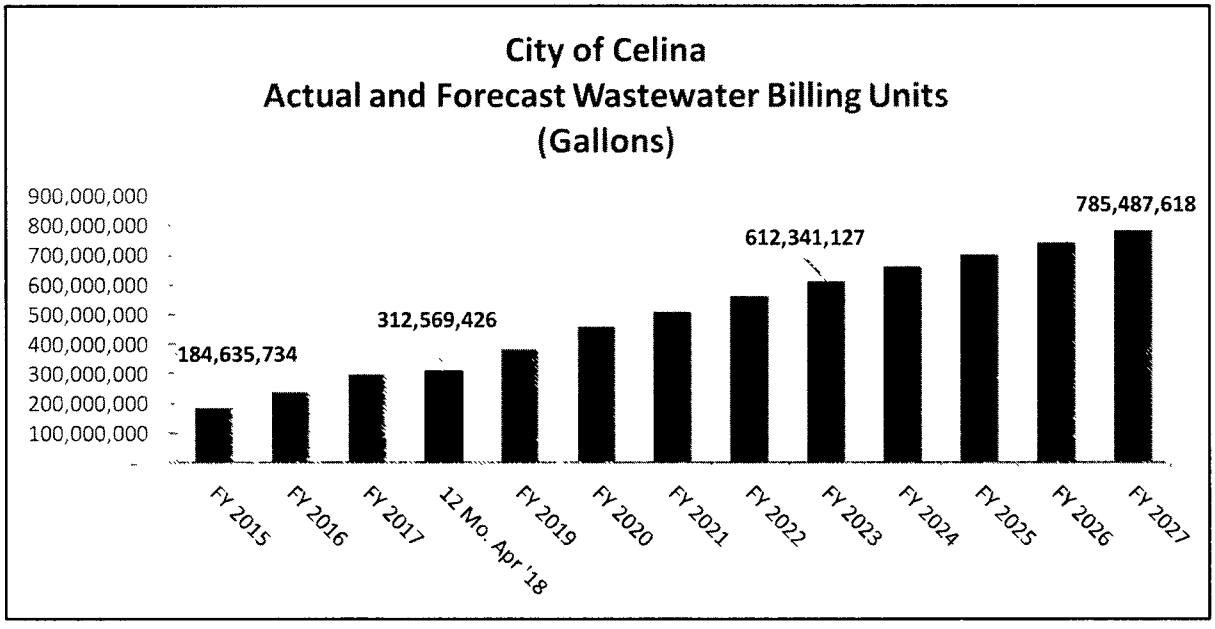
TABLE II-11

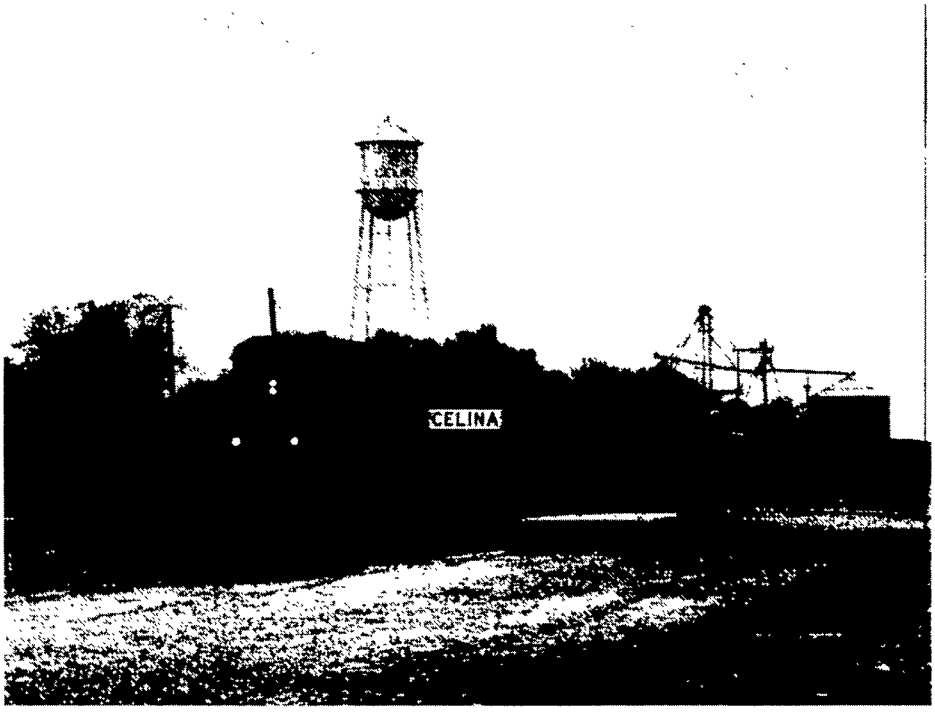
CITY OF CELINA

FORECAST WASTEWATER BILLING UNITS
WASTEWATER Customer Classes

	Residential	Residential Outside	Commercial	Commercial Outside	Total
	WASTEWATER Historical Billing Units				
FY 2015	168,638,444	156,100	15,748,990	92,200	**184,635,734**
FY 2016	217,345,047	86,100	20,605,360	92,600	**238,129,107**
FY 2017	276,165,029	72,600	21,126,552	74,400	**297,438,581**
	WASTEWATER Forecast Billing Units				
12 Mo. Apr '18	288,193,448	76,000	24,239,678	60,300	**312,569,426**
FY 2019	352,634,224	76,000	29,659,731	60,300	**382,430,254**
FY 2020	423,599,130	76,000	35,628,521	60,300	**459,363,951**
FY 2021	470,958,042	76,000	39,611,835	60,300	**510,706,177**
FY 2022	518,346,371	76,000	43,597,622	60,300	**562,080,293**
FY 2023	564,707,790	76,000	47,497,037	60,300	**612,341,127**
FY 2024	608,902,316	76,000	51,214,197	60,300	**660,252,813**
FY 2025	649,747,940	76,000	54,649,684	60,300	**704,533,924**
FY 2026	686,069,257	76,000	57,704,635	60,300	**743,910,192**
FY 2027	724,420,958	76,000	60,930,360	60,300	**785,487,618**

CHART II-12

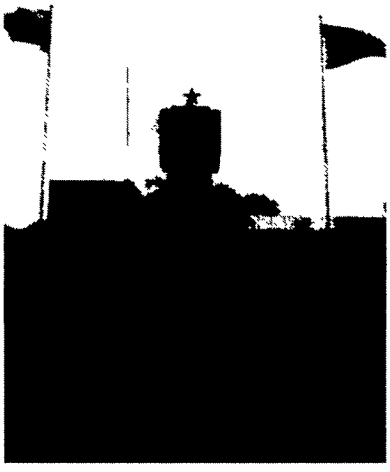

City of Celina
Actual and Forecast Wastewater Billing Units
(Gallons)
900,000,000
800,000,000
700,000,000
600,000,000
500,000,000
400,000,000
300,000,000
200,000,000
100,000,000
184,635,734
312,569,426
612,341,127
785,487,618
FY 2015
FY 2016
FY 2017
12 Mo. Apr '18
FY 2019
FY 2020
FY 2021
FY 2022
FY 2023
FY 2024
FY 2025
FY 2026
FY 2027


CELINA

Section III

SECTION III

Water & Wastewater Forecast Revenue Requirement



In this section of the water and wastewater rate study and long-term financial plan, the City of Celina's test year and forecast water and wastewater utility revenue requirements are developed. The test year consists of the City's current fiscal year, October 1, 2017 through September 30, 2018. The estimates presented in this section are based on the City's approved budget for FY 2018.

The calculation of a revenue requirement differs from a utility's budget in that it represents only that amount that must be raised through the City's user rates. This means that non-rate revenue (such as reconnection fees, late payment charges and interest) must be subtracted from the budgeted operating and capital expenditures to determine the net revenue requirement to be raised from rates.

As is typical for publicly owned utilities, the City of Celina's system revenue requirements were developed using the cash basis of ratemaking. Under the cash basis, as defined by the AWWA Manual M-1, system revenue requirements consist of cash expenditures and other financial commitments (such as debt service coverage or reserves) that must be met through system operating revenues and other revenue sources.

All data used in the development of the revenue requirements was obtained from the financial statements, budgets and other information provided by the City. Calculation summaries are presented in the rate model summaries contained in **Appendix A** of this report. For rate design purposes, revenue requirements are developed separately for the water and wastewater systems.

The assumptions utilized in this expense forecast will be thoroughly detailed in this section of the report. These assumptions are critical to the development of both the revenue requirement and the ultimate rate recommendation. The project team reviewed these assumptions with the City staff and considers all to be consistent with staff recommendations.

In this section, current and forecast Operating Costs, Capital Outlays, Transfers, and Debt Service will be examined first. Non-rate revenues will be subtracted from the total to yield the Net Revenue Requirement.

Operating Expenses and Capital Outlays – Test Year

Table III-1 summarizes the test year FY 2018 water system operating expenses and capital outlays in detail by department. **Table III-2** presents the test year FY 2018 operating expenses and capital outlays in detail by department for the wastewater system.

The City's Water and Sewer Enterprise Fund accounts for all water, sewer and utility billing functions, including administration, operation and maintenance of the water and sewer system and billing and collection activities. There are three (3) Cost Centers within the City's Utility Fund, each with their own budget. Each of the Cost Centers typically includes some or all of the expense categories of Personnel Services, Materials and Supplies, Contractual & Professional, Sundry, Reimbursements, and Capital Outlays. Other Non-Departmental expenses and Transfers are shown outside of these Cost Centers but in the Fund budget.

The City's budget has the following expense categories in each Cost Center:

- **Personnel Services -** includes personnel salaries and benefits
- **Contractual Services** – includes water and wastewater consultant and contractor financial and engineering services
- **Materials and Supplies** – Office supplies, IT software/hardware, tools and chemicals
- **Maintenance** – refers to costs related to maintenance and fuel for vehicles and facilities and sludge removal
- **Utilities** – includes costs for electric and gas services and phone service
- **Operation and Capital Outlays** – includes Upper Trinity Regional Water District Fees for purchased water and fees charged for conveyance and treatment of wastewater and capital outlays. Note: the rate model separates UTRWD costs into a distinct line item
- **Non – Departmental** – primarily transfers the Water and Sewer Funds allocated share of expenses to other internal funds, including the General Fund.

Tables III-1 and **III-2** also allocate total budget expenses between the water and wastewater functions based on general ratemaking principles. As the tables show, total operating expenses, and capital outlays in the test year are **$4,680,570** for the water utility and **$3,449,877** for the wastewater utility.

TABLE III-1

CITY OF CELINA [redacted]

SCENARIO: 2018 11 14 Scenario 1 -- Status Quo

Department Code		Net Budget	Treatment	Distribution	Admin	Customer Billing
	Operating & Maintenance					
1	Personnel Svcs	$ 860,891	$ -	$ 742,609	$ -	$ 118,282
2	Contractual	26,149	-	20,000	-	6,149
3	Materials & Supplies	658,400	-	658,400	-	-
4	Operations	164,509	16,000	139,000	-	9,509
5	Utilities	237,864	-	227,499	-	10,365
UTRWD-W	Upper Trinity Regional Water District- Water	2,111,200	2,111,200	-	-	-
	Total Operating & Maintenance	**4,139,331**	**2,127,200**	**1,826,858**	**-**	**185,273**
	Transfers	**359,415**	**-**	**-**	**359,415**	**-**
	Capital Outlays	**181,823**	**-**	**181,823**	**-**	**-**
	Total WATER Operating Expenses, Transfers and Capital Outlays	**$ 4,680,570**	**$ 2,127,200**	**$ 2,008,681**	**$ 359,415**	**$ 185,273**

TABLE III-2

CITY OF CELINA [redacted]

SCENARIO: 2018 11 14 Scenario 1 -- Status Quo

Department Code		Net Budget	Treatment	Collection	Admin	Customer Billing
	Operating & Maintenance					
1	Personnel Svcs	$ 491,035	$ -	$ 422,734	$ -	$ 68,301
2	Contractual	200,051	-	196,500	-	3,551
3	Materials & Supplies	71,000	-	71,000	-	-
4	Operations	215,991	-	210,500	-	5,491
5	Utilities	81,985	-	76,000	-	5,985
UTRWD-W	Upper Trinity Regional Water District- Sewer	2,054,363	2,009,037	45,326	-	-
	Total Operating & Maintenance	**3,164,382**	**2,009,037**	**1,048,360**	**-**	**106,985**
	Transfers	**167,585**	**-**	**-**	**167,585**	**-**
	Capital Outlays	**117,911**	**-**	**117,911**	**-**	**-**
	Total WATER Operating Expenses, Transfers and Capital Outlays	**$ 3,449,877**	**$ 2,009,037**	**$ 1,166,271**	**$ 167,585**	**$ 106,985**

Operating Expenses and Capital Outlays – Ten Year Forecast

Table III-3 and **Chart III-4** present the water and wastewater utility operating expense and capital outlay forecast for the five-year period FY 2018 – FY 2022. Details behind these calculations can be found in the rate model summarized in **Appendix A**. This forecast is based on the following set of assumptions:

- Most operating costs are expected to increase at an annual rate of 3%, which is approximately equivalent to the rate of inflation.
- Certain expenses will increase at above-inflation rates, to reflect the rapid rate of increase of these costs. These expenses include chemicals, workers' compensation, Medicare and insurance.
- The City of Celina staff provided guidance on inflation factors used in their budgetary forecasts and these same factors were applied within the rate model.
- The City anticipates adding approximately eight employees during the forecast period. Two are utility billing personnel; two are water department personnel; and four are wastewater department personnel.
- Utility Billing Costs are distributed to water, solid waste and wastewater based on FY 2018 revenue budgeted for each department.
- As shown in these charts, UTRWD charges are by far the largest annual expense paid by Celina's water and wastewater utilities. The project team utilized UTRWD's most recent budgeted rate forecast as the basis for the UTRWD cost estimates. **Any changes in UTRWD forecast rate estimates used in determining the City's water and wastewater revenue requirement for this rate study could require significant changes to the rate plan presented in this report.**
- Transfer to General Fund for General and Administrative – This amount is budgeted to be $352,000 in the test year FY 2018 and is forecast to increase by approximately 3.0% per year.
- Additional Water/Sewer Revenue Transfer for 175,000 in the test year. This too is escalated by 3% per year.

TABLE III-3

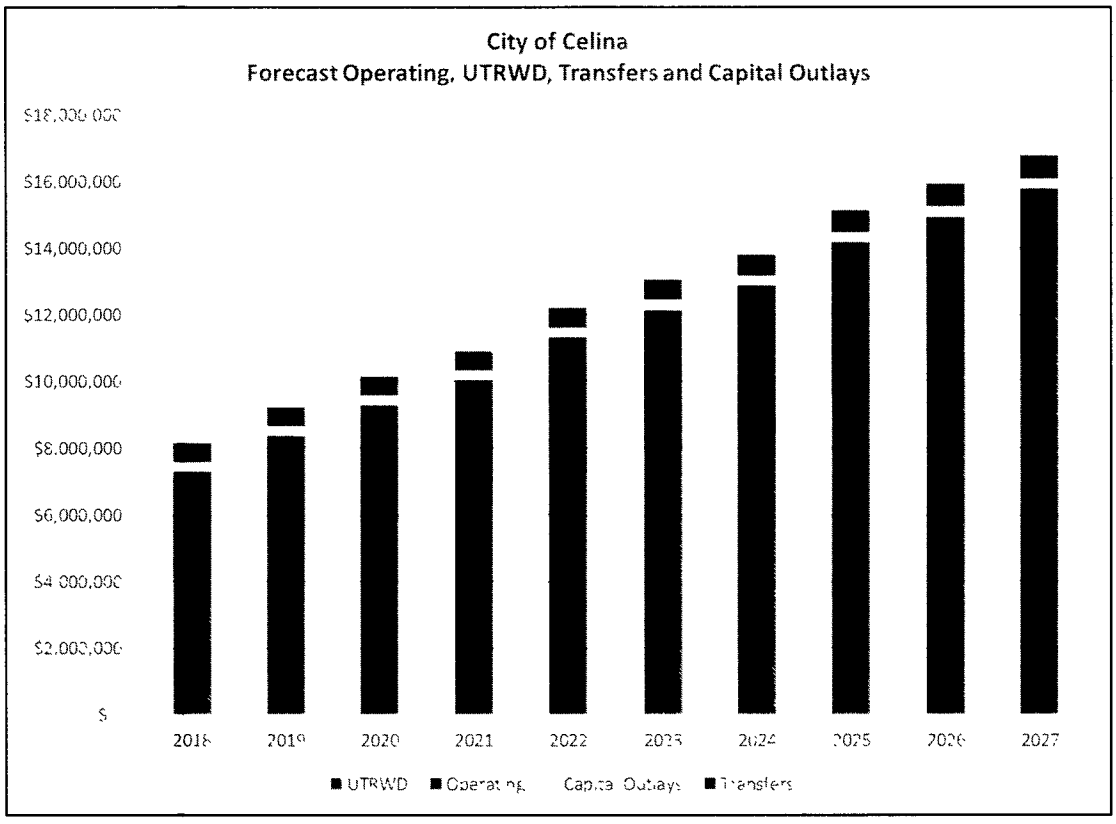
CITY OF CELINA

[redacted]

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

	Operating Expenses	UTRWD Payments	Capital Outlays	Transfers & Contingencies	Total Operating/ Capital Outlays
[redacted]					
2018	$ 2,028,131	$ 2,111,200	$ 181,823	$ 359,415	**$ 4,680,570**
2019	2,102,146	2,841,778	181,823	370,198	**5,495,944**
2020	2,267,259	3,246,517	181,823	381,304	**6,076,903**
2021	2,410,800	3,548,227	181,823	392,743	**6,533,593**
2022	2,532,400	4,370,998	181,823	404,525	**7,489,747**
2023	2,626,984	4,716,766	181,823	416,661	**7,942,234**
2024	2,725,720	5,068,882	181,823	429,160	**8,405,585**
2025	2,828,826	5,981,962	181,823	442,035	**9,434,647**
2026	2,936,540	6,366,659	181,823	455,296	**9,940,318**
2027	3,049,110	6,777,020	181,823	468,955	**10,476,908**
[redacted] Revenue Requirement					
2018	$ 1,110,019	$ 2,054,363	$ 117,911	$ 167,585	**$ 3,449,877**
2019	1,155,702	2,286,905	117,911	172,612	**3,733,130**
2020	1,217,802	2,552,716	117,911	177,791	**4,066,219**
2021	1,319,844	2,753,412	117,911	183,124	**4,374,292**
2022	1,450,513	2,964,499	117,911	188,618	**4,721,541**
2023	1,625,247	3,182,731	117,911	194,277	**5,120,165**
2024	1,687,926	3,404,162	117,911	200,105	**5,410,104**
2025	1,757,817	3,624,223	117,911	206,108	**5,706,060**
2026	1,826,298	3,837,846	117,911	212,291	**5,994,346**
2027	1,897,987	4,069,818	117,911	218,660	**6,304,376**
[redacted] Revenue Requirement					
2018	$ 3,138,150	$ 4,165,563	$ 299,734	$ 527,000	**$ 8,130,447**
2019	3,257,848	5,128,683	299,734	542,810	**9,229,074**
2020	3,485,061	5,799,233	299,734	559,094	**10,143,122**
2021	3,730,644	6,301,639	299,734	575,867	**10,907,884**
2022	3,982,913	7,335,497	299,734	593,143	**12,211,287**
2023	4,252,231	7,899,497	299,734	610,937	**13,062,399**
2024	4,413,645	8,473,044	299,734	629,266	**13,815,689**
2025	4,586,644	9,606,185	299,734	648,144	**15,140,706**
2026	4,762,838	10,204,505	299,734	667,588	**15,934,664**
2027	4,947,097	10,846,837	299,734	687,615	**16,781,284**

CHART III-4



Upper Trinity Regional Water District (UTRWD)

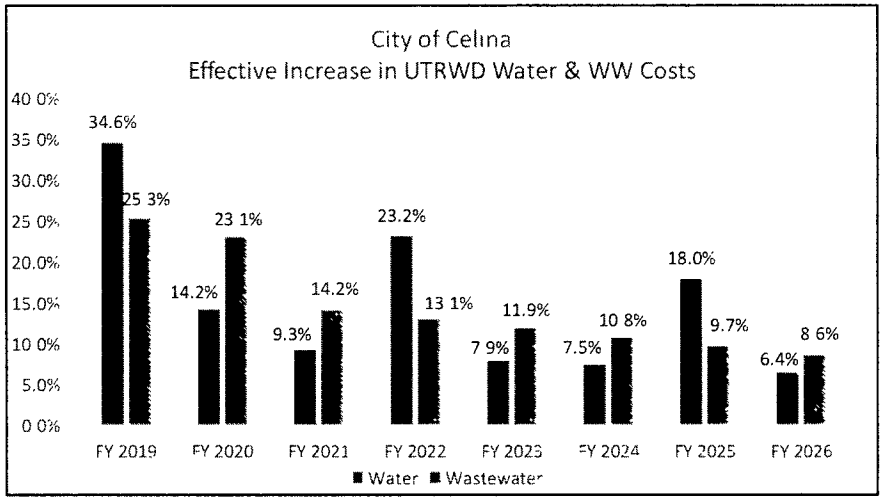
As stated above, a primary component of the City's operating budget is its contractual agreement for treated water service from UTRWD. The project team obtained recent correspondence from UTRWD regarding their preliminary forecasts of the future cost of service. Each year UTRWD updates its forecast of operating and capital expenses, with new rates adopted by the UTRWD Board of Directors in September. UTRWD's preliminary forecast reveals an expected graduated series of rate increases over the next several years as it builds additional infrastructure, develops additional water sources, and expands its operations. These actions will require that the District incur sizable capital outlays and new bond issues which will be factored into the rates charged to customers.

The City also sends a portion of its wastewater flows to UTRWD for treatment. UTRWD maintains wastewater treatment plants and a transmission system utilized in conveying and treating Celina wastewater flows. The respective flows and varying cost projections for each of these wastewater system components were factored into the cost projections for wastewater treatment and transmission in the rate model.

The volume charge for water from the UTRWD in FY 2018 is $1.23 per thousand gallons. The UTRWD annual demand charge is $428,200 per MGD. Both charges are forecast to increase by 5% annually in 2019 and 2020, and 3.5% in 2021 – 2027. The project team estimated that wastewater rates will increase annually by 3% for inflation. **Chart III-5** presents the forecast percent increases in UTRWD's water and wastewater charges paid by Celina for

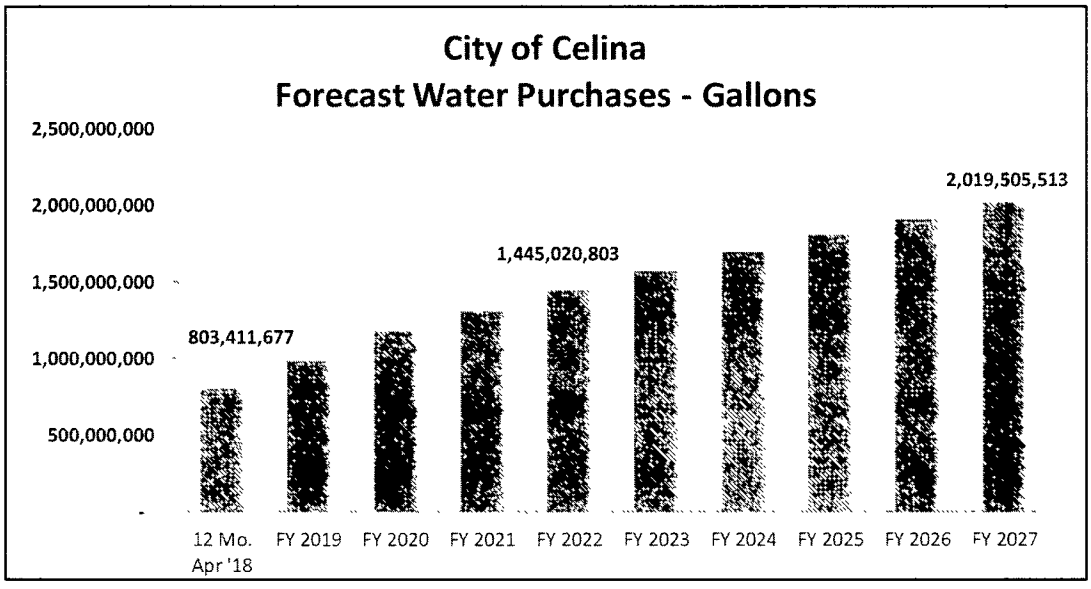
the next decade. Importantly, these increases do not just reflect cost increases by NTMWD; they also incorporate Celina's forecast growth in demand. It should also be noted that Celina's contract water demand is assumed to increase by 1.0 MGD in 2019, 2022, and 2025.

CHART III-5



The forecast water purchases from UTRWD are presented in **Chart III-6**. Based on current account growth estimates, water purchases from UTRWD are expected to increase from approximately 800 million gallons in the year ending April 2018 to over 2 billion in fiscal year ending 2027.

CHART III-6



Capital Improvement Plan

The City has developed a comprehensive capital improvement plan ("CIP") for its water and wastewater system. The plan includes estimates for infrastructure capital improvements for the ten-year (2018 – 2027) rate study financial planning period. This plan includes an aggressive list of projects required to meet utility service needs for communities like Celina with high growth forecasts in number of accounts and water/wastewater demands. The water CIP includes storage, pumps and distribution lines expansion, repairs and upgrades. The wastewater CIP includes wastewater treatment and collection system expansion and upgrades to infrastructure. In developing a ten-year financial forecast, the project team used the totals provided by the City to determine an overall estimate for capital spending needs for the decade. This total CIP for the next ten years is $164 million, presented in **Table III-7**.

TABLE III-7

CITY OF CELINA
CAPITAL IMPROVEMENT PLAN
FUNDING THROUGH NEW BOND ISSUES

30" and 36" Discharge Line from RR to DTPS	$ 8,000,000
New 6 MG GST at CRPS	7,000,000
30" and 24" Discharge Line from RR to DTPS	5,600,000
CRPS Improvements	5,500,000
Coit Rd 2 MGD Water Tower Construction	5,400,000
24" Line to increase capacity in the Low pressure plane	5,340,000
Downtown Water Improvements	5,250,000
18" and 24" to Morgan Lakes	4,800,000
CRPS & Downtown Pump Station - Phase 1	4,500,000
30" and 24" Parallel Line from DTPS to Sunset	3,500,000
Other Capital Improvement Projects	16,456,000
Total Water Projects	**$ 71,346,000**
WASTEWATER PROJECTS	
30", 36", 42", 60" Interceptor from Downtowm to WWT	$ 20,000,000
Downtown WWTP Upgrade to .95 MGD	13,700,000
WWTP 3 MGD	12,000,000
WWTP 2 MGD	11,000,000
Construct 15"- 30" interceptor Doe Branch to CR 51	6,000,000
Downtown WW Improvements	5,250,000
21" line from Dallas Pkwy to Preston	5,000,000
Construct 10" - 21" interceptor Doe Branch to CR 83	3,200,000
18" line adding capacity for Downtown	3,066,000
Bus 289 Sewer line	3,000,000
Other Capital Improvement Projects	7,821,000
Total Wastewater Projects	**$ 92,937,000**
Total Water and Wastewater Projects	**$ 164,283,000**

Existing and Forecast Debt Service

Table III-8 presents current and forecast debt service for the water and wastewater utility. At present the water and wastewater utility has ten bond issues outstanding with principal totaling over $28 million. The outstanding bond principal is for debt that was issued between 2004 and 2017. This debt is a combination of Certificates of Obligation (CO) and General Obligation (GO) bonds.

In 2018 the City intends to issue an additional $32 million of debt to pay for CIP projects. The City expects to issue another $129 million in debt over the next decade to finance the balance of the water and wastewater CIP. These assumptions are consistent with City staff's desires and with the City's intention to fund all capital improvements through debt.

TABLE III-8

CITY OF CELINA

CURRENT AND FORECAST DEBT SERVICE

SCENARIO: 2018 09 06 Scenario 1 -- Status Quo

			Wastewater		
Year	Current	Forecast	Current	Forecast	Total
TY 2018	$ 1,313,274	$ -	$ 907,720	$ -	**$ 2,220,995**
FY 2019	1,319,470	1,187,714	912,003	923,778	**4,342,966**
FY 2020	1,321,713	1,187,714	913,553	923,778	**4,346,759**
FY 2021	1,319,211	3,167,239	911,824	1,913,540	**7,311,814**
FY 2022	1,320,325	3,167,239	912,594	1,913,540	**7,313,698**
FY 2023	1,318,293	4,025,032	911,189	3,365,191	**9,619,706**
FY 2024	1,323,037	4,025,032	914,468	3,365,191	**9,627,729**
FY 2025	1,134,909	4,420,937	784,437	5,080,779	**11,421,062**
FY 2026	1,137,219	4,420,937	786,033	5,080,779	**11,424,969**
FY 2027	1,132,256	4,552,906	782,603	6,070,541	**12,538,306**

Non-Rate Revenues

Although rate revenues constitute the majority of the revenue received by the City of Celina for water and wastewater service, a certain amount of revenue is accrued from non-rate sources. These revenues include connection fees, miscellaneous charges, permit fees, testing fees, construction water and other fees. These non-rate revenues are subtracted from the overall budget to determine the revenue requirement to be raised from rates. **Note:** a substantial portion of non-rate revenues come from water and wastewater connection fees. These fees are expected to increase as the City's population grows. However, as the annual growth in number of accounts begin to slow there is expected to be a corresponding reduction in annual revenue from connection fees.

Non-Rate Revenues not specifically and solely tied to either water or wastewater were allocated between the two utilities based on a 50/50 water wastewater allocation. Except for connection fees, non-rate revenues are projected to remain stable over the forecast period. Annual non-rate revenue totals are presented in **Table III-9.**

TABLE III-9

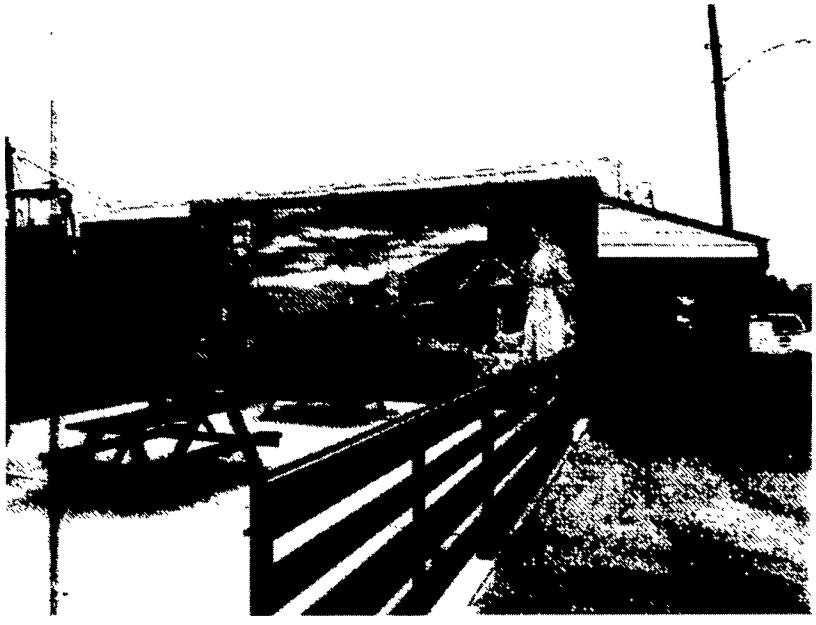
CITY OF CELINA

[redacted]

SCENARIO:

2018 09 06 Scenario 1 -- Status Quo

	[redacted]			[redacted]			Total
	Connection Fees	Other	Total	Connection Fees	Other	Total	Total
2018	$1,166,000	$ 509,083	**$1,675,083**	$ 891,000	$ 313,217	**$ 1,204,217**	**$ 2,879,300**
2019	1,166,000	509,083	**1,675,083**	891,000	313,217	**1,204,217**	**2,879,300**
2020	1,284,048	509,083	**1,793,131**	981,207	313,217	**1,294,424**	**3,087,555**
2021	856,918	509,083	**1,366,001**	654,815	313,217	**968,032**	**2,334,034**
2022	857,451	509,083	**1,366,534**	655,222	313,217	**968,439**	**2,334,973**
2023	838,870	509,083	**1,347,952**	641,023	313,217	**954,240**	**2,302,193**
2024	799,662	509,083	**1,308,744**	611,062	313,217	**924,279**	**2,233,024**
2025	739,066	509,083	**1,248,149**	564,758	313,217	**877,975**	**2,126,124**
2026	657,203	509,083	**1,166,286**	502,202	313,217	**815,419**	**1,981,705**
2027	693,941	509,083	**1,203,024**	530,276	313,217	**843,493**	**2,046,516**



Net Revenue Requirement

Table III-10 presents the test year and ten-year forecast for the City's net revenue requirement to be raised from rates for the water and wastewater utility for the test year 2017 and forecast period. The water and wastewater net revenue requirement is expected to increase from **$7,472,142** in FY 2018 to **$27,273,073** in FY 2027.

TABLE III-10

CITY OF CELINA

CURRENT AND FORECAST NET REVENUE REQUIREMENT

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

	Operating Expenses	Capital Outlays	Debt Service	Transfers & Contingencies	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
2018	$ 4,139,331	$ 181,823	$ 1,313,274	$ 359,415	**$ 5,993,844**	$ 1,675,083	**$ 4,318,761**
2019	4,943,924	181,823	2,507,185	370,198	**8,003,129**	1,675,083	**6,328,046**
2020	5,513,776	181,823	2,509,427	381,304	**8,586,330**	1,793,131	**6,793,199**
2021	5,959,027	181,823	4,486,450	392,743	**11,020,043**	1,366,001	**9,654,041**
2022	6,903,399	181,823	4,487,564	404,525	**11,977,310**	1,366,534	**10,610,777**
2023	7,343,750	181,823	5,343,325	416,661	**13,285,559**	1,347,952	**11,937,606**
2024	7,794,602	181,823	5,348,069	429,160	**13,753,654**	1,308,744	**12,444,910**
2025	8,810,788	181,823	5,555,847	442,035	**14,990,493**	1,248,149	**13,742,344**
2026	9,303,199	181,823	5,558,157	455,296	**15,498,475**	1,166,286	**14,332,189**
2027	9,826,129	181,823	5,685,162	468,955	**16,162,070**	1,203,024	**14,959,046**
	WASTEWATER Revenue Requirement						
2018	3,164,382	117,911	907,720	167,585	**4,357,598**	1,204,217	**3,153,381**
2019	3,442,607	117,911	1,835,781	172,612	**5,568,911**	1,204,217	**4,364,694**
2020	3,770,518	117,911	1,837,331	177,791	**5,903,551**	1,294,424	**4,609,127**
2021	4,073,256	117,911	2,825,364	183,124	**7,199,656**	968,032	**6,231,624**
2022	4,415,011	117,911	2,826,134	188,618	**7,547,675**	968,439	**6,579,235**
2023	4,807,977	117,911	4,276,380	194,277	**9,396,546**	954,240	**8,442,305**
2024	5,092,088	117,911	4,279,659	200,105	**9,689,764**	924,279	**8,765,484**
2025	5,382,040	117,911	5,865,215	206,108	**11,571,275**	877,975	**10,693,300**
2026	5,664,143	117,911	5,866,812	212,291	**11,861,158**	815,419	**11,045,739**
2027	5,967,805	117,911	6,853,144	218,660	**13,157,520**	843,493	**12,314,027**
	TOTAL Revenue Requirement						
2018	7,303,713	299,734	2,220,995	527,000	**10,351,442**	2,879,300	**7,472,142**
2019	8,386,530	299,734	4,342,966	542,810	**13,572,040**	2,879,300	**10,692,740**
2020	9,284,294	299,734	4,346,759	559,094	**14,489,881**	3,087,555	**11,402,325**
2021	10,032,283	299,734	7,311,814	575,867	**18,219,698**	2,334,034	**15,885,665**
2022	11,318,410	299,734	7,313,698	593,143	**19,524,985**	2,334,973	**17,190,012**
2023	12,151,728	299,734	9,619,706	610,937	**22,682,105**	2,302,193	**20,379,912**
2024	12,886,690	299,734	9,627,729	629,266	**23,443,418**	2,233,024	**21,210,394**
2025	14,192,829	299,734	11,421,062	648,144	**26,561,769**	2,126,124	**24,435,644**
2026	14,967,342	299,734	11,424,969	667,588	**27,359,633**	1,981,705	**25,377,928**
2027	15,793,934	299,734	12,538,306	687,615	**29,319,589**	2,046,516	**27,273,073**

Water Utility Cost Functionalization

Once the total water and wastewater system costs have been identified, the next step in the rate development process is to isolate the costs associated with each system function. Some of these expenditures are a function of base water demand; others are based on the peak demands placed on the system. Certain costs are associated with serving customers regardless of the volume of water use or wastewater discharge. The basic steps used to allocate the City's water revenue requirements include the following:

1. Each system's costs (revenue requirements) are categorized by utility function (i.e. treatment, distribution, administrative, customer). This process is known as *functionalization.*
2. Functionalized costs are classified based on the service characteristics or the types of demand served by the utility (base and maximum day). This process is known as *classification.*
3. Costs by service characteristic are allocated to customer classes in proportion to the service demands demonstrated by each class.

This three-step process allows for the allocation of system costs in the same terms as customer classes. The approaches described in this section follow standard industry practices. Water system costs are allocated to the following functions:

Treatment – the process by which raw water is converted to potable water

Distribution – the lines that carry water to individual customers' properties

Administration – miscellaneous overhead and other non-operating costs

Customer Billing – the processes involved in billing and providing other services to customers

The project team allocated operating budget line item expenses individually to system functions based on general guidelines, specific research and input from the City of Celina staff. The results of the allocation process for the test year are summarized in **Table III-11.**

TABLE III-11

CITY OF CELINA

[redacted]

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

Function	2018 Revenue Requirement	Percent
Treatment	$ 1,532,717	35 5%
Distribution	2,365,190	54 8%
Administration	258,970	6 0%
Customer	161,883	3 7%
Total	**4,318,761**	**100 0%**

Water Utility Cost Classification

The allocation of functionalized water system costs to service characteristics follows the base-extra capacity cost allocation method recommended by AWWA. Using this method, costs are segregated into the following categories:

Base costs – capital costs and O&M expenses associated with service to customers under average demand conditions. This category does not include any costs attributable to variations in water use resulting from peaks in demand. Base costs tend to vary directly with the total quantity of water used.

Maximum Day/Extra Capacity costs – costs attributable to facilities that are designed to meet peaking requirements. These costs include capital and operating charges for additional plant and system capacity beyond that required for average usage.

Customer Billing costs – costs associated with any aspect of customer service, including billing, accounting, and meter services. These costs are independent of the amount of water used and the size of the customer's meter and are not subject to peaking factors.

According to AWWA Manual M-1, in the base-extra capacity method, care must be taken in separating costs between those devoted to base capacity and those devoted to extra capacity. The peak to average factor is calculated by dividing the volume on the peak day of the year by the average daily volume. Facilities designed to meet maximum-day requirements, such as the treatment and distribution functions, are allocated 67% (2/3) to base, and 33% to extra capacity (Max Day). This means that facilities designed to meet maximum-day requirements, such as the treatment and distribution functions, are allocated 67% to base, and 33% to extra capacity.

All customer service-related costs are allocated 100% to customer billing. Administration costs are generally not directly-assignable to individual classifications. Therefore, it is standard rate-making practice to allocate these costs on an indirect basis to service characteristics.

The system-wide costs by service characteristic are shown in **Table III-12**. As with cost functionalization, these percentages are not expected to change significantly in the forecast period.

TABLE III-12

CITY OF CELINA

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

Function	2018 Revenue Requirement	Percent
Base	$ 2,782,775	64.43%
Maximum Day	1,391,387	32.22%
Customer	144,599	3.35%
Total	**4,318,761**	**100.0%**

Water Utility Cost Allocation

Allocation of costs by service characteristic to customer classes is based on the proportionate use levels of each characteristic by each class. The total water utility costs by customer class for the test year are summarized in **Table III-13** and for the ten-year forecast period in **Table III-14.**

TABLE III-13

CITY OF CELINA

[redacted]

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

Function	2018 Revenue Requirement	Percent
Residential	$ 2,420,035	56.0%
Residential Outside	790,984	18.3%
Commercial	794,755	18.4%
Commercial Outside	312,987	7.2%
Total	**4,318,761**	**100.0%**

TABLE III-14

CITY OF CELINA

[redacted]

SCENARIO: 2018 11 14 Scenario 1 -- Status Quo

Year	Residential	Outside	Commercial	Outside	Total
12 Mo. Apr '18	$ 2,420,035	$ 790,984	$ 794,755	$ 312,987	**$ 4,318,761**
FY 2019	3,545,946	1,158,987	1,164,511	458,602	**6,328,046**
FY 2020	3,806,596	1,244,180	1,250,111	492,313	**6,793,199**
FY 2021	5,409,681	1,768,145	1,776,574	699,642	**9,654,041**
FY 2022	5,945,791	1,943,372	1,952,636	768,978	**10,610,777**
FY 2023	6,689,286	2,186,382	2,196,804	865,135	**11,937,606**
FY 2024	6,973,555	2,279,295	2,290,160	901,900	**12,444,910**
FY 2025	7,700,578	2,516,921	2,528,919	995,927	**13,742,344**
FY 2026	8,031,100	2,624,952	2,637,465	1,038,674	**14,332,189**
FY 2027	8,382,361	2,739,761	2,752,821	1,084,103	**14,959,046**

Wastewater Utility Cost Functionalization and Classification

Wastewater system costs are allocated to the following functions:

Treatment -- Volume – the costs associated with treating wastewater volume discharges

Collection – the lines that transport wastewater from customers' properties to the wastewater treatment plant

Administration – miscellaneous overhead and other non-operating costs

Customer Billing – the processes involved in billing and other services to customers

As was the case for the water system, wastewater utility operating budget line item expenses are allocated individually to functions. The results of the allocation process are presented on **Table III-15**. As with the water utility, these percentages are not forecast to change significantly during the next ten years.

TABLE III-15

CITY OF CELINA

TEST YEAR WASTEWATER COST FUNCTIONALIZATION

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

Function	2018 Revenue Requirement	Percent
Treatment	$ 1,453,842	46.1%
Collection	1,481,140	47.0%
Administration	121,273	3.8%
Customer	97,126	3.1%
Total	**3,153,381**	**100.0%**

Wastewater Utility Cost Allocation

Allocation of wastewater utility costs by service characteristic to customer classes is performed in the same manner as described for the water utility. The total wastewater utility costs by customer class for the test year are summarized in **Table III-16** and for the ten-year forecast period in **Table III-17.**

TABLE III-16

CITY OF CELINA

TEST YEAR WASTEWATER COST ALLOCATION

SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

Function	2018 Revenue Requirement	Percent
Residential	$ 2,911,907	92.3%
Residential Outside	765	0.0%
Commercial	240,096	7.6%
Commercial Outside	612	0.0%
Total	**3,153,381**	**100.0%**

TABLE III-17

CITY OF CELINA

FORECAST WASTEWATER COST ALLOCATION

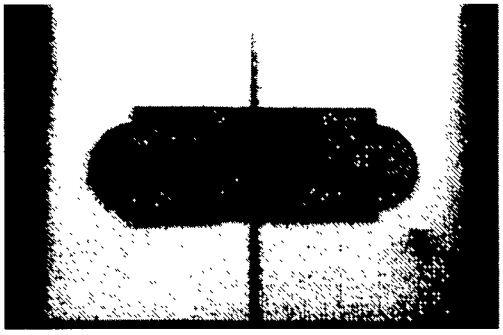
SCENARIO:
2018 11 14 Scenario 1 -- Status Quo

Year	Residential	Residential Outside	Commercial	Commercial Outside	Total
2018	$ 2,911,907	$ 765	$ 240,096	$ 612	**$ 3,153,381**
2019	4,029,748	866	333,388	692	**4,364,694**
2020	4,255,761	761	351,996	608	**4,609,127**
2021	5,753,072	926	476,887	739	**6,231,624**
2022	6,074,276	888	503,362	709	**6,579,235**
2023	7,793,257	1,047	647,167	835	**8,442,305**
2024	8,091,874	1,008	671,798	804	**8,765,484**
2025	9,870,280	1,152	820,949	918	**10,693,300**
2026	10,195,884	1,127	847,829	898	**11,045,739**
2027	11,366,129	1,190	945,760	948	**12,314,027**

Section IV

SECTION IV

Water and Wastewater Rate Design



Rate design involves determining charges for each class of customers that will generate a desired level of revenue in accordance with AWWA and other industry cost of service rate-making principles. The water and wastewater rates developed in this section are designed to recover the test year and forecast revenue requirements while providing funding for the identified capital improvements and existing debt service. In this section the project team is presenting its recommended alternative rate plans for the City.

During the course of this study, the project team evaluated several alternative rate plans for the City. These rate plans included the following:

Rate Design 1 - Convert residential sewer rates to winter averaging. Currently the residential customer is charged 100% of monthly metered water up to a 14,000 gallon cap.

Rate Design 2 - Changing commercial customer's multi-tier inclining block volume rates to a uniform rate per 1,000 gallons.

Rate Design 3 - Change the rate charged to Light Farms area from residential outside to residential inside rate.

Rate Design 4 – Implementing the same the residential monthly charge for ¾" and 1" customers

After several meetings with staff and Council, it was determined that there would be two alternative rate plans to be presented for consideration. These plans are as follows:

Rate Plan Alternative 1 – Status Quo – implementing a series of phased in rate adjustments over the next three fiscal years. Also includes reducing the wastewater winter average by 1,000 gallons each year for the three-year period.

Rate Plan Alternative 2 – WW Inverted Blocks – same as Rate Plan 1 except for implementing an inverted bock rate structure for the residential wastewater customer class.

Both rate plans are considered to be revenue neutral, in that each is forecast to recover an equivalent amount of revenue per year. Further, each of the alternative rate plans developed by the project team includes the following objectives:

- Each plan will ensure that water rates will cover the water cost of service and wastewater rates will cover the wastewater cost of service
- Each plan is intended to allow the City to increase its operating reserves from 40 days to 60 days in three years
- Each rate plan presents a forecast of rates for three years. City staff and the project team discussed the adoption of rate plan, with rates to be automatically implemented on January 1st of each year beginning with January 2019 and ending in January 2021
- Given the continued residential and Commercial growth in the City and potential for unexpected events, the project team recommends that the City not commit itself to a rate plan beyond three years. Further, the project team recommends that the City review these rates annually, to incorporate any unanticipated changes to costs, volumes or growth assumptions that may occur during that time.
- The most significant impact on rates will be the cost of UTRWD treated water and wastewater treatment and debt issued to fund the CIP. **Should UTRWD make material changes to its rate forecasts and/or the City changes its forecast of future debt, the City should undertake an immediate review of its rate plan.**

Rate Plan Alternative 1 – Status Quo

Table IV-1 presents a summary of the first alternative water and wastewater rate plan proposed for Residential and Commercial customers. **Table IV-2** presents the impact on monthly charges of both the water and wastewater rate adjustments for representative Residential and Commercial accounts.

As previously mentioned, this alternative retains the basic rate structure for water and wastewater currently in place for the City. It requires a series of annual percentage rate adjustments in January of each year.

In lieu of changing to a winter averaging method for billing residential sewer accounts (Alternative #1), the staff chose to "ratchet" down the 14,000 gallons monthly cap by 1,000 gallons each of the three-year rate plan. The ultimate goal is to reach 9,000 gallons, but that will require a timeframe that extends beyond the three years of this rate plan. Since the average monthly use by residential customers never exceeded 10,000 gallons over the twelve-month test year used in the rate study, 9,000 gallons is considered an appropriate cap for the City residential customers.

In addition, the staff decided that instead of changing ¾" meter monthly charge to equal 1" meter monthly charge they will grandfather the ¾" meter monthly charge. The City is no longer installing ¾" meters for residential customers. 1" is the smallest meter the City will install.

A full exhibit of the 3-year rate plan is presented in **Appendix A** of this report. Appendix A further forecasts rates for a 10-year period. However, beyond FY 2021 the recommended rates should be considered as trends and general guidelines. Because of the significant volume of and volatility of future growth forecasts, **the project team strongly recommends that the rate plan be reviewed every year to ensure that revenues are consistent with forecasts and are adequate to fund all the costs of providing service.**

TABLE IV-1

CITY OF CELINA

PROPOSED WATER AND WASTEWATER RATE PLAN

Scenario: 2018 11 14 Scenario 1 -- Status Quo

Effective [redacted]

		Jan-18	Jan-19	Jan-20	Jan-21
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 23.15	$ 23.84	$ 24.56	$ 25.30
1"		38.93	40.10	41.30	42.54
1 1/2"		77.87	80.21	82.61	85.09
2"		124.59	128.33	132.18	136.14
Volume Rate Per 1,000 Gal					
2,001	10,000	5 06	5.21	5.37	5.53
10,001	20,000	7 66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13.02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 27.81	$ 28.64	$ 29.50	$ 30.39
1"		48.67	50.13	51.63	53.18
1 1/2"		97.34	100.26	103.27	106.37
2"		155.74	160.41	165.22	170.18
3"		233 60	240.61	247.83	255.26
4"		389.34	401.02	413.05	425.44
Volume Rate Per 1,000 Gal					
2,001	10,000	5.06	5.21	5.37	5.53
10,001	20,000	7.66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13.02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 21 50	$ 23.44	$ 25.54	$ 27.84
1"		38 63	42.11	45.90	50.03
1 1/2"		72.10	78.59	85.66	93.37
2"		123.60	134.72	146.85	160.07
Volume Rate/1,000 Gal (2,001 to 14,000)		5.84	6.37	6.94	7.56
Residential Usage Cap (gallons)		14,000	13,000	12,000	11,000
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 25.75	$ 28.07	$ 30.59	$ 33.35
1"		48.29	52.64	57.37	62.54
1 1/2"		90.13	98.24	107.08	116.72
2"		154.50	168.41	183.56	200.08
3"		-	-	-	-
4"		386 25	421.01	458.90	500.20
Volume Rate/1,000 Gal		5.84	6.37	6.94	7.56

TABLE IV-2

CITY OF CELINA

IMPACT OF RATE PLAN ON MONTHLY CHARGES

Scenario: 2018 11 14 Scenario 1 -- Status Quo

Effective [redacted]

		Jan-18	Jan-19	Jan-20	Jan-21
Residential Monthly Charges -- 3/4"					
5,000 Water	5,000 WW	$ 77.35	$ 82.01	$ 87.02	$ 92.42
	Increase -- $		**4.66**	**5.01**	**5.39**
	Increase -- %		6.0%	6.1%	6.2%
10,000 Water	10,000 WW	131.85	139.90	148.56	157.88
	Increase -- $		**8.05**	**8.66**	**9.32**
	Increase -- %		6.1%	6.2%	6.3%
20,000 Water	14,000 WW	231.81	244.26	257.58	271.83
	Increase -- $		**12.45**	**13.32**	**14.26**
	Increase -- %		5.4%	5.5%	5.5%
Commercial Monthly Charges -- 1 1/2"					
30,000 Water	30,000 WW	$ 558.27	$ 590.24	$ 624.53	$ 661.35
	Increase -- $		**31.97**	**34.30**	**36.82**
			5.7%	5.8%	5.9%
60,000 Water	60,000 WW	1,124.07	1,183.52	1,247.08	1,315.06
	Increase -- $		**59.45**	**63.55**	**67.98**
	Increase -- %		5.3%	5.4%	5.5%

The projected rate revenues developed in this section, are forecast to be sufficient to fund all operating and current scheduled capital obligations through FY 2021 **if all annual adjustments are implemented beginning with January 2019**. Rate revenues should be sufficient to fund the water and wastewater full cost of service including all existing and future debt service over the forecast period. **Chart IV-3** presents the rate model's dashboard charts projecting revenues, net revenues, debt service and debt service coverage[1] under the proposed rate plan. This highlights the importance of the implementation of each annual rate adjustment and future review of growth, operating and capital assumptions and actual financial results.

Table IV-4 presents forecast revenues for the test year and each of the next three years if the three-year rate plan is adopted, as well as a forecast of future revenues for a ten-year period.

[1] Note. The water and wastewater outstanding debt are all CO and GO bonds and, therefore, have no debt service coverage requirements. This chart is presented as one of a several indicators used to demonstrate the utility fund's financial health with implementation of the recommended rate plan

CHART IV-3

TABLE IV-4

CITY OF CELINA

Forecast Water and Wastewater Revenues

Scenario: 2018 11 14 Scenario 1 -- Status Quo

Fiscal Year	[illegible] Revenues	Wastewater Revenues	Non-Rate Revenues	Total Revenues
2018	$ 5,872,806	$ 2,769,309	$ 2,879,300	$ 11,521,415
2019	7,381,866	3,612,639	2,879,300	13,873,805
2020	9,125,209	4,729,761	3,087,555	16,942,525
2021	10,449,782	5,731,544	2,334,034	18,515,359
2022	11,846,288	6,875,726	2,334,973	21,056,987
2023	13,293,007	8,164,595	2,302,193	23,759,794
2024	14,675,719	9,233,531	2,233,024	26,142,273
2025	15,978,119	10,148,295	2,126,124	28,252,538
2026	17,208,732	11,036,873	1,981,705	30,227,310
2027	18,534,125	12,003,266	2,046,516	32,583,908

Rate Plan Alternative 2 – Wastewater Inverted Block

Table IV-5 presents a summary of the second alternative water and wastewater rate plan proposed for Residential and Commercial customers. **Table IV-6** presents the impact on monthly charges of both the water and wastewater rate adjustments for representative Residential and Commercial accounts.

As previously mentioned, this alternative retains the basic rate structure for water and wastewater currently in place for the City. It requires a series of annual percentage rate adjustments in January of each year. However, while water rates are unchanged from Alternative #1, wastewater rates are converted into an inverted block for residential wastewater customers.

This alternative also includes the ratcheting down of the wastewater usage cap, as well as the grandfathering of ¾" water meters.

A full exhibit of the 3-year rate plan is presented in **Appendix B** of this report. Appendix B further forecasts rates for a 10-year period. However, beyond FY 2021 the recommended rates should be considered as trends and general guidelines. Because of the significant volume of and volatility of future growth forecasts, **the project team strongly recommends that the rate plan be reviewed every year to ensure that revenues are consistent with forecasts and are adequate to fund all the costs of providing service.**

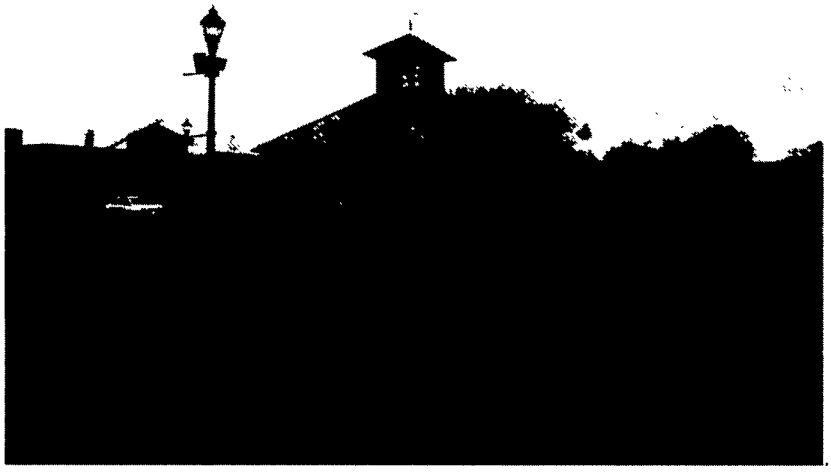


TABLE IV-5

CITY OF CELINA

PROPOSED WATER AND WASTEWATER RATE PLAN

Scenario: 2018 11 14 Scenario 2 -- WW Inverted Block

Effective [redacted]

		Jan-18	Jan-19	Jan-20	Jan-21
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 23.15	$ 23.84	$ 24.56	$ 25.30
1"		38 93	40.10	41.30	42.54
1 1/2"		77 87	80.21	82.61	85.09
2"		124.59	128.33	132.18	136.14
Volume Rate Per 1,000 Gal					
2,001	10,000	5.06	5.21	5.37	5.53
10,001	20,000	7.66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13.02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 27.81	$ 28.64	$ 29.50	$ 30.39
1"		48.67	50.13	51.63	53.18
1 1/2"		97.34	100.26	103.27	106.37
2"		155.74	160.41	165.22	170.18
3"		233.60	240.61	247.83	255.26
4"		389.34	401.02	413.05	425.44
Volume Rate Per 1,000 Gal					
2,001	10,000	5.06	5.21	5.37	5.53
10,001	20,000	7.66	7.89	8.13	8.37
20,001	30,000	9.02	9.29	9.57	9.86
30,001	Above	13 02	13.41	13.81	14.23
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 21.50	$ 23.44	$ 25.54	$ 27.84
1"		38.63	42.11	45.90	50.03
1 1/2"		72 10	78.59	85.66	93.37
2"		123.60	134.72	146.85	160.07
Volume Rate/1,000 Gal (2,001 to 5,000)		5.84	5.84	6.37	6.94
Volume Rate/1,000 Gal (5,001 to 14,000)		5.84	7.23	7.88	8.59
Residential Usage Cap (gallons)		14 000	13,000	12,000	11,000
[redacted]					
Minimum Charge -- 1st 2,000 Gal					
3/4"		$ 25.75	$ 28.07	$ 30.59	$ 33.35
1"		48.29	52.64	57.37	62.54
1 1/2"		90 13	98.24	107.08	116.72
2"		154.50	168.41	183.56	200.08
3"		-	-	-	-
4"		386 25	421.01	458.90	500.20
Volume Rate/1,000 Gal		5 84	6.37	6.94	7.56

TABLE IV-6

CITY OF CELINA

IMPACT OF RATE PLAN ON MONTHLY CHARGES

		Scenario: Effective	2018 11 14 Scenario 2 -- WW Inverted Block [redacted]		
		Jan-18	Jan-19	Jan-20	Jan-21
Residential Monthly Charges -- 3/4"					
5,000 Water	5,000 WW	$ 77.35	$ 80.43	$ 85.31	$ 90.54
	Increase -- $		**3.08**	**4.87**	**5.24**
	Increase -- %		4.0%	6.1%	6.1%
10,000 Water	10,000 WW	131.85	142.64	151.55	161.14
	Increase -- $		**10.79**	**8.91**	**9.59**
	Increase -- %		8.2%	6.2%	6.3%
20,000 Water	14,000 WW	231.81	250.46	264.34	279.20
	Increase -- $		**18.65**	**13.88**	**14.86**
	Increase -- %		8.0%	5.5%	5.6%
Commercial Monthly Charges -- 1 1/2"					
30,000 Water	30,000 WW	$ 558.27	$ 590.24	$ 624.53	$ 661.35
	Increase -- $		**31.97**	**34.30**	**36.82**
			5.7%	5.8%	5.9%
60,000 Water	60,000 WW	1,124.07	1,183.52	1,247.08	1,315.06
	Increase -- $		**59.45**	**63.55**	**67.98**
	Increase -- %		5.3%	5.4%	5.5%

The projected rate revenues developed in this section, are forecast to be sufficient to fund all operating and current scheduled capital obligations through FY 2021 **if all annual adjustments are implemented beginning with January 2019**. Rate revenues should be sufficient to fund the water and wastewater full cost of service including all existing and future debt service over the forecast period. **Chart IV-7** presents the rate model's dashboard charts projecting revenues, net revenues, debt service and debt service coverage[2] under the proposed rate plan. This highlights the importance of the implementation of each annual rate adjustment and future review of growth, operating and capital assumptions and actual financial results.

Table IV-8 presents forecast revenues for the test year and each of the next three years if the three-year rate plan is adopted, as well as a forecast of future revenues for a ten-year period.

[2] Note: The water and wastewater outstanding debt are all CO and GO bonds and, therefore, have no debt service coverage requirements This chart is presented as one of a several indicators used to demonstrate the utility fund's financial health with implementation of the recommended rate plan

CHART IV-7

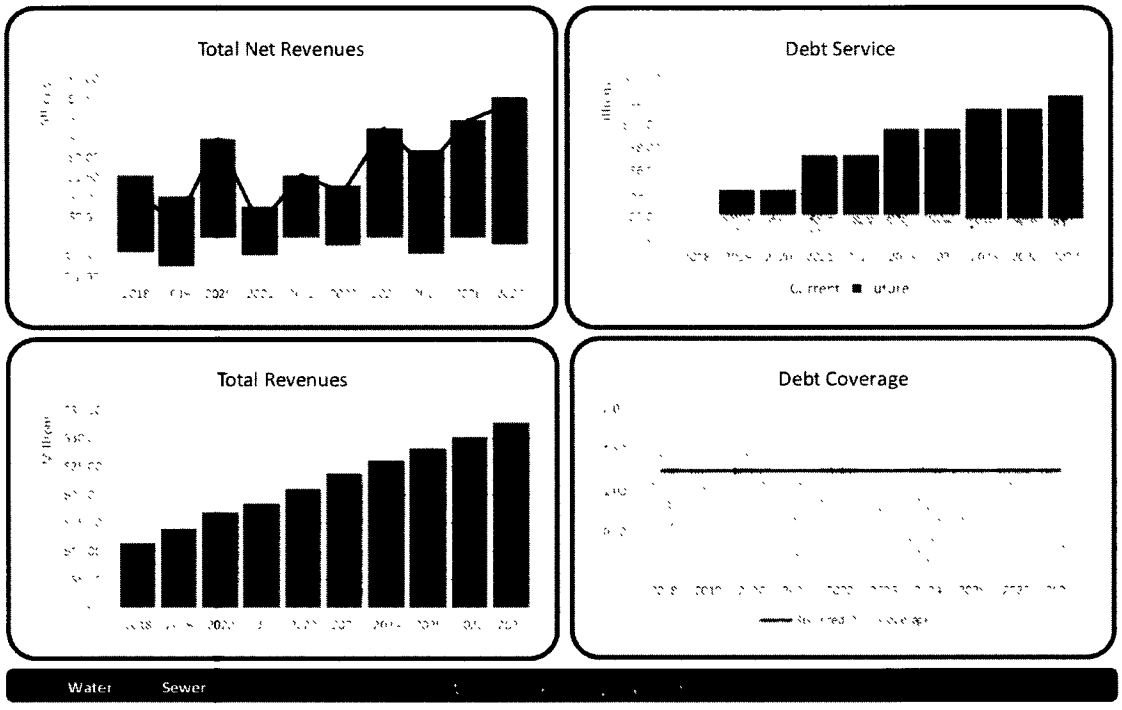


TABLE IV-8

CITY OF CELINA

Forecast Water and Wastewater Revenues

Scenario: 2018 11 14 Scenario 2 -- WW Inverted Block

Fiscal Year	Water Revenues	Wastewater Revenues	Non-Rate Revenues	Total Revenues
2018	$ 5,872,806	$ 2,769,309	$ 2,879,300	$ 11,521,415
2019	7,366,426	3,638,522	2,879,300	13,884,248
2020	9,096,832	4,779,193	3,087,555	16,963,580
2021	10,417,285	5,791,446	2,334,034	18,542,764
2022	11,809,448	6,947,587	2,334,973	21,092,008
2023	13,251,668	8,249,927	2,302,193	23,803,788
2024	14,640,110	9,330,035	2,233,024	26,203,169
2025	15,944,699	10,254,360	2,126,124	28,325,183
2026	17,172,738	11,152,226	1,981,705	30,306,668
2027	18,495,359	12,128,719	2,046,516	32,670,594

Notes on Rate Recommendations

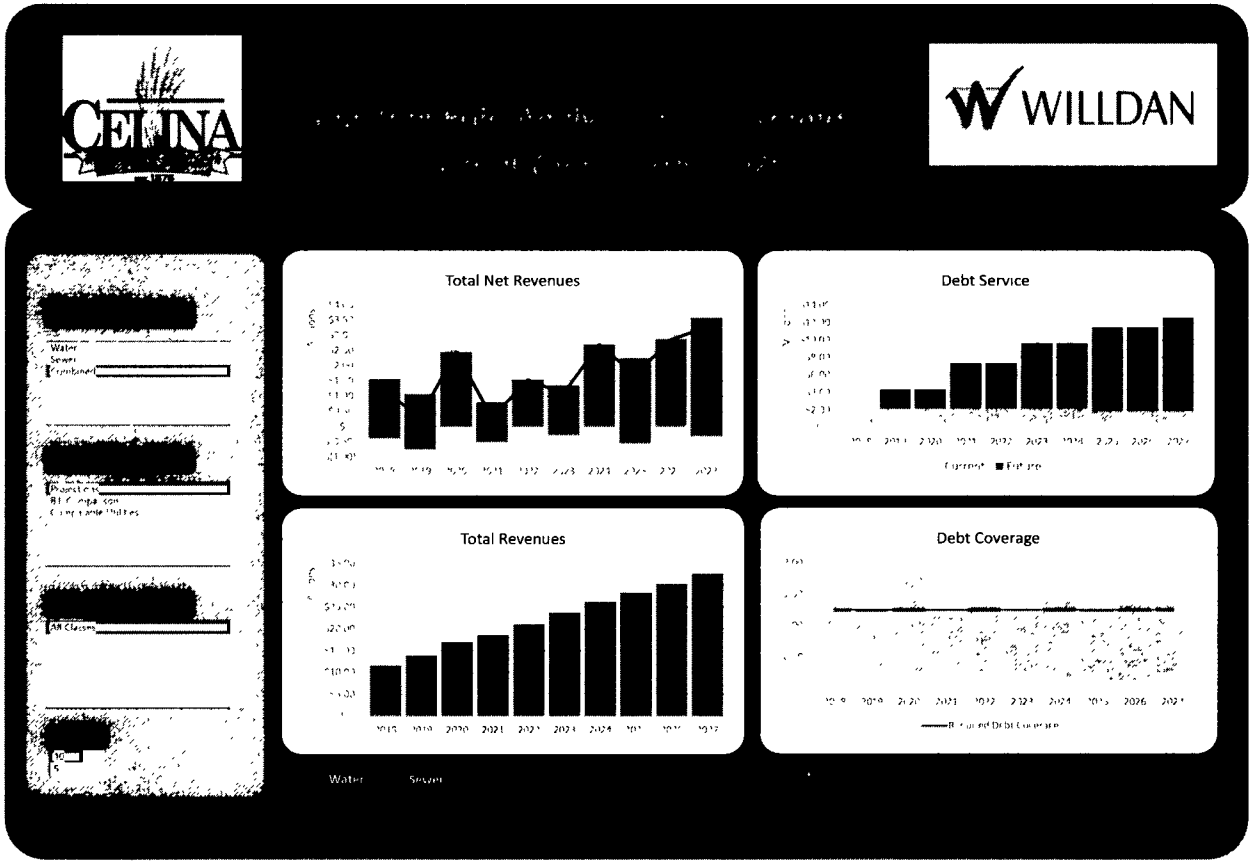
The forecast and recommendations presented in this study represent a combination of the best information available from the City of Celina and the project team's expertise. However, this forecast relies in part on assumptions about future events and events beyond the control of the project team (such as account growth rates within the City). The forecast and recommendations contained in this study may be subject to revision if any of the following events occurs:

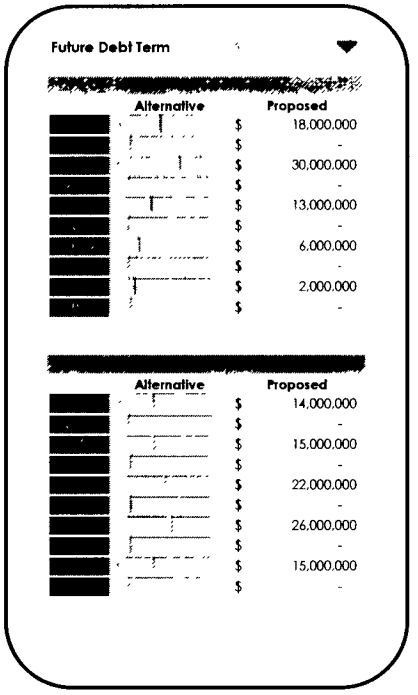
- Actual growth in accounts and consumed volumes is less than (or significantly greater than) forecast.
- Capital improvement plan funding costs increase significantly due to the rising cost of materials or other factors.
- An unforeseen event impacts the City, such as an extended recession, natural catastrophe or terrorist attack.
- Significant and long-lasting changes in weather patterns.
- Increases, decreases or changes in interest rates, coverage requirements, or reserve requirements for long-term debt.
- The City of Celina budget levels or priorities change significantly from those forecast in this study.

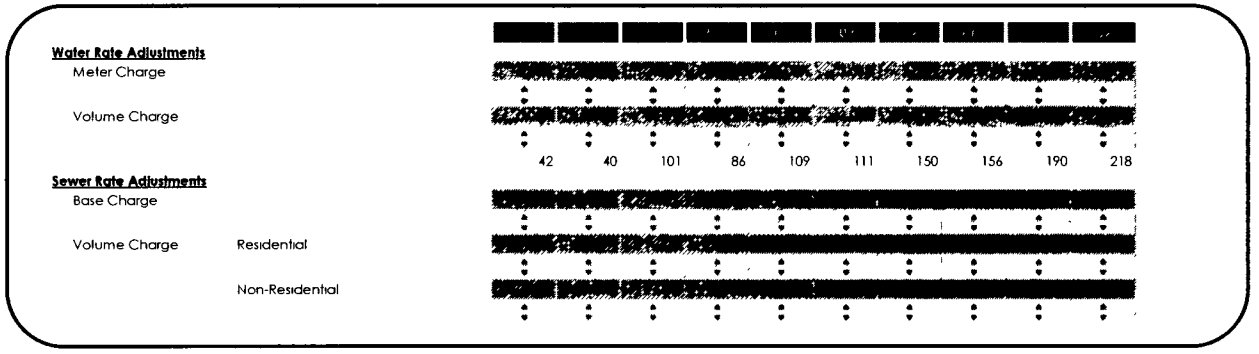
It should be noted that none of these events are foreseen by the project team or the City at this time.

If any of these events occur, the City may be compelled to consider further adjustments to its water and wastewater rates.

Appendix A







CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
1	[redacted]					
	[redacted]					
	[redacted]					
	Monthly Minimum Charge					
	3/4"		$ 23 15	$ 23 84	$ 24 56	$ 25 30
	1"		38 93	40 10	41 30	42 54
	1 1/2"		77 87	80 21	82 61	85 09
	2"		124 59	128 33	132 18	136 14
	Volume Rate/1,000 Gal					
	2,001	10,000	$ 5 06	$ 5 21	$ 5 37	$ 5 53
	10,001	20,000	7 66	7 89	8 13	8 37
	20,001	30,000	9 02	9 29	9 57	9 86
	30,001	Above	13 02	13 41	13 81	14 23
	[redacted]					
	Monthly Minimum Charge					
	3/4"		$ 34 72	$ 35 77	$ 36 84	$ 37 94
	1"		58 40	58 40	60 15	61 95
	1 1/2"		116 81	116 81	120 31	123 92
	2"		186 89	186 89	192 49	198 27
	Volume Rate/1,000 Gal					
	2,001	10,000	$ 7 59	$ 7 82	$ 8 05	$ 8 29
	10,001	20,000	11 49	11 83	12 19	12 56
	20,001	30,000	13 53	13 94	14 35	14 78
	30,001	Above	19 53	20 12	20 72	21 34

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

[redacted]

Monthly Minimum Charge								
	3/4"	$	27 81	$	28 64	$	29 50	$ 30 39
	1"		48 67		50 13		51 63	53 18
	1 1/2"		97 34		100 26		103 27	106 37
	2"		155 74		160 41		165 22	170 18
	3"		233 60		240 61		247 83	255 26
	4"		389 34		401 02		413 05	425 44
Volume Rate/1,000 Gal								
2,001	10,000	$	5 06	$	5 21	$	5 37	$ 5 53
10,001	20,000		7 66		7 89		8 13	8 37
20,001	30,000		9 02		9 29		9 57	9 86
30,001	Above		13 02		13 41		13 81	14 23

[redacted]

Monthly Minimum Charge								
	3/4"	$	41 72	$	42 97	$	44 26	$ 45 58
	1"		73 01		75 20		77 45	79 77
	1 1/2"		146 01		150 39		154 90	159 55
	2"		233 61		240 62		247 84	255 27
	3"		350 40		360 91		371 74	382 89
	4"		584 01		601 53		619 58	638 16
Volume Rate/1,000 Gal								
2,001	10,000	$	7 59	$	7 82	$	8.05	$ 8 29
10,001	20,000		11 49		11 83		12 19	12 56
20,001	30,000		13 53		13 94		14 35	14 78
30,001	Above		19.53		20 12		20.72	21 34

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
2	[redacted]					
[redacted]						
Monthly Minimum Charge						
		3/4"	$ 21 50	$ 23 44	$ 25 54	$ 27 84
		1"	38 63	42 11	45 90	50 03
		1 1/2"	72 10	78 59	85 66	93 37
		2"	123 60	134 72	146 85	160 07
Volume Rate/1,000 Gal						
	2,001	Maximum	5 84	6 37	6 94	7 56
		Maximum Gallons	14 000	13,000	12,000	11 000
[redacted]						
Monthly Minimum Charge						
		3/4"	32 25	35.15	38 32	41 76
		1"	57 95	63 16	68 84	75 04
		1 1/2"	108 15	117 88	128 49	140 06
		2"	185 40	202 09	220 27	240 10
Volume Rate/1,000 Gal						
	2,001	Maximum	12 90	14 06	15 33	16 71
		Maximum Gallons	14 000	13,000	12,000	11 000

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
Monthly Minimum Charge						
		3/4"	25 75	28 07	30 59	33 35
		1"	48 29	52 64	57 37	62 54
		1 1/2"	90 13	98 24	107 08	116 72
		2"	154 50	168 41	183 56	200 08
		4"	386 25	421 01	458 90	500 20
Volume Rate/1,000 Gal						
	2,001	Above	5 84	6 37	6 94	7 56
Monthly Minimum Charge						
		3/4"	38 63	42 10	45 89	50 02
		1"	72 44	78 95	86 06	93 81
		1 1/2"	135 20	147 36	160 63	175.08
		2"	231 75	252 61	275 34	300 12
		4"	579 38	631 52	688 36	750 31
Volume Rate/1,000 Gal						
	2,001	Above	12 90	14 06	15 33	16 71

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

	Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
3 [redacted]				
5,000 Gallons -- 3/4" Meter				
Total	$ 38 33	$ 39 48	$ 40 66	$ 41.88
Dollar Inc	1 20	1 15	1 18	1 22
Percent Inc	3 2%	3 0%	3 0%	3 0%
10,000 Gallons -- 3/4" Meter				
Total	63 63	65 54	67 51	69 53
Dollar Inc	1 70	1 91	1 97	2 03
Percent Inc	2 7%	3 0%	3 0%	3 0%
20,000 Gallons -- 3/4" Meter				
Total	140 23	144 44	148 77	153 23
Dollar Inc	3 90	4 21	4 33	4 46
Percent Inc	2 9%	3 0%	3 0%	3 0%
30,000 Gallons -- 3/4" Meter				
Total	230 43	237 34	244 46	251.80
Dollar Inc	7 30	6 91	7 12	7 33
Percent Inc	3 3%	3 0%	3 0%	3 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

		Current	Effective Jan-19	Effective [illegible]	Effective [illegible]
3	[illegible]				
5,000	**3/4" Meter**				
	Total	$ 57 49	$ 59 22	$ 61 00	$ 62 83
	Dollar Inc	1 79	1 73	1 78	1 83
	Percent Inc	3 2%	3 0%	3 0%	3 0%
10,000	**3/4" Meter**				
	Total	95 44	98 31	101 26	104 30
	Dollar Inc	2 54	2 87	2 95	3 04
	Percent Inc	2 7%	3 0%	3 0%	3 0%
20,000	**3/4" Meter**				
	Total	210 34	216 66	223 16	229 85
	Dollar Inc	5 84	6 32	6 50	6 69
	Percent Inc	2 9%	3 0%	3 0%	3 0%
4	[illegible]				
30,000 Gallons -- 1 1/2" Meter					
	Total	304 62	313 76	323 17	332 87
	Dollar Inc	6 40	9 14	9 41	9 70
	Percent Inc	2 1%	3 0%	3 0%	3 0%
60,000 Gallons -- 1 1/2" Meter					
	Total	695 22	716 08	737 56	759 69
	Dollar Inc	25 00	20 86	21 48	22 13
	Percent Inc	3 7%	3 0%	3 0%	3 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

			Current	Effective Jan-19	Effective Jan-20	Effective Jan-21
5	[redacted]					
5,000 Gallons -- 3/4" Meter						
	Total		$ 39 02	$ 42 53	$ 46 36	$ 50 53
	Dollar Inc		1 23	3 51	3 83	4 17
	Percent Inc		3 3%	9 0%	9 0%	9 0%
10,000 Gallons -- 3/4" Meter						
	Total		68 22	74 36	81 05	88 35
	Dollar Inc		1 78	6 14	6 69	7 29
	Percent Inc		2 7%	9 0%	9 0%	9 0%
15,000 Gallons -- 3/4" Meter						
	Total		91 58	99 82	108 81	118 60
	Dollar Inc		2 22	8 24	8 98	9 79
	Percent Inc		2 5%	9 0%	9 0%	9 0%
20,000 Gallons -- 3/4" Meter						
	Total		91 58	99 82	108 81	118 60
	Dollar Inc		2 22	8 24	8 98	9 79
	Percent Inc		2 5%	9 0%	9 0%	9 0%
6	[redacted]					
30,000 Gallons -- 1 1/2" Meter						
	Total	1 1/2"	$ 253 65	$ 276 48	$ 301 36	$ 328 48
	Dollar Inc		3 08	22 83	24 88	27 12
	Percent Inc		1 2%	9 0%	9 0%	9 0%
60,000 Gallons -- 1 1/2" Meter						
	Total	1 1/2"	640 65	698 31	761 16	829 66
	Dollar Inc		132 08	57 66	62 85	68 50
	Percent Inc		26 0%	9 0%	9 0%	9 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- Three Year Summary
Scen: **2018 11 14 Scenario 1 -- Status Quo**

		Current	Effective Jan-19	Effective	Effective
5	[redacted]				
	5,000 Gallons Water, 5,000 Gallons WW -- 3/4" Meter				
	Total	$ 77 35	$ 82 01	$ 87 02	$ 92 42
	Dollar Inc	2 43	4 66	5 01	5 39
	Percent Inc	3 2%	6 0%	6 1%	6.2%
	10,000 Gallons Water, 10,000 Gallons WW -- 3/4" Meter				
	Total	131 85	139 90	148 56	157 88
	Dollar Inc	32 13	8 05	8 66	9 32
	Percent Inc	32 2%	6 1%	6 2%	6 3%
	20,000 Gallons Water, 14,000 Gallons WW -- 3/4" Meter				
	Total	231 81	244 26	257 58	271 83
	Dollar Inc	57 69	12 45	13 32	14.26
	Percent Inc	33.1%	5 4%	5 5%	5 5%
	30,000 Gallons Water, 30,000 Gallons WW -- 3/4" Meter				
	Total	322 01	337 17	353 27	370 40
	Dollar Inc	61 09	15 16	16 10	17 13
	Percent Inc	23 4%	4 7%	4 8%	4 8%
6	[redacted]				
	30,000 Gallons Water, 30,000 Gallons WW -- 1 1/2" Meter				
	Total -	$ 558 27	$ 590 24	$ 624 53	$ 661 35
	Dollar Inc	9 48	31 97	34 30	36 82
	Percent Inc	1 7%	5 7%	5 8%	5 9%
	60,000 Gallons Water, 60,000 Gallons WW -- 1 1/2" Meter				
	Total -	1,335 87	1,414 39	1,498 72	1,589 35
	Dollar Inc	157 08	78 52	84 33	90 63
	Percent Inc	13 3%	5 9%	6 0%	6 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 1 -- Status Quo**

1 [redacted]

[redacted]

[redacted]

Monthly Minimum Charge

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3/4"	$ 22 25	$ 23 15	$ 23 84	$ 24 56	$ 25 30	$ 26 06	$ 26 84	$ 27 37	$ 27 92	$ 28 48	$ 29 05
1"	38 93	38 93	40 10	41 30	42 54	43 82	45 13	46 03	46 95	47 89	48 85
1 1/2"	77 87	77 87	80 21	82 61	85 09	87 64	90 27	92 08	93 92	95 80	97 71
2"	124 59	124 59	128 33	132 18	136 14	140 23	144 43	147 32	150 27	153 27	156 34
3"	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
2,001	10,000	4 96	5 06	5 21	5 37	5 53	5 70	5 87	5 98	6 10	6 22	6 35
10,001	20,000	7 44	7 66	7 89	8 13	8 37	8 62	8 88	9 06	9 24	9 42	9 61
20,001	30,000	8 68	9 02	9 29	9 57	9 86	10 15	10 46	10 67	10 88	11 10	11 32
30,001	Above	12 40	13 02	13 41	13 81	14 23	14 65	15 09	15 40	15 70	16 02	16 34
-	-	-	-	-	-	-	-	-	-	-	-	-

[redacted]

Monthly Minimum Charge

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3/4"	$ 33 38	$ 34 72	$ 35 77	$ 36 84	$ 37 94	$ 39 08	$ 40 26	$ 41 06	$ 41 88	$ 42 72	$ 43 57
1"	58 40	58 40	58 40	60 15	61 95	63 81	65 72	67 70	69 05	70 43	71 84
1 1/2"	116 81	116 81	116 81	120 31	123 92	127 64	131 47	135 41	138 12	140 88	143 70
2"	186 89	186 89	186 89	192 49	198 27	204 21	210 34	216 65	220 98	225 40	229 91
3"	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
2,001	10,000	7 44	7 59	7 82	8 05	8 29	8 54	8 80	8 97	9 15	9 34	9 52
10,001	20,000	11 16	11 49	11 83	12 19	12 56	12 93	13 32	13 59	13 86	14 14	14 42
20,001	30,000	13 02	13 53	13 94	14 35	14 78	15 23	15 68	16 00	16 32	16 65	16 98
30,001	Above	18 60	19 53	20 12	20 72	21 34	21 98	22 64	23 09	23 56	24 03	24 51
-	-	-	-	-	-	-	-	-	-	-	-	-

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 1 -- Status Quo**

[redacted]

Monthly Minimum Charge

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective [redacted]	Effective [redacted]	Effective [redacted]	Effective [redacted]	Effective [redacted]	[redacted]
3/4"		$ 27 81	$ 27 81	$ 28 64	$ 29 50	$ 30 39	$ 31 30	$ 32 24	$ 32 88	$ 33 54	$ 34 21	$ 34 90
1"		48 67	48 67	50 13	51 63	53 18	54 78	56 42	57 55	58 70	59 88	61 07
1 1/2"		97 34	97.34	100 26	103 27	106 37	109 56	112 84	115 10	117 40	119 75	122 15
2"		155 74	155 74	160 41	165 22	170 18	175 29	180 55	184 16	187 84	191 60	195 43
3"		233 60	233 60	240 61	247 83	255 26	262 92	270 81	276 22	281 75	287 38	293 13
4"		389 34	389 34	401 02	413 05	425 44	438 21	451 35	460 38	469 59	478 98	488 56
6"		-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

2,001	10,000	4 96	5 06	5 21	5 37	5 53	5 70	5 87	5 98	6 10	6 22	6 35
10,001	20,000	7 44	7 66	7 89	8 13	8 37	8 62	8 88	9 06	9 24	9 42	9 61
20,001	30,000	8 68	9 02	9 29	9 57	9 86	10 15	10 46	10 67	10 88	11 10	11 32
30,001	Above	12 40	13 02	13 41	13 81	14 23	14 65	15 09	15 40	15 70	16 02	16 34
-	-	-	-	-	-	-	-	-	-	-	-	-

[redacted]

Monthly Minimum Charge

		Current	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective [redacted]	Effective [redacted]	Effective [redacted]	Effective [redacted]	Effective [redacted]	[redacted]
3/4"		$ 41 72	$ 41 72	$ 42 97	$ 44 26	$ 45 58	$ 46 95	$ 48 36	$ 49 33	$ 50 31	$ 51 32	$ 52 35
1"		73 01	73 01	75 20	77 45	79 77	82 17	84 63	86 33	88 05	89 81	91 61
1 1/2"		146 01	146 01	150 39	154 90	159 55	164 34	169 27	172 65	176 10	179 63	183 22
2"		233 61	233 61	240 62	247 84	255 27	262 93	270 82	276 23	281 76	287 39	293 14
3"		350 40	350 40	360 91	371 74	382 89	394 38	406 21	414 33	422 62	431 07	439 69
4"		584 01	584 01	601 53	619 58	638 16	657 31	677 03	690 57	704 38	718 47	732 84
6"		-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

2,001	10,000	7 44	7 59	7 82	8 05	8 29	8 54	8 80	8 97	9 15	9 34	9 52
10,001	20,000	11 16	11 49	11 83	12 19	12 56	12 93	13 32	13 59	13 86	14 14	14 42
20,001	30,000	13 02	13 53	13 94	14 35	14 78	15 23	15 68	16 00	16 32	16 65	16 98
30,001	Above	18 60	19 53	20 12	20 72	21 34	21 98	22 64	23 09	23 56	24 03	24 51

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 1 -- Status Quo**

2 [redacted]

[redacted]

Monthly Minimum Charge

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3/4"		$ 20 60	$ 21 50	$ 23 44	$ 25 54	$ 27 84	$ 30 35	$ 33 08	$ 34 07	$ 35 10	$ 36 15	$ 37 23
1"		38 63	38 63	42 11	45 90	50 03	54 53	59 44	61 22	63 06	64 95	66 90
1 1/2"		72 10	72 10	78 59	85 66	93 37	101 78	110 93	114 26	117 69	121 22	124 86
2"		123 60	123 60	134 72	146 85	160 07	174 47	190 17	195 88	201 76	207 81	214 04
3"		-	-	-	-	-	-	-	-	-	-	-
4"		-	-	-	-	-	-	-	-	-	-	-
6"		-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

2,001	14,000	5 73	5 84	6 37	6 94	7 56	8 24	8 99	9 26	9 53	9 82	10 11
-	-	-	-	-	-	-	-	-	-	-	-	-

[redacted]

Monthly Minimum Charge

3/4"		30 90	32 25	35 15	38 32	41 76	45 52	49 62	51 11	52 64	54 22	55 85
1"		57 95	57 95	63 16	68 84	75 04	81 79	89 16	91 83	94 59	97 42	100 35
1 1/2"		108 15	108 15	117 88	128 49	140 06	152 66	166 40	171 39	176 54	181 83	187 29
2"		185 40	185 40	202 09	220 27	240 10	261 71	285 26	293 82	302 63	311 71	321 06
3"		-	-	-	-	-	-	-	-	-	-	-
4"		-	-	-	-	-	-	-	-	-	-	-
6"		-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

2,001	14,000	8 60	12 90	14 06	15 33	16 71	18 21	19 85	20 44	21 06	21 69	22 34
-	-	-	-	-	-	-	-	-	-	-	-	-

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 1 -- Status Quo**

[redacted]

Monthly Minimum Charge

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3/4"	25 75	25 75	28 07	30 59	33 35	36 35	39 62	40 81	42 03	43 29	44 59
1"	48 29	48 29	52 64	57 37	62 54	68 17	74 30	76 53	78 83	81 19	83 63
1 1/2"	90 13	90 13	98 24	107 08	116 72	127 23	138 68	142 84	147 12	151 54	156 08
2"	154 50	154 50	168 41	183 56	200 08	218 09	237 72	244 85	252 19	259 76	267 55
3"	-	-	-	-	-	-	-	-	-	-	-
4"	386 25	386 25	421 01	458 90	500 20	545 22	594 29	612 12	630 49	649 40	668 88
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
2,001	Above	5 73	5 84	6 37	6 94	7 56	8 24	8 99	9 26	9 53	9 82	10 11
-	-	-	-	-	-	-	-	-	-	-	-	-

[redacted]

Monthly Minimum Charge

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3/4"	38 63	38 63	42.10	45 89	50 02	54 52	59 43	61 21	63 05	64 94	66 89
1"	72 44	72 44	78 95	86 06	93 81	102 25	111 45	114 79	118 24	121 78	125 44
1 1/2"	135 20	135 20	147 36	160 63	175 08	190 84	208 01	214 25	220 68	227 30	234 12
2"	231 75	231 75	252 61	275 34	300 12	327 13	356 58	367 27	378 29	389 64	401 33
3"	-	-	-	-	-	-	-	-	-	-	-
4"	579 38	579 38	631 52	688 36	750 31	817 84	891 44	918 18	945 73	974 10	1,003 32
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-

Volume Rate/1,000 Gal

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
2,001	Above	8 60	12 90	14 06	15 33	16 71	18 21	19 85	20 44	21 06	21 69	22 34
-	-	-	-	-	-	-	-	-	-	-	-	-

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 1 -- Status Quo**

3 [redacted] -- WATER

	Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective [redacted]	Effective [redacted]	Effective [redacted]
5,000 Gallons -- 3/4" Meter											
Total	$ 37 13	$ 38 33	$ 39 48	$ 40 66	$ 41 88	$ 43 14	$ 44.43	$ 45 32	$ 46 23	$ 47 15	$ 48 10
Dollar Inc		1 20	1 15	1 18	1 22	1 26	1 29	0 89	0 91	0 92	0 94
Percent Inc		3 2%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
10,000 Gallons -- 3/4"" Meter											
Total	61 93	63 63	65 54	67 51	69 53	71 62	73 76	75 24	76 74	78 28	79 85
Dollar Inc		1 70	1 91	1 97	2 03	2 09	2 15	1 48	1 50	1 53	1 57
Percent Inc		2 7%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
20,000 Gallons -- 3/4" Meter											
Total	136 33	140 23	144 44	148 77	153 23	157 83	162 57	165 82	169 13	172 52	175 97
Dollar Inc		3 90	4 21	4 33	4 46	4 60	4 73	3 25	3 32	3 38	3 45
Percent Inc		2 9%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
30,000 Gallons -- 3/4" Meter											
Total	223 13	230 43	237 34	244 46	251 80	259 35	267 13	272 47	277 92	283 48	289 15
Dollar Inc		7 30	6 91	7 12	7 33	7 55	7 78	5 34	5 45	5 56	5 67
Percent Inc		3 3%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 1 -- Status Quo**

	Current	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective Jan-25	Effective Jan-26	Effective Jan-27
3 [redacted]										
5,000 Gallons -- 3/4" Meter										
Total	$ 55 70	$ 57 49	$ 59 22	$ 61 00	$ 62 83	$ 64 71	$ 66 65	$ 67 99	$ 69.35	$ 70 73	$ 72 15
Dollar Inc		1 79	1 73	1 78	1 83	1 88	1 94	1 33	1 36	1 39	1 41
Percent Inc		3 2%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
10,000 Gallons -- 3/4"" Meter										
Total	92 90	95 44	98 31	101 26	104 30	107 42	110 65	112 86	115 12	117 42	119 77
Dollar Inc		2.54	2 87	2 95	3 04	3 13	3 22	2 21	2 26	2 30	2 35
Percent Inc		2 7%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
20,000 Gallons -- 3/4" Meter										
Total	204 50	210 34	216 66	223 16	229 85	236 75	243 85	248 72	253 70	258 77	263 95
Dollar Inc		5 84	6 32	6 50	6 69	6 90	7 10	4 88	4 97	5 07	5 18
Percent Inc		2 9%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
4 [redacted]										
30,000 Gallons -- 1 1/2" Meter										
Total	298 22	304 62	313 76	323 17	332 87	342 85	353 14	360 20	367 40	374 75	382 25
Dollar Inc		6 40	9 14	9 41	9 70	9 99	10 29	7 06	7 20	7 35	7 50
Percent Inc		2 1%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%
60,000 Gallons -- 1 1/2" Meter										
Total	670 22	695 22	716 08	737 56	759.69	782 48	805 95	822 07	838 51	855 28	872 39
Dollar Inc		25 00	20 86	21 48	22 13	22 79	23 47	16 12	16 44	16 77	17 11
Percent Inc		3 7%	3 0%	3 0%	3 0%	3 0%	3 0%	2 0%	2 0%	2 0%	2 0%

CITY OF CELINA
WATER/WASTEWATER COST OF SERVICE MODEL

City Rate Plan -- 10 Year Summary
***Scen:* 2018 11 14 Scenario 1 -- Status Quo**

		Current	Effective Jan-18	Effective Jan-19	Effective Jan-20	Effective Jan-21	Effective Jan-22	Effective Jan-23	Effective Jan-24	Effective [redacted]	Effective Jan-26	Effective [redacted]
5	[redacted]											
5,000 Gallons -- 3/4" Meter												
	Total	$ 37 79	$ 39 02	$ 42 53	$ 46 36	$ 50 53	$ 55 08	$ 60 04	$ 61 84	$ 63 69	$ 65 60	$ 67 57
	Dollar Inc		1 23	3 51	3 83	4 17	4 55	4 96	1 80	1 86	1 91	1 97
	Percent Inc		3 3%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
10,000 Gallons -- 3/4" Meter												
	Total	66 44	68 22	74 36	81 05	88 35	96 30	104 96	108 11	111 36	114 70	118 14
	Dollar Inc		1 78	6 14	6 69	7 29	7 95	8 67	3 15	3 24	3 34	3 44
	Percent Inc		2 7%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
20,000 Gallons -- 3/4" Meter												
	Total	89 36	91 58	99 82	108 81	118 60	129 27	140 91	145 13	149 49	153 97	158 59
	Dollar Inc		2 22	8 24	8 98	9 79	10 67	11 63	4 23	4 35	4 48	4 62
	Percent Inc		2 5%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
30,000 Gallons -- 3/4" Meter												
	Total	89 36	91 58	99 82	108 81	118 60	129 27	140 91	145 13	149 49	153 97	158 59
	Dollar Inc		2 22	8 24	8 98	9 79	10 67	11 63	4 23	4 35	4 48	4 62
	Percent Inc		2 5%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
6	[redacted]											
30,000 Gallons -- 1 1/2" Meter												
	Total 1 1/2"	$ 250 57	$ 253 65	$ 276 48	$ 301 36	$ 328 48	$ 358 05	$ 390 27	$ 401 98	$ 414 04	$ 426 46	$ 439 25
	Dollar Inc		3 08	22 83	24 88	27 12	29 56	32 22	11 71	12 06	12 42	12 79
	Percent Inc		1 2%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%
60,000 Gallons -- 1 1/2" Meter												
	Total 1 1/2"	422 47	428 85	467 45	509 52	555 37	605 36	659 84	679 63	700 02	721 02	742 65
	Dollar Inc		6 38	38 60	42 07	45 86	49 98	54.48	19 80	20 39	21 00	21 63
	Percent Inc		1 5%	9 0%	9 0%	9 0%	9 0%	9 0%	3 0%	3 0%	3 0%	3 0%