



Glossary of Terms

- ◆ PUD – public utility district
- ◆ RCW – Revised Code of Washington
- ◆ O&M – operating & maintenance
- ◆ CIP – capital improvement program
- ◆ kWh – kilowatt hours
- ◆ kW – kilowatt
- ◆ BPA – Bonneville Power Administration
- ◆ COSA – cost-of-service analysis
- ◆ GS – general service
- ◆ ccf – hundred cubic feet
- ◆ SDF – system development fee
- ◆ MCE – meter capacity equivalent
- ◆ MSE – meter service equivalent

Meter Size	MCE Ratio	MSE Ratio
3/4" (Typical Residential Customer)	1.00	1.00
1"	1.67	1.27
1 1/2"	3.33	1.64
2"	5.33	2.64
3"	10.67	10.00
4"	16.67	12.73

Note: 1 ccf is approximately 784 gallons or 5,984 16oz bottles of water



Fiscal Policies

Policy	Purpose	Target
Operating Reserve	To provide sufficient cash flow to accommodate short-term revenue and expense cycles	35% of annual O&M expenses 20% of annual power expenses
Capital Reserve	To provide a source of funding for emergency repairs, unanticipated capital, and project cost overruns	Electric: 1% of original asset cost Water: 2% of original asset cost
System Reinvestment	To preserve system integrity through ongoing reinvestment	100% annual depreciation
Debt Service Coverage	To comply with existing debt covenants and maintain creditworthiness for future debt issuance	Internal PUD target: 1.75x Bond minimum: 1.25x

ELECTRIC UTILITY





Electric Utility 6-Year CIP

Description	2019	2020	2021	2022	2023	2024	Total
Carson - Rebuild 3-phase #2 ACSR with 3-phase 336 ACSR	\$ 120,338	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 120,338
Carson - Construct 3-phase 336 ACSR	159,068	-	-	-	-	-	159,068
Stevenson - Install 150 amp, 114 kVA Regulator	-	123,713	-	-	-	-	123,713
Cape Horn - Install 328 amp, 250 kVA Regulator	-	448,864	-	-	-	-	448,864
Cape Horn - Install 219 amp, 167 kVA Regulator	-	-	51,744	-	-	-	51,744
Cape Horn - Rebuild 3-phase #4 Cu with 3-phase #1/0 ACSR	-	-	196,851	-	-	-	196,851
Carson - Construct 3-phase #2 AL 15KV (Stevenson/Stabler)	-	281,216	-	-	-	-	281,216
Carson - Construct 3-phase #2 AL 15KV (Home Valley)	-	-	-	-	190,942	-	190,942
Cape Horn - Construct 3-phase #2 AL 15KV (Mt Pleasant)	-	-	-	-	-	397,158	397,158
Cape Horn - Construct 3-phase #2 AL 15KV (Washougal River)	-	-	-	-	-	297,869	297,869
Cape Horn - Construct 3-phase #2 AL 15KV (Washougal River)	-	-	-	-	-	318,063	318,063
Cape Horn - Construct 1-phase #2 ACSR (Prindle)	-	-	-	-	-	8,414	8,414
Underwood - Rebuild 1-phase #6 A CWC with 3-phase #2 ACSR	-	31,366	-	-	-	-	31,366
AMI - Electric	-	-	-	-	608,326	632,660	1,240,986
No. Bonneville Substation Rebuild	-	-	-	-	5,596,603	-	5,596,603
Vehicle/Equipment Fleet Rotation	46,800	183,872	483,692	99,438	565,744	-	1,379,545
Pole Test	52,000	54,080	56,243	58,493	60,833	63,266	344,915
Underground Replacement	520,000	486,720	449,946	409,450	364,996	379,596	2,610,708
Overhead Replacement	312,000	378,560	449,946	526,436	608,326	632,660	2,907,928
Tools & Equipment	52,000	16,224	16,873	17,548	18,250	18,980	139,874
Oil Container Shed	20,800	-	-	-	-	-	20,800
Emergency Generator	156,000	-	-	-	-	-	156,000
Radio System Replacement	130,000	-	-	-	-	-	130,000
Yard Improvements	197,600	-	-	-	-	-	197,600
Office Building Improvements	57,200	-	-	-	-	-	57,200
Administration Building Upgrade	-	-	-	233,972	-	-	233,972
Develop plan to reconstruct switching & feeders from from sub to riser pole	-	97,344	-	-	-	-	97,344
Develop plan to construct new 3-phase URD at Salmon Falls Road	-	77,875	-	-	-	-	77,875
Total	\$ 1,823,806	\$ 2,179,835	\$ 1,705,294	\$ 1,345,337	\$ 8,014,020	\$ 2,748,665	\$ 17,816,957



Electric: Residential

Energy Use kWh	Total Monthly Charges							
	Existing	2019	2020	2021	2022	2023	2024	
300	\$ 45.52	\$ 53.46	\$ 62.88	\$ 73.24	\$ 84.86	\$ 92.63	\$ 98.17	
600	68.29	76.92	86.76	97.48	109.22	117.26	123.34	
900	91.06	100.38	110.64	121.72	133.58	141.89	148.51	
1,100	106.24	116.02	126.56	137.88	149.82	158.31	165.29	
1,400	129.01	139.48	150.44	162.12	174.18	182.94	190.46	
1,700	151.78	162.94	174.32	186.36	198.54	207.57	215.63	
2,300	197.32	209.86	222.08	234.84	247.26	256.83	265.97	

Average

Energy Use kWh	Increase / (Decrease) to Total Monthly Charges					
	2019	2020	2021	2022	2023	2024
300	\$ 7.94	\$ 9.42	\$ 10.36	\$ 11.62	\$ 7.77	\$ 5.54
600	8.63	9.84	10.72	11.74	8.04	6.08
900	9.32	10.26	11.08	11.86	8.31	6.62
1,100	9.78	10.54	11.32	11.94	8.49	6.98
1,400	10.47	10.96	11.68	12.06	8.76	7.52
1,700	11.16	11.38	12.04	12.18	9.03	8.06
2,300	12.54	12.22	12.76	12.42	9.57	9.14

Average

Energy Use kWh	Percent Increase to Total Monthly Charges					
	2019	2020	2021	2022	2023	2024
300	17.44%	17.62%	16.48%	15.87%	9.16%	5.98%
600	12.64%	12.79%	12.36%	12.04%	7.36%	5.19%
900	10.24%	10.22%	10.01%	9.74%	6.22%	4.67%
1,100	9.21%	9.08%	8.94%	8.66%	5.67%	4.41%
1,400	8.12%	7.86%	7.76%	7.44%	5.03%	4.11%
1,700	7.35%	6.98%	6.91%	6.54%	4.55%	3.88%
2,300	6.36%	5.82%	5.75%	5.29%	3.87%	3.56%

Average



Electric: GS 1P (no demand meter)

Energy Use kWh	Total Monthly Charges									
	Existing	2019	2020	2021	2022	2023	2024			
300	\$ 45.58	\$ 58.16	\$ 72.52	\$ 88.88	\$ 107.30	\$ 123.60	\$ 139.47			
600	68.41	81.32	96.04	112.76	131.60	148.20	164.94			
800	83.63	96.76	111.72	128.68	147.80	164.60	181.92			
1,100	106.46	119.92	135.24	152.56	172.10	189.20	207.39	Average		
1,400	129.29	143.08	158.76	176.44	196.40	213.80	232.86			
1,700	152.12	166.24	182.28	200.32	220.70	238.40	258.33			
2,200	190.17	204.84	221.48	240.12	261.20	279.40	300.78			

Energy Use kWh	Increase / (Decrease) to Total Monthly Charges									
	2019	2020	2021	2022	2023	2024				
300	\$ 12.58	\$ 14.36	\$ 16.36	\$ 18.42	\$ 16.30	\$ 15.87				
600	12.91	14.72	16.72	18.84	16.60	16.74				
800	13.13	14.96	16.96	19.12	16.80	17.32				
1,100	13.46	15.32	17.32	19.54	17.10	18.19	Average			
1,400	13.79	15.68	17.68	19.96	17.40	19.06				
1,700	14.12	16.04	18.04	20.38	17.70	19.93				
2,200	14.67	16.64	18.64	21.08	18.20	21.38				

Energy Use kWh	Percent Increase to Total Monthly Charges						
	2019	2020	2021	2022	2023	2024	
300	27.60%	24.69%	22.56%	20.72%	15.19%	12.84%	
600	18.87%	18.10%	17.41%	16.71%	12.61%	11.30%	
800	15.70%	15.46%	15.18%	14.86%	11.37%	10.52%	
1,100	12.64%	12.78%	12.81%	12.81%	9.94%	9.61%	Average
1,400	10.67%	10.96%	11.14%	11.31%	8.86%	8.91%	
1,700	9.28%	9.65%	9.90%	10.17%	8.02%	8.36%	
2,200	7.71%	8.12%	8.42%	8.78%	6.97%	7.65%	



Electric: GS 3P (no demand meter)

Energy Use kWh	Total Monthly Charges								
	Existing	2019	2020	2021	2022	2023	2024		
1,000	\$ 110.85	\$ 132.20	\$ 153.40	\$ 174.60	\$ 196.00	\$ 212.00	\$ 229.90		
2,000	186.95	209.40	231.80	254.20	277.00	294.00	314.80		
3,000	263.05	286.60	310.20	333.80	358.00	376.00	399.70		
4,000	339.15	363.80	388.60	413.40	439.00	458.00	484.60		Average
5,000	415.25	441.00	467.00	493.00	520.00	540.00	569.50		
6,000	491.35	518.20	545.40	572.60	601.00	622.00	654.40		
8,000	643.55	672.60	702.20	731.80	763.00	786.00	824.20		

Energy Use kWh	Increase / (Decrease) to Total Monthly Charges								
	2019	2020	2021	2022	2023	2024			
1,000	\$ 21.35	\$ 21.20	\$ 21.20	\$ 21.40	\$ 16.00	\$ 17.90			
2,000	22.45	22.40	22.40	22.80	17.00	20.80			
3,000	23.55	23.60	23.60	24.20	18.00	23.70			
4,000	24.65	24.80	24.80	25.60	19.00	26.60			Average
5,000	25.75	26.00	26.00	27.00	20.00	29.50			
6,000	26.85	27.20	27.20	28.40	21.00	32.40			
8,000	29.05	29.60	29.60	31.20	23.00	38.20			

Energy Use kWh	Percent Increase to Total Monthly Charges						
	2019	2020	2021	2022	2023	2024	
1,000	19.26%	16.04%	13.82%	12.26%	8.16%	8.44%	
2,000	12.01%	10.70%	9.66%	8.97%	6.14%	7.07%	
3,000	8.95%	8.23%	7.61%	7.25%	5.03%	6.30%	
4,000	7.27%	6.82%	6.38%	6.19%	4.33%	5.81%	Average
5,000	6.20%	5.90%	5.57%	5.48%	3.85%	5.46%	
6,000	5.46%	5.25%	4.99%	4.96%	3.49%	5.21%	
8,000	4.51%	4.40%	4.22%	4.26%	3.01%	4.86%	



Electric: GS 1P (demand meter)

Energy Use kWh	Demand kW	Total Monthly Charges									
		Existing	2019	2020	2021	2022	2023	2024			
900	4	\$ 89.02	\$ 104.06	\$ 119.60	\$ 135.23	\$ 150.86	\$ 162.49	\$ 174.12			
1,900	9	151.82	167.46	183.60	199.93	216.26	228.59	240.92			
2,800	13	208.34	224.52	241.20	258.16	275.12	288.08	301.04			
3,700	17	264.86	281.58	298.80	316.39	333.98	347.57	361.16			
4,600	21	321.38	338.64	356.40	374.62	392.84	407.06	421.28			
5,600	25	384.18	402.04	420.40	439.32	458.24	473.16	488.08			
7,400	33	497.22	516.16	535.60	555.78	575.96	592.14	608.32			

Energy Use kWh	Demand kW	Increase / (Decrease) to Total Monthly Charges									
		2019	2020	2021	2022	2023	2024				
900	4	\$ 15.04	\$ 15.54	\$ 15.63	\$ 15.63	\$ 11.63	\$ 11.63				
1,900	9	15.64	16.14	16.33	16.33	12.33	12.33				
2,800	13	16.18	16.68	16.96	16.96	12.96	12.96				
3,700	17	16.72	17.22	17.59	17.59	13.59	13.59				
4,600	21	17.26	17.76	18.22	18.22	14.22	14.22				
5,600	25	17.86	18.36	18.92	18.92	14.92	14.92				
7,400	33	18.94	19.44	20.18	20.18	16.18	16.18				

Energy Use kWh	Demand kW	Percent Increase to Total Monthly Charges									
		2019	2020	2021	2022	2023	2024				
900	4	16.90%	14.93%	13.07%	11.56%	7.71%	7.16%				
1,900	9	10.30%	9.64%	8.89%	8.17%	5.70%	5.39%				
2,800	13	7.77%	7.43%	7.03%	6.57%	4.71%	4.50%				
3,700	17	6.31%	6.12%	5.89%	5.56%	4.07%	3.91%				
4,600	21	5.37%	5.24%	5.11%	4.86%	3.62%	3.49%				
5,600	25	4.65%	4.57%	4.50%	4.31%	3.26%	3.15%				
7,400	33	3.81%	3.77%	3.77%	3.63%	2.81%	2.73%				



Electric: GS 3P (demand meter)

Energy Use kWh	Demand kW	Existing	Total Monthly Charges							
			2019	2020	2021	2022	2023	2024		
3,600	12	\$ 301.83	\$ 316.24	\$ 330.40	\$ 344.92	\$ 359.44	\$ 371.96	\$ 385.48		
7,200	24	527.91	544.48	560.80	577.84	594.88	609.92	625.96		
10,800	36	758.19	776.95	795.47	815.06	834.66	852.25	870.84		
14,400	48	1,058.09	1,079.52	1,100.79	1,123.50	1,146.21	1,166.92	1,188.62		
18,000	59	1,357.99	1,382.09	1,406.11	1,431.94	1,457.76	1,481.58	1,506.40		
21,700	72	1,666.21	1,693.06	1,719.92	1,748.94	1,777.96	1,804.99	1,833.01		
28,900	95	2,266.01	2,298.20	2,330.56	2,365.81	2,401.07	2,434.32	2,468.57		

Energy Use kWh	Demand kW	Increase / (Decrease) to Total Monthly Charges							
		2019	2020	2021	2022	2023	2024		
3,600	12	\$ 14.41	\$ 14.16	\$ 14.52	\$ 14.52	\$ 12.52	\$ 13.52		
7,200	24	16.57	16.32	17.04	17.04	15.04	16.04		
10,800	36	18.76	18.51	19.59	19.59	17.59	18.59		
14,400	48	21.43	21.27	22.71	22.71	20.71	21.71		
18,000	59	24.10	24.02	25.82	25.82	23.82	24.82		
21,700	72	26.85	26.85	29.02	29.02	27.02	28.02		
28,900	95	32.19	32.36	35.25	35.25	33.25	34.25		

Energy Use kWh	Demand kW	Percent Increase to Total Monthly Charges							
		2019	2020	2021	2022	2023	2024		
3,600	12	4.77%	4.48%	4.39%	4.21%	3.48%	3.63%		
7,200	24	3.14%	3.00%	3.04%	2.95%	2.53%	2.63%		
10,800	36	2.47%	2.38%	2.46%	2.40%	2.11%	2.18%		
14,400	48	2.03%	1.97%	2.06%	2.02%	1.81%	1.86%		
18,000	59	1.77%	1.74%	1.84%	1.80%	1.63%	1.68%		
21,700	72	1.61%	1.59%	1.69%	1.66%	1.52%	1.55%		
28,900	95	1.42%	1.41%	1.51%	1.49%	1.38%	1.41%		



Electric: Industrial (demand meter)

Energy Use kWh	Demand kW	Total Monthly Charges							
		Existing	2019	2020	2021	2022	2023	2024	
89,800	310	\$ 6,604.16	\$ 6,640.72	\$ 6,688.43	\$ 6,727.16	\$ 6,765.89	\$ 6,802.62	\$ 6,829.37	
179,700	621	13,324.80	13,392.69	13,482.91	13,555.16	13,627.41	13,697.66	13,748.94	
269,500	932	20,037.95	20,137.16	20,269.84	20,375.57	20,481.30	20,585.03	20,660.81	
359,300	1,242	26,751.11	26,881.62	27,056.77	27,195.98	27,335.19	27,472.40	27,572.69	
449,200	1,553	33,471.74	33,633.60	33,851.25	34,023.98	34,196.71	34,367.44	34,492.26	
539,000	1,863	40,184.90	40,378.06	40,638.18	40,844.39	41,050.60	41,254.81	41,404.13	
718,700	2,484	53,618.69	53,874.51	54,219.59	54,492.80	54,766.01	55,037.23	55,235.57	

Energy Use kWh	Demand kW	Increase / (Decrease) to Total Monthly Charges							
		2019	2020	2021	2022	2023	2024		
89,800	310	\$ 36.55	\$ 47.71	\$ 38.73	\$ 38.73	\$ 36.73	\$ 26.75		
179,700	621	67.90	90.22	72.25	72.25	70.25	51.28		
269,500	932	99.20	132.68	105.73	105.73	103.73	75.78		
359,300	1,242	130.51	175.14	139.21	139.21	137.21	100.28		
449,200	1,553	161.86	217.65	172.73	172.73	170.73	124.81		
539,000	1,863	193.16	260.11	206.21	206.21	204.21	149.31		
718,700	2,484	255.82	345.08	273.21	273.21	271.21	198.34		

Energy Use kWh	Demand kW	Percent Increase to Total Monthly Charges							
		2019	2020	2021	2022	2023	2024		
89,800	310	0.55%	0.72%	0.58%	0.58%	0.54%	0.39%		
179,700	621	0.51%	0.67%	0.54%	0.53%	0.52%	0.37%		
269,500	932	0.50%	0.66%	0.52%	0.52%	0.51%	0.37%		
359,300	1,242	0.49%	0.65%	0.51%	0.51%	0.50%	0.37%		
449,200	1,553	0.48%	0.65%	0.51%	0.51%	0.50%	0.36%		
539,000	1,863	0.48%	0.64%	0.51%	0.50%	0.50%	0.36%		
718,700	2,484	0.48%	0.64%	0.50%	0.50%	0.50%	0.36%		

WATER UTILITY - CARSON SYSTEM





Carson 6-Year CIP

Description	2019	2020	2021	2022	2023	2024	Total
Misc. WTP Maintenance	\$ 6,240	\$ 6,490	\$ 6,749	\$ 7,019	\$ 7,300	\$ 7,592	\$ 41,390
Industrial Well Water Right	-	-	-	17,548	-	-	17,548
Linde Well Water Right	-	-	-	19,888	-	-	19,888
Wind River Intake & WTP Pre-Design Report	52,000	54,080	-	-	-	-	106,080
Wind River Water Right	-	-	33,746	-	-	-	33,746
2,800 feet of 8-inch Main, Metzger Rd (S-B Rd South)	83,200	227,677	710,352	-	-	-	1,021,228
2,000 feet of 8-inch Main, Metzger Rd (S-B Rd North)	-	-	-	175,479	495,178	-	670,657
2,100 feet of 8-inch Main, Hot Springs Avenue	-	-	-	-	-	179,675	179,675
Hydrant Replacement	20,800	21,632	22,497	23,397	24,333	25,306	137,966
Carson Water System Plan Update - 2020	41,600	43,264	-	-	-	-	84,864
AMI metering	-	-	-	-	510,994	-	510,994
Vehicle/Equipment Fleet Rotation	36,400	-	-	-	-	-	36,400
System Improvements - General	36,400	-	-	-	-	-	36,400
Total	\$ 276,640	\$ 353,142	\$ 773,344	\$ 243,331	\$ 1,037,805	\$ 212,574	\$ 2,896,836



Carson CIP (2025 – 2038)

Description	2025 & 2026	2027 & 2028	2029 & 2030	2031 & 2032	2033 & 2034	2035 & 2036	2037 & 2038	Total
Misc. WTP Maintenance	\$ 16,107	\$ 17,421	\$ 18,843	\$ 20,380	\$ -	\$ -	\$ -	\$ 72,752
Develop Linde Well	-	498,159	-	-	-	-	-	498,159
Water Treatment Plant Rebuild	-	4,144,684	-	-	-	-	-	4,144,684
Wind River Intake & Transmission Line Construction	-	-	-	-	-	-	5,696,920	5,696,920
Water Treatment Plant Expansion	-	-	-	-	-	-	2,191,123	2,191,123
New Reservoir	-	-	-	-	-	-	4,382,246	4,382,246
1,300 feet of 8-inch Main, Glur Road / Wilkinson Street	-	123,970	386,788	-	-	-	-	510,758
3,300 feet of 12-inch Main, Wind River Rd	-	-	416,268	1,298,757	-	-	-	1,715,026
2,600 feet of 12-inch Main, Hot Springs Avenue	289,452	903,091	-	-	-	-	-	1,192,544
2,100 feet of 8-inch Main, Hot Springs Avenue	560,587	-	-	-	-	-	-	560,587
1,350 feet of 12-inch Main, Old Detour Road	-	-	151,698	473,297	-	-	-	624,995
Hydrant Replacement	53,690	43,269	31,405	33,967	36,739	39,737	42,980	281,787
Carson Water System Plan Update - 2030	-	-	125,619	-	-	-	-	125,619
Restructuring pressure zones	-	-	-	247,382	524,846	567,674	613,996	1,953,899
Annual Average	-	-	-	-	1,692,700	1,830,824	970,696	4,494,219
Total	\$ 919,836	\$ 5,730,595	\$ 1,130,621	\$ 2,073,785	\$ 2,254,285	\$ 2,438,235	\$ 13,897,961	\$ 28,445,319



Carson: Residential Monthly Bill Impacts

Usage (ccf)	Existing Mo. Charges	Proposed Monthly Charges						Average
		2019	2020	2021	2022	2023	2024	
3	\$43.75	\$49.77	\$53.17	\$56.74	\$60.48	\$64.40	\$69.72	
5	46.83	53.02	56.64	60.44	64.43	68.61	74.27	
7	52.99	57.52	61.45	65.57	69.90	74.43	80.57	
25	109.98	104.77	111.92	119.43	127.32	135.57	146.75	
50	194.73	194.77	208.05	222.02	236.68	252.02	272.81	
75	286.98	319.71	341.51	364.44	388.51	413.68	447.81	
100	379.23	444.65	474.97	506.86	540.33	575.34	622.81	
150	563.73	694.53	741.89	791.70	843.97	898.66	972.80	
200	748.23	944.41	1,008.80	1,076.54	1,147.62	1,221.98	1,322.80	

Usage (ccf)	\$ Variance from Existing Rates						% Variance from Existing Rates						Average
	2019	2020	2021	2022	2023	2024	2019	2020	2021	2022	2023	2024	
3	\$6.02	\$3.39	\$3.57	\$3.75	\$3.92	\$5.31	13.8%	6.8%	6.7%	6.6%	6.5%	8.3%	
5	6.19	3.62	3.80	3.99	4.18	5.66	13.2%	6.8%	6.7%	6.6%	6.5%	8.3%	
7	4.53	3.92	4.13	4.33	4.53	6.14	8.6%	6.8%	6.7%	6.6%	6.5%	8.3%	
25	(5.21)	7.14	7.52	7.89	8.25	11.18	-4.7%	6.8%	6.7%	6.6%	6.5%	8.3%	
50	0.04	13.28	13.97	14.66	15.34	20.79	0.0%	6.8%	6.7%	6.6%	6.5%	8.3%	
75	32.73	21.80	22.93	24.06	25.17	34.13	11.4%	6.8%	6.7%	6.6%	6.5%	8.3%	
100	65.42	30.32	31.89	33.47	35.01	47.47	17.3%	6.8%	6.7%	6.6%	6.5%	8.3%	
150	130.80	47.35	49.82	52.27	54.69	74.14	23.2%	6.8%	6.7%	6.6%	6.5%	8.3%	
200	196.18	64.39	67.74	71.08	74.36	100.81	26.2%	6.8%	6.7%	6.6%	6.5%	8.3%	



Carson: Commercial Monthly Bill Impacts

Usage (ccf)	Existing Mo. Charges	Proposed Monthly Charges						
		2019	2020	2021	2022	2023	2024	
7	\$52.99	\$70.13	\$77.89	\$86.58	\$96.33	\$107.29	\$116.14	
15	77.63	96.83	109.80	124.59	141.47	160.73	174.00	
25	109.98	130.19	149.69	172.11	197.89	227.54	246.32	
40	160.83	180.24	209.53	243.39	282.53	327.76	354.80	
47	184.56	203.60	237.45	276.65	322.02	374.52	405.42	Average
75	286.98	297.03	349.14	409.70	480.01	561.59	607.92	
150	563.73	547.28	648.32	766.08	903.17	1,062.65	1,150.32	
250	932.73	880.96	1,047.23	1,241.25	1,467.40	1,730.73	1,873.52	
500	1,855.23	1,715.14	2,044.50	2,429.18	2,877.96	3,400.94	3,681.52	

Usage (ccf)	\$ Variance from Existing Rates						% Variance from Existing Rates						
	2019	2020	2021	2022	2023	2024	2019	2020	2021	2022	2023	2024	
7	\$17.14	\$7.76	\$8.69	\$9.75	\$10.95	\$8.85	32.3%	11.1%	11.2%	11.3%	11.4%	8.3%	
15	19.20	12.97	14.79	16.88	19.26	13.26	24.7%	13.4%	13.5%	13.5%	13.6%	8.3%	
25	20.21	19.50	22.42	25.78	29.65	18.77	18.4%	15.0%	15.0%	15.0%	15.0%	8.3%	
40	19.41	29.28	33.86	39.14	45.23	27.04	12.1%	16.2%	16.2%	16.1%	16.0%	8.3%	
47	19.04	33.85	39.20	45.37	52.50	30.90	10.3%	16.6%	16.5%	16.4%	16.3%	8.3%	Average
75	10.05	52.11	60.55	70.31	81.58	46.33	3.5%	17.5%	17.3%	17.2%	17.0%	8.3%	
150	(16.45)	101.04	117.75	137.10	159.48	87.67	-2.9%	18.5%	18.2%	17.9%	17.7%	8.3%	
250	(51.77)	166.27	194.02	226.15	263.34	142.79	-5.6%	18.9%	18.5%	18.2%	17.9%	8.3%	
500	(140.09)	329.36	384.68	448.78	522.99	280.58	-7.6%	19.2%	18.8%	18.5%	18.2%	8.3%	

WATER UTILITY - UNDERWOOD SYSTEM





Underwood 6-Year CIP

Description	2019	2020	2021	2022	2023	2024	Total
Water Rights	\$ -	\$ 10,816	\$ -	\$ -	\$ -	\$ -	\$ 10,816
Galligan Springs PS Replacement	-	-	-	-	-	506,128	506,128
Shepherd Tank Replacement - Construction	78,000	-	-	-	-	-	78,000
Ternahan Roof Replacement	26,000	-	-	-	-	-	26,000
1,300 LF of eight-inch Main; Cooper Ave Spur to Sooter Road	78,000	243,360	-	-	-	-	321,360
Survey & Easements of Scoggins Road Phase 2	15,600	-	-	-	-	-	15,600
3,600 LF of eight-inch Main; Scoggins Road Phase 2 to Little Buck Creek Road	-	-	-	-	260,060	811,386	1,071,445
Replace Cooper Ave PRV Stations	-	-	89,989	-	-	-	89,989
2,500 LF of eight-inch Main; Scoggins PRV to Kollock Knapp Road	-	-	173,229	540,475	-	-	713,704
Evaluation of eight-inch Transmission Main	-	-	-	-	36,500	-	36,500
Leak Detection and Replacement	-	11,898	12,374	12,868	13,383	13,919	64,441
Hydrant Replacement	10,400	-	11,249	-	12,167	-	33,815
Underwood Water System Plan Update - 2020	41,600	43,264	-	-	-	-	84,864
AMI metering	-	-	-	-	182,498	-	182,498
System Improvements - General	36,400	-	-	-	-	-	36,400
Total	\$ 286,000	\$ 309,338	\$ 286,840	\$ 553,343	\$ 504,607	\$ 1,331,432	\$ 3,271,560



Underwood CIP (2025 – 2038)

Description	2025 & 2026	2027 & 2028	2029 & 2030	2031 & 2032	2033 & 2034	2035 & 2036	2037 & 2038	Total
Emergency Generators	\$ -	\$ 249,080	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 249,080
Galligan Springs PS Replacement	526,373	-	-	-	-	-	-	526,373
Loop Scooter Road to School House Road	-	-	-	325,855	-	-	-	325,855
Circle Drive: Replace four-inch Line	586,892	-	-	-	-	-	-	586,892
1,500 LF of eight-inch Main; Cook Underwood Road	132,751	414,184	-	-	-	-	-	546,935
Highland Orchard Road: Replace two-inch Line	-	-	-	1,020,440	-	-	-	1,020,440
Little Buck Creek Road: Replace four-inch Line	-	-	281,381	877,910	-	-	-	1,159,291
Cooper Avenue to Highway 14	-	185,401	578,450	-	-	-	-	763,850
Leak Detection and Replacement	29,530	31,939	34,545	37,364	-	-	-	133,378
Hydrant Replacement	13,159	14,233	15,395	16,651	18,009	19,479	21,068	117,995
Underwood Water System Plan Update - 2030	-	-	125,619	-	-	-	-	125,619
Waterline upgrade Projects	-	-	-	222,644	472,362	510,906	552,596	1,758,509
Annual Average	-	-	-	-	1,305,223	1,411,729	1,526,926	4,243,878
Total	\$ 1,288,705	\$ 894,836	\$ 1,035,391	\$ 2,500,864	\$ 1,795,594	\$ 1,942,115	\$ 2,100,591	\$ 11,558,096



Underwood: Residential Monthly Bill Impacts

Usage (ccf)	Existing Mo. Charges		Proposed Monthly Charges						
	2019	2020	2021	2022	2023	2024			
4	\$ 65.68	\$ 79.31	\$ 89.01	\$ 99.85	\$ 111.98	\$ 125.53	\$ 141.85		
6	72.36	84.91	95.29	106.90	119.89	134.39	151.86		
8	79.04	90.51	101.58	113.95	127.79	143.25	161.88		
10	85.72	96.11	107.86	121.01	135.70	152.12	171.89	Average	
25	143.02	169.61	190.35	213.54	239.47	268.44	303.34		
40	200.32	243.11	272.83	306.07	343.24	384.76	434.78		
55	257.62	316.61	355.32	398.61	447.01	501.09	566.23		
70	324.42	402.64	451.85	506.90	568.45	637.22	720.06		
85	395.97	494.93	555.42	623.08	698.73	783.25	885.07		

Usage (ccf)	\$ Variance from Existing Rates						% Variance from Existing Rates					
	2019	2020	2021	2022	2023	2024	2019	2020	2021	2022	2023	2024
4	\$ 13.63	\$ 9.69	\$ 10.84	\$ 12.12	\$ 13.55	\$ 16.32	20.8%	12.2%	12.2%	12.1%	12.1%	13.0%
6	12.55	10.38	11.61	12.98	14.50	17.47	17.4%	12.2%	12.2%	12.1%	12.1%	13.0%
8	11.47	11.06	12.38	13.84	15.46	18.62	14.5%	12.2%	12.2%	12.1%	12.1%	13.0%
10	10.39	11.75	13.14	14.69	16.42	19.77	12.1%	12.2%	12.2%	12.1%	12.1%	13.0%
25	26.59	20.73	23.19	25.93	28.97	34.90	18.6%	12.2%	12.2%	12.1%	12.1%	13.0%
40	42.79	29.72	33.24	37.16	41.53	50.02	21.4%	12.2%	12.2%	12.1%	12.1%	13.0%
55	58.99	38.70	43.29	48.40	54.08	65.14	22.9%	12.2%	12.2%	12.1%	12.1%	13.0%
70	78.22	49.21	55.05	61.55	68.77	82.84	24.1%	12.2%	12.2%	12.1%	12.1%	13.0%
85	98.96	60.49	67.66	75.65	84.52	101.82	25.0%	12.2%	12.2%	12.1%	12.1%	13.0%



Underwood: Orchard/Vineyard Monthly Bill Impacts

Usage (ccf)	Existing Mo. Charges		Proposed Monthly Charges							Average
	2019	2020	2021	2022	2023	2024	2025			
7	\$ 75.70	\$ 99.40	\$ 116.39	\$ 136.32	\$ 159.71	\$ 187.17	\$ 211.50			
15	104.82	135.80	157.24	182.15	211.10	244.78	276.60			
35	181.22	247.80	282.93	323.15	369.23	422.03	476.90			
45	219.42	303.80	345.77	393.65	448.29	510.66	577.05			
60	276.72	387.80	440.04	499.41	566.88	643.60	727.27			
75	348.27	484.12	557.95	643.36	742.20	856.64	968.00			
150	706.02	965.72	1,147.53	1,363.14	1,618.77	1,921.81	2,171.65			
300	1,421.52	1,928.92	2,326.68	2,802.69	3,371.92	4,052.16	4,578.94			
500	2,375.52	3,213.20	3,898.88	4,722.10	5,709.46	6,892.62	7,788.66			

Usage (ccf)	\$ Variance from Existing Rates						% Variance from Existing Rates						Average
	2019	2020	2021	2022	2023	2024	2019	2020	2021	2022	2023	2024	
7	\$ 23.70	\$ 16.99	\$ 19.93	\$ 23.39	\$ 27.46	\$ 24.33	31.3%	17.1%	17.1%	17.2%	17.2%	13.0%	
15	30.98	21.44	24.91	28.96	33.68	31.82	29.6%	15.8%	15.8%	15.9%	16.0%	13.0%	
35	66.58	35.13	40.22	46.08	52.81	54.86	36.7%	14.2%	14.2%	14.3%	14.3%	13.0%	
45	84.38	41.97	47.88	54.64	62.37	66.39	38.5%	13.8%	13.8%	13.9%	13.9%	13.0%	
60	111.08	52.24	59.37	67.48	76.72	83.67	40.1%	13.5%	13.5%	13.5%	13.5%	13.0%	
75	135.85	73.83	85.41	98.84	114.44	111.36	39.0%	15.3%	15.3%	15.4%	15.4%	13.0%	
150	259.70	181.81	215.61	255.64	303.04	249.84	36.8%	18.8%	18.8%	18.8%	18.7%	13.0%	
300	507.40	397.76	476.01	569.23	680.24	526.78	35.7%	20.6%	20.5%	20.3%	20.2%	13.0%	
500	837.68	685.69	823.21	987.36	1,183.16	896.04	35.3%	21.3%	21.1%	20.9%	20.7%	13.0%	