

Cedars of Tuam Water Service

2025 Annual Report



INTRODUCTION

This report provides a summary of the Cedars of Tuam Water Service for 2025. It includes a description of the service, summary of the water supply, demand, and production, drinking water quality, operations highlights, capital project updates and financial report.

SERVICE DESCRIPTION

The Cedars of Tuam Water Utility is a rural residential community located on Salt Spring Island. The service was created in 1970 and became a CRD service in 2002. The Cedars of Tuam Water Utility (Figure 1) is comprised of 16 parcels of land with 17 single-family equivalent connections.

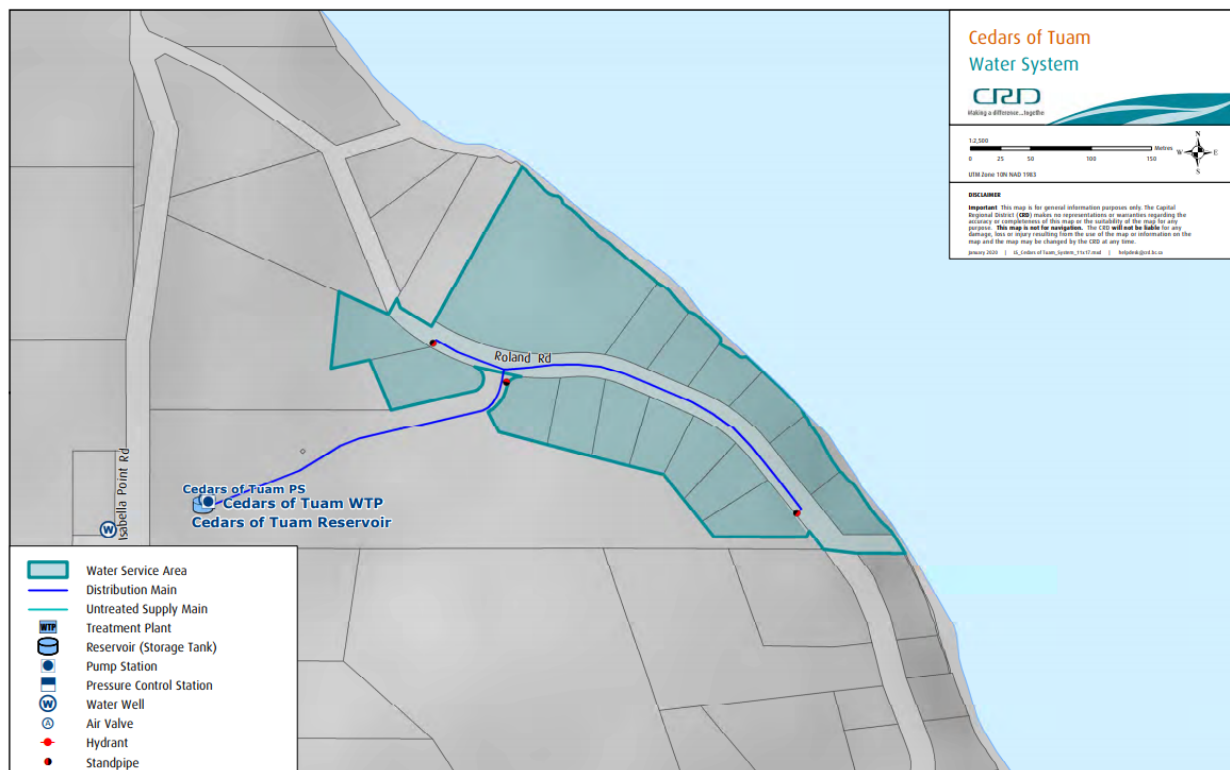


Figure 1: Cedars of Tuam Water Service

The Cedars of Tuam water system is primarily comprised of:

- One ground water source well
- a water treatment plant (WTP) that has a vortex sand separator and provides disinfection using sodium hypochlorite;
- 1 water reservoir – 46 m³ (10,000 lg);
- 650 meters of water distribution pipe;
- standpipes and gate valves;
- water service connections complete with water meters.

WATER PRODUCTION AND DEMAND

Referring to Figure 2, the amount of water extracted (water production) from the groundwater well prior to 2024 is unknown. This is the result of inaccurate water meter readings due to sand intrusion of the groundwater source. Sand from the well was creating a false read. As of late 2023, a new water meter was installed that is not influenced by the sand. The water production from the well in 2025 was 2,201 m³. The 2025 drought was especially challenging for the well and needed to be supplemented in October and November. 176 m³ of water was trucked in to sustain the demand within the system. That volume is not reflected in Figure 2 production volume as it came from an outside source.

Water demand (customer water billing) for the service totaled 1,035 cubic meters (m³) of water; 11% decrease from the previous year and a 23% decrease from the 5-year rolling average.

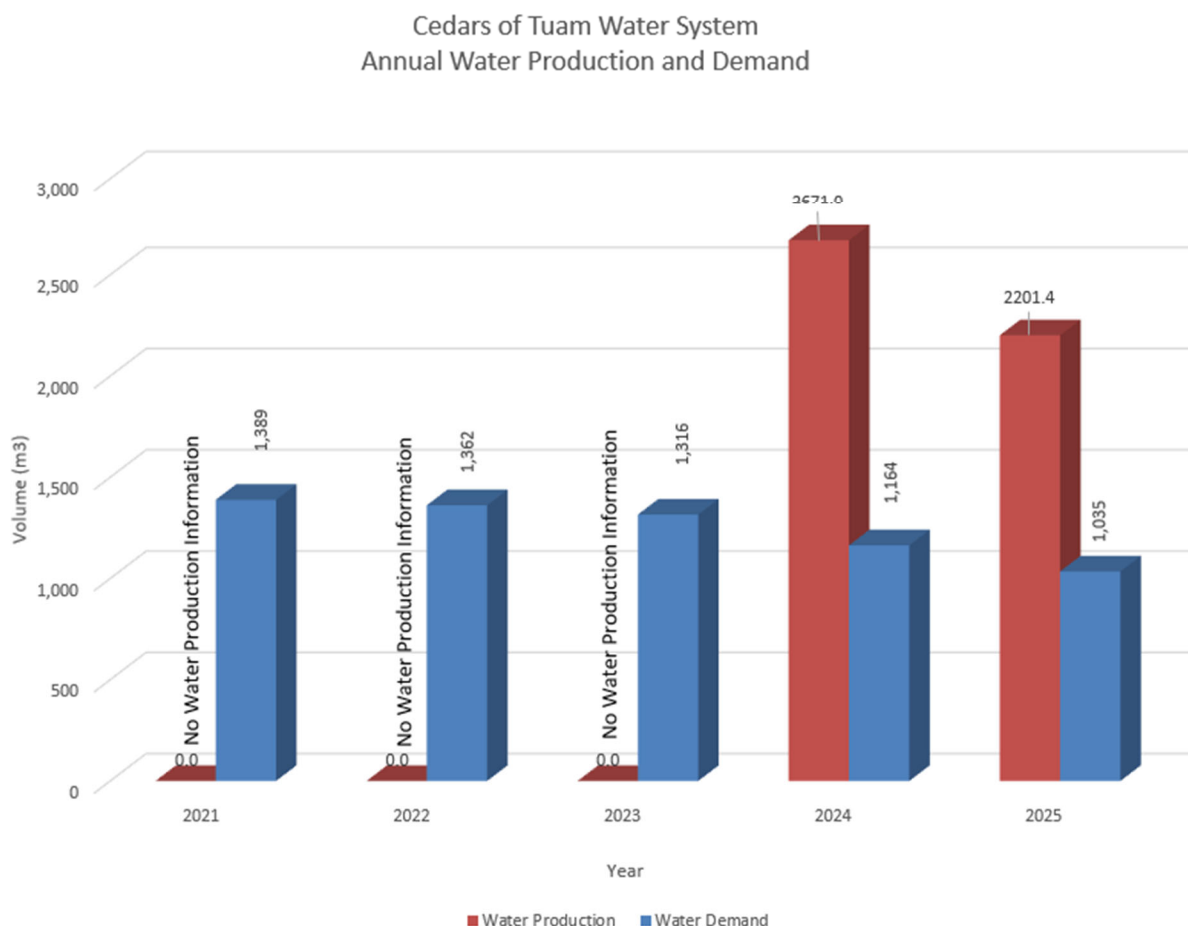


Figure 2: Cedars of Tuam Water Service Annual Water Production and Demand

The Cedars of Tuam Water System is fully metered, and water meters are read quarterly. Water meter information enables water production and consumption to be compared to estimated leakage losses in the distribution system. The difference between water produced and water demand (total metered consumption) is called non-revenue water and includes distribution leaks, residential meter error, and unmetered uses such as standpipe flushing, distribution system maintenance and process water for monitoring chlorine residual. Non-revenue water for 2025 was 1,166 m³ which represents 53% of the total water produced. The majority of the non-revenue water is attributed to residential meter error and weekly operational flushing from a stand-pipe as well as several leaks that were repaired during the reporting year. The CRD will continue to monitor the non-revenue water by comparing quarterly meter reads to water production over periods of time.

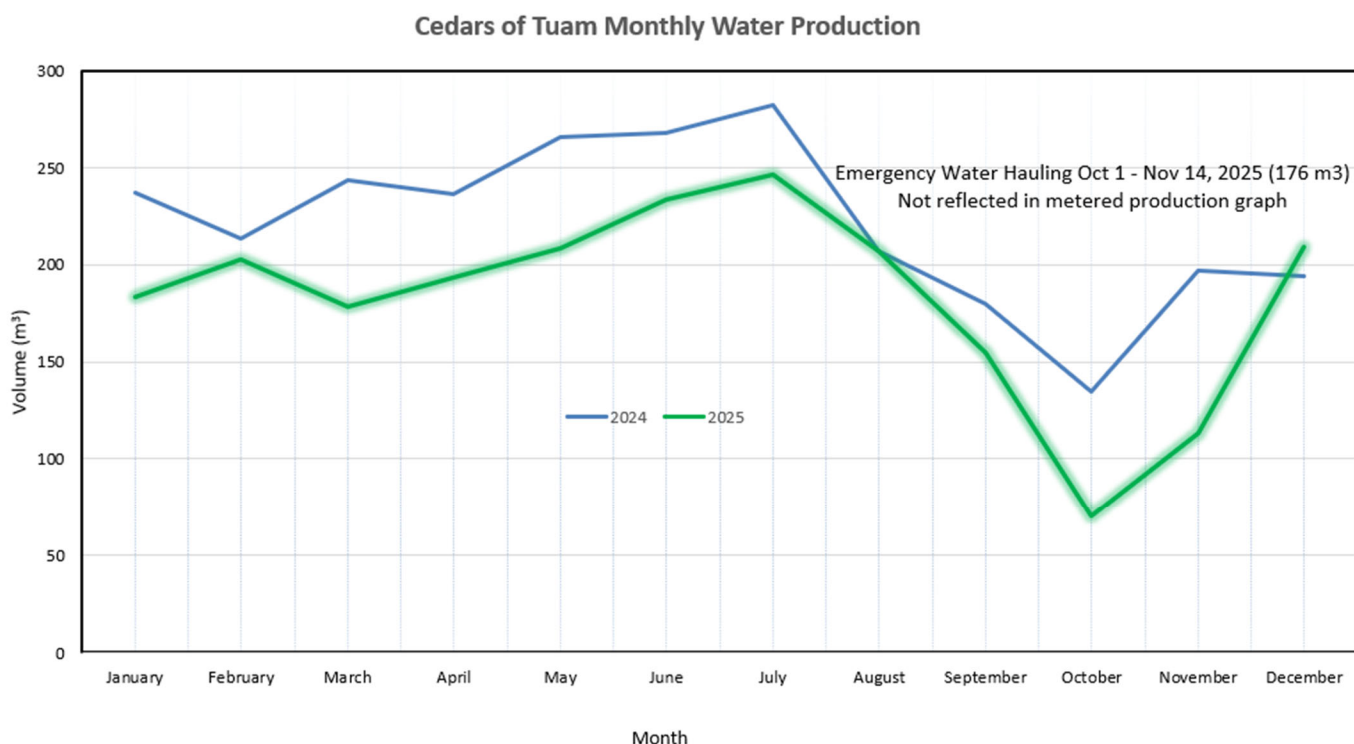


Figure 3: Cedars of Tuam Water Service Monthly Water Production

The monthly water production at Cedars of Tuam is represented in Figure 3. This graph demonstrates the struggle with the existing well to produce water during drought periods starting in August and extending into November each year. Water is hauled by truck to sustain the supply in the system as needed. There is slight increase in demand during the summer months as to be expected.

WATER QUALITY

The analytical results (biological, chemical and physical parameters) of water samples collected in 2025 from the Cedars of Tuam Water System indicated that the drinking water was of good quality and within Guidelines for Canadian Drinking Water Quality (GCDWQ) limits, including disinfection by-products. The treated water temperature exceeded the aesthetic objective from July through September. No indicator bacteria were found in the raw or treated water in 2025.

Typical Cedars of Tuam Water System drinking water quality characteristics for 2025 are summarized as follows:

- Source water from the well was free of *E.coli* and total coliform bacteria throughout the year.
- The raw water turbidity was consistently well below 1 NTU.
- Iron and Manganese concentrations were low throughout the year. For iron, this is a bit unusual in comparison to previous years where exceedances were frequently detected.
- Treated water was bacteriologically safe to drink all year in 2025, no indicator bacteria were found in any sample.
- The treated water turbidity leaving the treatment plant was consistently below 1 NTU during the year.
- Disinfection by-product concentrations were well below the GCDWQ limits. Total organic carbon concentrations were very low throughout 2025.
- The median annual free chlorine concentration in the system was an acceptable 0.67 mg/L.

Table 1 and 2 below provide a summary of the 2025 raw and treated water test results.

Water Quality data collected from this drinking water system can be reviewed on the CRD website: <https://www.crd.bc.ca/about/data/drinking-water-quality-reports/>

OPERATIONAL HIGHLIGHTS

The following is a summary of the major operational issues that were addressed during the 2024 reporting period:

- 211 Roland Rd service leak at meter
- 206 Roland Rd service line repair
- 226 Roland Road called out to isolate private side leak
- Replacement of leaking reservoir outlet valve

CAPITAL IMPROVEMENTS

The following are capital projects in progress or completed in 2025:

19-03 Safe Work Procedures

The safe work procedures have been developed as needed. This project has been closed.

21-05 Water Systems Upgrade

The scope includes replacing a chlorinator, level transducer and flow meter.

24-03 Public Engagement for Future Projects

This is a project to support informing and engaging the ratepayers on possible future projects requiring debt funding including petition or other approval process.

25-02 Sand Separator & Chlorine Analyzer

This project consists of installation of a sand separator and a chlorine analyzer to improve function of the well and treatment process.

25-01 Well Testing

This project is for the testing of the new well (WIN19325).

23-01 Electrical System Upgrade

The project is for the installation of the new electrical service mast, panel components for safety and code compliance.

The Capital Projects Financial Summary for 2025 can be found in Appendix A.

Upcoming Projects in 2026 include:

- 26-03 Investigation/decommissioning of unused wells
- 26-04 Health and Safety Improvements including eyewash/shower
- 26-05 Installation of new residential water meters

2025 FINANCIAL REPORT

Please refer to the attached 2025 Statement of Operations and Reserve Balances.

Revenue includes parcel taxes (Transfers from Government), fixed user fees (User Charges), water sales (Sale-Water), interest on savings (Interest earnings), transfers from the Operating Reserve Fund, and miscellaneous revenue such as late payment charges (Other revenue).

Expenses include all costs of providing the service. General Government Services includes budget preparation, financial management, utility billing and risk management services. CRD Labour and Operating Costs include CRD staff time as well as the costs of equipment, tools, and vehicles. Debt servicing costs are interest and principal payments on long term debt. Other Expenses includes all other costs to administer and operate the water system, including insurance, supplies, water testing, and electricity.

The difference between Revenue and Expenses is reported as Net revenue (expenses). Any transfers to or from capital or reserve funds for the service (Transfers to own funds) are deducted from this amount and it is then added to any surplus or deficit carry forward from the prior year, yielding an Accumulated Surplus (or deficit). In alignment with Local Government Act Section 374 (11), any deficit must be carried forward and included in next year's financial plan.

WATER SYSTEM PROBLEMS - WHO TO CALL:

To report any event or to leave a message regarding the Cedars of Tuam Water System, call either:

CRD water system emergency call centre:	1-855-822-4426 (toll free)
	1-250-474-9630 (toll)
CRD water system general enquiries (toll free):	1-800-663-4425

When phoning with respect to an emergency, please specify to the operator, the service area in which the emergency has occurred.

Submitted by:	Dan Ovington, BBA , Senior Manager, Salt Spring Island Electoral Area
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Concurrence:	Stephen Henderson, MBA, P.G.Dip.Eng, BSc, General Manager, Electoral Area Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

Appendix A: [2025 Capital Projects List – Financial Summary](#)

Appendix B: [2025 Statement of Operations and Reserve Balances](#)

For questions related to this Annual Report please email saltspring@crd.bc.ca

Table 1: 2025 Summary of Raw Water Test Results, Cedars of Tuam Water System										
PARAMETER		2025 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2015 - 2024 ANALYTICAL RESULTS			
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range Minimum Maximum		≤ = Less than or equal to	Median	Samples Analyzed	Range Minimum Maximum	
ND means Not Detected by analytical method used										
Physical Parameters/Biological										
Hardness as CaCO ₃	mg/L	68.65	4	66.2	69	No Guideline Required	63.1	31	54.5	89.8
Turbidity	NTU	0.25	12	0.15	0.6	1.0 NTU	0.46	88	< 0.14	28
pH	pH Units	Not tested in 2025				7.0-10.5 AO	6.77	25	2.2	7.4
Carbon, Total Organic	mg/L	0.59	2	0.47	0.71	Guideline Archived	0.745	18	0.4	1.3
Water Temperature	Degrees C	11	25	9.5	13	≤ 15 AO	11	147	1.47	16
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	< 1	12	< 1	< 1	0 MAC	< 1	122	<1	56
<i>E. coli</i>	CFU/100 mL	< 1	12	< 1	< 1	0 MAC	< 1	122	<1	1
Hetero. Plate Count, 7 day	CFU/1 mL	Not tested in 2024					200	41	< 10	3630
Parasites										
<i>Cryptosporidium</i> , Total oocysts	oocysts/100 L	Last tested in 2014				Zero detection desirable	Last tested in 2014			
<i>Giardia</i> , Total cysts	cysts/100 L	Last tested in 2014				Zero detection desirable	Last tested in 2014			
Metals										
Aluminum	ug/L as Al	5.65	4	< 3	9.5	2900 MAC / 100 OG	7.5	31	< 3	142
Antimony	ug/L as Sb	< 0.5	4	< 0.5	< 0.5	6 MAC	< 0.5	31	< 0.5	< 0.5
Arsenic	ug/L as As	< 0.1	4	< 0.1	< 0.1	10 MAC	< 0.1	31	< 0.1	0.13
Barium	ug/L as Ba	4.35	4	4.2	4.8	1000 MAC	5	31	3.8	11.8
Beryllium	ug/L as Be	< 0.1	4	< 0.1	< 0.1		< 0.1	31	< 0.1	< 0.1
Bismuth	ug/L as Bi	< 1	4	< 1	< 1		< 1	31	< 1	< 1
Boron	ug/L as B	157.5	4	132	209	5000 MAC	65	31	< 50	260
Cadmium	ug/L as Cd	< 0.01	4	< 0.01	< 0.01	7 MAC	< 0.01	31	< 0.01	0.012
Calcium	mg/L as Ca	21	4	20	21.6	No Guideline Required	19.3	31	15.8	29.9
Chromium	ug/L as Cr	< 1	4	< 1	< 1	50 MAC	< 1	31	< 1	1.2
Cobalt	ug/L as Co	< 0.2	4	< 0.2	< 0.2		< 0.2	31	< 0.2	< 0.5
Copper	ug/L as Cu	3.24	4	2.5	4.09	2000 MAC / ≤ 1000 AO	4	31	1.94	24
Iron	ug/L as Fe	33	4	16.7	50	≤ 100 AO	42.75	32	9.9	921
Lead	ug/L as Pb	< 0.2	4	< 0.2	< 0.2	5 MAC	< 0.2	31	< 0.2	1.9
Lithium	ug/L as Li	< 2	4	< 2	< 2		< 2	21	< 2	< 5
Magnesium	mg/L as Mg	3.89	4	3.5	4.15	No Guideline Required	3.65	31	2.96	4.5
Manganese	ug/L as Mn	2.55	4	< 1	6.9	120 MAC / ≤ 20 AO	1.4	31	< 1	14
Molybdenum	ug/L as Mo	< 1	4	< 1	< 1		< 1	31	< 1	< 1
Nickel	ug/L as Ni	< 1	4	< 1	< 1		< 1	31	< 1	4.3
Potassium	mg/L as K	0.883	4	0.846	0.927		0.844	31	0.585	0.965
Selenium	ug/L as Se	< 0.1	4	< 0.1	< 0.1	50 MAC	< 0.1	31	< 0.1	0.11
Silicon	ug/L as Si	6990	4	6870	7690		7050	31	6440	7970
Silver	ug/L as Ag	< 0.02	4	< 0.02	< 0.02	No Guideline Required	< 0.02	31	< 0.02	< 0.02
Sodium	mg/L as Na	17.85	4	16.8	18.4	≤ 200 AO	17.5	31	14.3	22.8
Strontium	ug/L as Sr	79.95	4	72.7	83.1	7000 MAC	77.7	31	63.9	98.4
Sulfur	mg/L as S	< 3	4	< 3	< 3		< 3	31	< 3	< 3
Tin	ug/L as Sn	< 5	4	< 5	< 5		< 5	31	< 5	< 5
Titanium	ug/L as Ti	< 5	4	< 5	< 5		< 5	31	< 5	8.7
Thallium	ug/L as Tl	< 0.01	4	< 0.01	< 0.01		< 0.01	31	< 0.01	< 0.05
Uranium	ug/L as U	< 0.1	4	< 0.1	< 0.1	20 MAC	< 0.1	31	< 0.1	< 0.1
Vanadium	ug/L as V	< 5	4	< 5	< 5		< 5	31	< 5	< 5
Zinc	ug/L as Zn	6.1	4	< 5	6.8	≤ 5000 AO	6.9	31	< 5	22.5
Zirconium	ug/L as Zr	< 0.1	4	< 0.1	< 0.1		< 0.1	31	< 0.1	< 0.5

Table 2: 2025 Summary of Treated Water Test Results, Cedars of Tuam Water System										
PARAMETER		2025 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2015-2024 ANALYTICAL RESULTS			
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range		≤ = Less than or equal to	Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum	Maximum
ND means Not Detected by analytical method used										
Physical Parameters										
Hardness	mg/L as CaCO3	80.95	4	76.3	104	AO pH 7.0 -10.5	75.55	26	61.5	91.9
pH	pH units	Not tested in 2025					7	70	6.5	8.1
Turbidity	NTU	0.3	48	0.1	0.85		0.4	313	0.05	17
Total Organic Carbon	mg/L	0.535	2	0.27	0.8		0.66	19	0.31	1.12
Water Temperature	deg C	10.15	94	3.5	19	≤ 15 AO	11	555	5	20
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	< 1	48	< 1	< 1	0 MAC	< 1	347	<1	1
E. coli	CFU/100 mL	< 1	48	< 1	< 1	0 MAC	< 1	348	<1	< 1
Hetero. Plate Count, 7 day	CFU/1 mL	Not tested in 2025				No Guideline Required	40	3	10	130
Disinfectants										
Disinfectants										
Chlorine, Free Residual	mg/L as Cl2	0.67	110	0.21	1.11		0.45	1133	0	2.4
Chlorine, Total Residual	mg/L as Cl2	0.89	4	0.86	1.19		0.53	618	0.17	2.5
Disinfection By-Products										
Disnfection Byproducts										
Bromodichloromethane	ug/L	6.95	2	6.2	7.7	100 MAC	6.2	19	0.61	13
Bromoform	ug/L	1.65	2	1.2	2.1		1.2	19	< 0.1	2
Chloroform	ug/L	6.25	2	5.2	7.3		6.2	19	3.8	18
Chlorodibromomethane	ug/L	6.5	2	6.4	6.6		5.4	19	<0.1	8.4
Total Trihalomethanes	ug/L	21	2	20	22		20	19	8.73	39
Haloacetic Acids (HAA)										
HAA5	ug/L	Not tested in 2025				80 MAC	< 5	3	3.61	5.9
Metals										
Aluminum	ug/L as Al	4.55	4	3.2	7.8	2900 MAC / 100 OG	5.6	26	3.5	276
Antimony	ug/L as Sb	< 0.5	4	< 0.5	< 0.5	6 MAC	< 0.5	26	< 0.5	< 0.5
Arsenic	ug/L as As	< 0.1	4	< 0.1	0.18	10 MAC	< 0.1	26	< 0.1	0.62
Barium	ug/L as Ba	11.8	4	10.6	12.5	1000 MAC	10.6	26	4.5	15.8
Beryllium	ug/L as Be	< 0.1	4	< 0.1	< 0.1		< 0.1	26	< 0.1	< 0.1
Bismuth	ug/L as Bi	< 1	4	< 1	< 1		< 1	26	< 1	< 1
Boron	ug/L as B	117.5	4	98	159	5000 MAC	77.5	26	< 50	165
Cadmium	ug/L as Cd	< 0.01	4	< 0.01	< 0.01	7 MAC	< 0.01	26	< 0.01	0.011
Calcium	mg/L as Ca	26.95	4	25.5	37.8	No Guideline Required	26.35	26	18.5	35
Chromium	ug/L as Cr	1.25	4	< 1	2.3	50 MAC	1.1	26	< 1	3.2
Cobalt	ug/L as Co	< 0.2	4	< 0.2	< 0.2		< 0.2	26	< 0.2	0.67
Copper	ug/L as Cu	7.525	4	4.61	9.95	2000 MAC / ≤ 1000 AO	7.415	26	1.53	83.1
Iron	ug/L as Fe	33.7	4	15.2	37.2	≤ 100 AO	41.25	26	14.2	2440
Lead	ug/L as Pb	0.21	4	< 0.2	0.23	5 MAC	0.325	26	< 0.2	5.76
Lithium	ug/L as Li	< 2	4	< 2	< 2		< 2	17	< 2	< 2
Magnesium	mg/L as Mg	3.08	4	2.3	3.56	No Guideline Required	2.375	26	1.04	4.69
Manganese	ug/L as Mn	1.1	4	< 1	2.1	120 MAC / ≤ 20 AO	< 1	26	< 1	73
Molybdenum	ug/L as Mo	< 1	4	< 1	1.8		< 1	26	< 1	1
Nickel	ug/L as Ni	< 1	4	< 1	< 1		< 1	26	< 1	1.8
Potassium	mg/L as K	0.87	4	0.764	0.921		0.827	26	0.705	0.952
Selenium	ug/L as Se	< 0.1	4	< 0.1	< 0.1	50 MAC	< 0.1	26	< 0.1	< 0.1
Silicon	ug/L as Si	7785	4	6760	8700		7495	26	6170	8210
Silver	ug/L as Ag	< 0.02	4	< 0.02	< 0.02	No Guideline Required	< 0.02	26	< 0.02	< 0.02
Sodium	mg/L as Na	17.9	4	12.9	20.1	≤ 200 AO	18.15	26	15.1	20.7
Strontium	ug/L as Sr	85.85	4	82.7	104	7000 MAC	79.5	26	68.5	98
Sulphur	mg/L as S	< 3	4	< 3	< 3		< 3	26	< 3	< 3
Thallium	ug/L as Tl	< 0.01	4	< 0.01	< 0.01		< 0.01	26	< 0.01	< 0.01
Tin	ug/L as Sn	< 5	4	< 5	< 5		< 5	26	< 5	< 5
Titanium	ug/L as Ti	< 5	4	< 5	< 5		< 5	26	< 5	16
Uranium	ug/L as U	< 0.1	4	< 0.1	0.43	20 MAC	< 0.1	26	< 0.1	0.27
Vanadium	ug/L as V	< 5	4	< 5	< 5		< 5	26	< 5	6.4
Zinc	ug/L as Zn	9.8	4	7.3	14.8	≤ 5000 AO	10.75	26	< 5	268
Zirconium	ug/L	< 0.1	4	< 0.1	< 0.1		< 0.1	26	< 0.1	0.26

2.622 - Cedars of Tuam Water

Capital Projects - Financial Summary

Updated @ 31/12/2025

Year	Project#	Capital Plan#	Status	Capital Project Description	Total Project Budget	Spending		Funding Sources			Total Funding in Place
						Expenditure Actuals	Remaining Spending	CRF	CWF	Grant	
2019	CE.699.4502	19-03	Closed	Safe Work Procedures	3,000	767	2,233	3,000	-	-	3,000
2021	CE.792.1601	21-05	Open	Water Systems Upgrade	36,000	17,163	18,837	6,000	-	30,000	36,000
2022	CE.802.8301	24-03	Open	Public Engagement	5,000	-	5,000	5,000	-	-	5,000
2025	CE.792.4601	25-02	Open	Sand Separator & Chlorine Analyzer	8,000	29	7,972	8,000			8,000
2025	CE.887.4501	25-01	Open	Well Testing for WIN 19325-Study	58,000	-	58,000	8,000	50,000		58,000
2025	CE.887.4601	23-01	Open	Electrical System Upgrade	50,000	9,554	40,446	8,000	42,000		50,000
				Totals	160,000	27,513	132,488	38,000	92,000	30,000	160,000

CAPITAL REGIONAL DISTRICT

CEDARS OF TUAM WATER

Statement of Operations (Unaudited)

For the Year Ended December 31, 2025

	2025	2024
Revenue		
User Charges	44,690	39,061
Sale - Water	9,918	9,657
Other revenue from own sources:		
Interest earnings	53	20
Recovery from Claim Reimbursement	12,656	2,800
Other revenue	361	223
Total Revenue	67,678	51,761
Expenses		
General government services	1,799	2,106
Contract for Services	120	181
CRD Labour and Operating costs	34,122	31,813
Other expenses	20,445	9,256
Total Expenses	56,486	43,356
Net revenue (expenses)	11,192	8,405
Transfers to own funds:		
Capital Reserve Fund	7,522	8,405
Operating Reserve Fund	3,670	-
Annual surplus/(deficit)	-	-
Accumulated surplus/(deficit), beginning of year		
Accumulated surplus/(deficit), end of year	\$ -	-

CAPITAL REGIONAL DISTRICT

CEDARS OF TUAM WATER Statement of Reserve Balances (Unaudited) For the Year Ended December 31, 2025

	Capital Reserve	
	2025	2024
Beginning Balance	25,370	16,170
Transfer from Operating Budget	7,522	8,405
Transfer from Completed Capital Projects	2,233	-
Transfer to Capital Project	(24,000)	-
Interest Income	171	795
Ending Balance	11,296	25,370

	Operating Reserve	
	2025	2024
Beginning Balance	2,865	2,722
Transfer from Operating Budget	3,670	-
Transfer to Operating Budget	-	-
Interest Income	142	143
Ending Balance	6,677	2,865