



City of Marco Island

Meeting Date: November 3, 2025

To: City Council

From: Jeffrey E. Poteet, General Manager- Water & Sewer

Through: Mike McNees, City Manager

Re: Water and Sewer (W&S) Departmental Report

Both the City's drinking water and wastewater operations follow Florida Department of Environmental Protection (FDEP) regulations and all other regulatory entity requirements. The W&S Department is operating within the approved budget. Below is a summary of department activities during the past month.

North Water Treatment Plant (NWTP) Lime Sludge Press Replacement

At the NWTP, the water treatment process begins with the addition of lime to raw water to remove hardness by precipitating hardness-causing minerals (primarily calcium and magnesium) from solution. The resulting lime slurry is subsequently conveyed to a lime sludge press for dewatering prior to offsite disposal. Efficient dewatering is critical to minimize hauling volumes and maintaining sludge handling capacity.



The existing lime sludge press was acquired as a used unit and installed in 2004. It operates approximately 8–10 hours per day under continuous load. Due to prolonged exposure to a wet and highly corrosive environment, key components of the press (such as the screw conveyor, press plates, and bearings) have experienced significant corrosion and wear, necessitating weekly repairs to sustain operational performance and prevent unplanned downtime.



Water and Sewer staff have obtained a turnkey proposal from the original manufacturer for a new lime sludge press, including both purchase and installation, with a total project cost of \$376,343. Replacement of the press will improve reliability, reduce maintenance frequency, and enhance sludge dewatering efficiency. The department plans to present this proposal to City Council for consideration in October.

2025 Smoke Testing of the City's Sewer Collection System

Smoke testing is an essential maintenance procedure conducted annually by the City as part of its routine inspection program to identify leaks, defects, or stormwater inflows within the sewer system. The test was performed across the entire Marco Island sewer network. The contractor utilized a non-toxic, odorless smoke oil introduced into the sewer lines, allowing observations of smoke emissions to pinpoint potential problem areas.



At the end of September, the contractor completed the smoke testing and identified a total of 211 deficiencies, consisting of 183 sewer laterals, 8 chimney, and 20 rings/covers. Of these, 120 defects 57% were located on private property. The Collection and Distribution Team has prioritized and is addressing the deficiencies identified within the public right-of-way and roadway areas. Defects identified on private property were communicated to the respective property owners through official correspondence, and the City will verify corrective actions taken in the next month.



The project was completed on schedule and within budget.

South Water Treatment Plant (SWTP) Odor Control Rehabilitation Project

The construction work on the SWTP Odor Control System is approximately 75% complete, and the system is already operational and showing significant improvement. The contractor is currently replacing pipes, airflow isolation valves, gauges, and nine control panels. Substantial completion of this project is scheduled for mid-November. The construction remains within budget and ahead of schedule.

Before



After



South Water Treatment Plant (SWTP) West High Service Pump Station (HSPS)

Significant progress has been made over the past two months on the construction of the West HSPS. The roof has been completed; skylights are being installed; the building has been painted; doors have been installed; lightning protection and fire suppression systems have been installed; electrical equipment and wiring have been completed; and LCEC has provided power to the new building.

The engineers have obtained approval from FDEP to place the new mains into service. The contractor is scheduled to connect the new mains to the existing system during the third week of October, followed by the installation of pumps in the following week. Additionally, the contractor will conduct programming and testing of the equipment during the last week of October and the first week of November.

The project remains on track for timely completion and within budget.

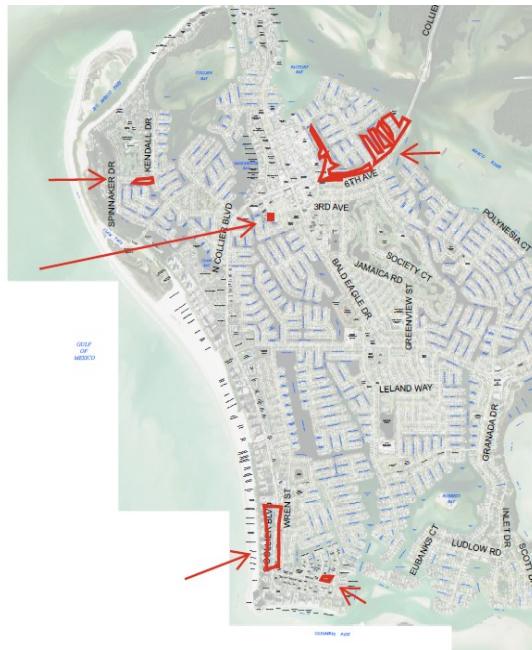


North Marco Water Main Improvements

The replacement of the existing 4-inch asbestos cement water main with an 8-inch PVC water main along Lee Avenue and Bald Eagle Drive has been successfully completed. The tie-in to the 10-inch water main on Bald Eagle Drive was performed on October 14, 2025, with minimal service interruption. The contractor will commence the second part of the project, which involves replacing the existing water main along the Utility Alley Way from Lee Avenue to Tampa Place, within the next few weeks. Upon completion, the new water main will establish a continuous loop within the system. The project remains on budget and schedule.



Water Service Interruptions with Boil Water Notice (BWN)			
Month	Number of Service Calls Resulting in a BWN	Number of Customers	Large Interruptions 50 Customer or More
Oct-24	5	320	Aquarius 50, Marco Villas-68,6000 Royal Marco Way-
Nov-24	6	383	6000 Royal marco Way-78, Tradewinds
Dec-24	3	160	1771 Mainsail 100, 901 South Collier 52.
Jan-25	3	66	
Feb-25	2	40	
March-25	0	0	NO PRECAUTIONARY BOIL WATER NOTICES
April-25	1	72	72 units at Stevens Landing
May-25	3	32	Town Center-7 Units
June-25	3	37	
July-25	3	367	Smokehouse Bay-349
Aug-25	3	291	Smokehouse Bay, Sandollar, Westview
Sept-25	6	236	Court Yard Towers-12



Treatment Plant Data							
Starting Date:		7/1/2025		Rain Fall for Time Period		5.30 Inches	
Ending Date:		7/30/2025		Average Daily Flow (ADF)			
Aquifer Storage & Recovery				Million Gallons per Day (MGD)			
ASR - Injection Avg. Daily Flow		6.06 MGD		Jul-25		"U" Undetected - results below	
ASR - Recovery Avg. Daily Flow		0.00 MGD		detection limit			
Marco Island Drinking Water							
				Max Day	Max Day	Flow	
Combined Consumer ADF		9.55 MGD		7/28/2025	11.43	MGD	
NWTP Consumer ADF		3.42 MGD		7/21/2025	3.94	MGD	
SWTP Consumer ADF		6.14 MGD		7/28/2025	7.58	MGD	
Finished Water Testing							
Minimum Chlorine Residual		3.30 mg/L					
		Maximum	Minimum			Maximum	Minimum
Turbidity	0.01	0.01	NTU	Chlorides	128	115	mg/L
Total Dissolved Solids	286.00	252.00	mg/L	Color	8	1	mg/L
P-Alkalinity	8.00	3.00	mg/L	Phosphate	0.99	0.65	mg/L
M-Alkalinity	41.00	26.00	mg/L	Ammonia	0.96	0.59	mg/L
Cal-Hardness	92.00	56.00	mg/L	Aluminum	0.1	0.03	mg/L
Total Hardness	120.00	95.00	mg/L	pH	8.99	8.7	SU
Jul-25 Wastewater - RWPF				Monthly Testing			
Average Flow		Monthly Max Day		Influent		Effluent	
Influent	2.20 MGD	7/4/2025	2.92	BOD	231.2	6.28	mg/L
Reuse	1.47 MGD	7/21/2025	2.19	TSS	96.8	0.72	mg/L
Deep Well	0.713 MGD	7/4/2025	1.808	Total N	NA	5.1	mg/L
				Total P	4	3.84	mg/L

Treatment Plant Data							
Starting Date:		8/1/2025		Rain Fall for Time Period		5.80 Inches	
Ending Date:		8/31/2025		Average Daily Flow (ADF)			
Aquifer Storage & Recovery				Million Gallons per Day (MGD)			
ASR - Injection Avg. Daily Flow		6.23 MGD		Aug-25		"U" Undetected - results below	
ASR - Recovery Avg. Daily Flow		0.00 MGD		detection limit			
Marco Island Drinking Water							
				Max Day	Max Day	Flow	
Combined Consumer ADF		9.25 MGD		8/2/2025	11.18	MGD	
NWTP Consumer ADF		3.61 MGD		8/6/2025	4.68	MGD	
SWTP Consumer ADF		5.65 MGD		8/2/2025	7.20	MGD	
Finished Water Testing							
Minimum Chlorine Residual		3.40 mg/L					
		Maximum	Minimum			Maximum	Minimum
Turbidity	0.01	0.01	NTU	Chlorides	117	101	mg/L
Total Dissolved Solids	251.00	235.00	mg/L	Color	8	2	mg/L
P-Alkalinity	10.00	5.00	mg/L	Phosphate	1.29	0.2	mg/L
M-Alkalinity	52.00	33.00	mg/L	Ammonia	1.36	0.83	mg/L
Cal-Hardness	80.00	66.00	mg/L	Aluminum	0.09	0.03	mg/L
Total Hardness	102.00	78.00	mg/L	pH	9.04	8.82	SU
Aug-25 Wastewater - RWPF				Monthly Testing			
Average Flow		Monthly Max Day		Influent		Effluent	
Influent	2.18 MGD	8/10/2025	3.59	BOD	199	5.05	mg/L
Reuse	1.78 MGD	8/5/2025	2.4	TSS	218	1.2	mg/L
Deep Well	0.392 MGD	8/10/2025	1.971	Total N	NA	8.39	mg/L
				Total P	4.5	4.33	mg/L