



City of Marco Island

Meeting Date: July 7, 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 Marco Main Improvements

The City of Marco Island is undertaking a critical infrastructure upgrade to improve water distribution and fire protection in the North Marco area. The existing water system in this region currently consists of a mix of 4-inch and 8-inch asbestos cement (AC) pipes.

This project will include the following improvements:

- Replacement of the existing 8-inch AC main along Bald Eagle Drive, extending from Tampa Place to Palm Street, with new piping.
- Installation of a new 10-inch PVC water main to replace the aging 4-inch AC mains on Tampa Place and Kerr Court.
- Creation of a closed-loop system, significantly enhancing water circulation and capacity for fire flow across the area.

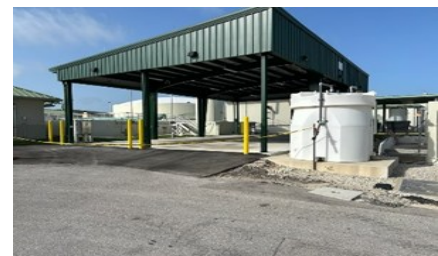


To initiate the project, the City will convene a kickoff meeting in the coming weeks. This coordination session will include City staff, the selected contractor, engineering consultants, and an archaeologist to address site considerations prior to construction.

Construction is anticipated to begin this summer.

C&D Building & Open Storage Structure

The construction of the Open Storage Structure is almost complete. The contractor is currently addressing the final punch list items and scheduling the final inspections. It remains on track to receive the certificate of occupancy in July.



Construction activities for the C&D Building are ongoing. The contractor has installed the drop ceilings, flooring, and cabinetry. Concrete curbs and sidewalks have also been completed in the parking lot. Paving of the parking lot is scheduled for the last week of June. The project remains on budget and on schedule for completion by the end of July.



Smoke Testing of the City's Sanitary Sewer Collection System

As part of its ongoing infrastructure maintenance program, the Water & Sewer (W&S) Department routinely conducts smoke testing on the City's gravity sanitary sewer collection system. This test is scheduled every five years and is designed to assess the condition and integrity of the system. Funding for this work is included in the FY2025 W&S Operating Budget, with a purchase order to be presented to the City Council for consideration in July.

Smoke testing is a widely accepted, cost-effective, and non-invasive method used to identify defects and potential sources of inflow and infiltration (I&I) in gravity-fed sanitary sewer systems. I&I can significantly impact system efficiency and lead to sanitary sewer overflows, increased treatment costs, and damage to public and private property.

Key objectives of the smoke testing process include:

- Detecting structural defects such as cracked or broken pipes
- Identifying uncapped or damaged sewer cleanouts
- Locating leaking or poorly sealed manhole covers
- Discovering improper or unauthorized building connections to the sewer system



During testing, non-toxic, non-staining, and non-hazardous smoke is forced into sections of the sewer system using a high-powered fan inserted into an open manhole. If the system is functioning correctly, the smoke will travel through the sewer mains and escape through plumbing vents, typically seen exiting through rooftops.

If smoke escapes from other locations such as:

- Cracks in sewer lines
- Open or missing cleanout caps
- Leaking manhole structures
- Defects inside private buildings or yards



These defects indicate possible problem areas where stormwater or groundwater could be infiltrating the system or where sewer gases could be escaping.

A sewer cleanout is a vital maintenance feature: a 6-inch vertical pipe connected to the lateral sewer line that links private properties to the public sewer system. Cleanouts are used for accessing the line during cleaning or removal of blockages.

Missing or broken cleanout caps are a common defect discovered during smoke testing. These defects are significant because they allow stormwater to enter the sewer system during rain events (inflow), and below-grade breaks can permit groundwater to infiltrate the system, both contributing to system overloading.

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

Construction of the walls for the Southwest Treatment Plant (SWTP) West High Service Pump Station (HSPS) has been completed, following delays caused by the late delivery of the required split-face masonry blocks.

The next phase of the project includes:

- End of June: Installation of concrete slabs for equipment and control panels.
- Mid-July: Installation of the roof structure.
- Following Roof Completion: Placement of equipment, pumps, and control panels.



A critical milestone is the connection of the new water mains to the existing distribution system, tentatively scheduled for the end of July. This task will require careful coordination with the water treatment plants, as it involves temporarily shutting down the South Plant for several hours.



Despite the earlier delay, the project remains on budget and is progressing according to the updated schedule.

Manhole Rehabilitation Project FY2025

The FY2025 Manhole Rehabilitation Project involves the repair and structural lining of existing sanitary sewer manholes located throughout Marco Island, Florida. Work will take place along Marco Lake Drive, Front Street, 1st Avenue, 2nd Avenue, 3rd Avenue, Quail Drive, 5th Avenue, 6th Avenue, and Nassau Court.

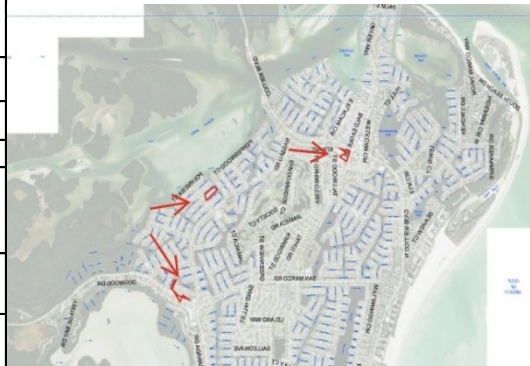
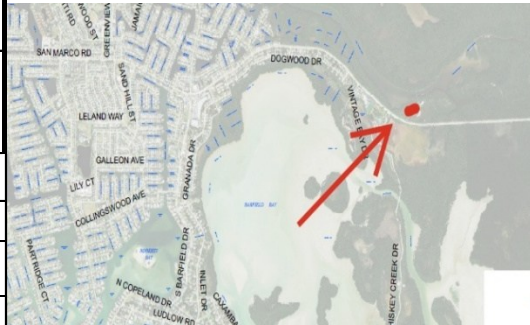
A total of 35 manholes, each 4 feet in diameter, will be rehabilitated to address structural wear, prevent infiltration, and improve the overall reliability of the sewer system. Repairs will be made as needed based on field conditions.

This annual maintenance project is scheduled to begin on July 14 and is expected to last approximately two months.



Prior to mobilization, the contractor will submit a Maintenance of Traffic (MOT) plan for approval by the appropriate City departments to ensure safety and minimize disruptions to traffic and residents.

Water Service Interruptions with Boil Water Notice (BWN)			
Month	Number of Service Calls Resulting in a BWN	Number of Customer s	Large Interruptions 50 Customer or More
June-24	4	229	4000 Royal Marco Way-
July-24	4	170	San Marco Villas-65
Aug-24	0	0	****NOTE NO PRECAUTIONARY BOIL WATER
Sept-24	4	307	Marco Villas-68 Twice, and
Oct-24	5	320	Aquarius 50, Marco Villas-68, 6000 Royal Marco Way- 78, Seawatch-80
Nov-24	6	383	6000 Royal marco Way-78, Tradewinds- 204
Dec-24	3	160	1771 Mainsail 100, 901 South Collier
Jan-25	3	66	
Feb-25	2	40	
March-25	0	0	****NOTE NO PRECAUTIONARY BOIL WATER NOTICES- MARCH
April-25	1	72	72 units at Stevens Landing
May-25	3	32	Town Center-7 Units



Treatment Plant Data							
Starting Date:		4/1/2025		Rain Fall for Time Period		0.20 Inches	
Ending Date:		4/30/2025		Average Daily Flow (ADF) Million Gallons per Day (MGD) "U" Undetected - results below detection limit			
Aquifer Storage & Recovery							
ASR - Injection Avg. Daily Flow		0.00 MGD					
ASR - Recovery Avg. Daily Flow		3.91 MGD					
Marco Island Drinking Water							
		Max Day		Max Day		Flow	
Combined Consumer ADF		11.59 MGD		4/13/2025		16.67 MGD	
NWTP Consumer ADF		4.07 MGD		4/7/2025		4.57 MGD	
SWTP Consumer ADF		7.52 MGD		4/13/2025		12.87 MGD	
Finished Water Testing							
Minimum Chlorine Residual		3.40 mg/L					
		Maximum Minimum		Maximum Minimum			
Turbidity		0.01 0.01 NTU		Chlorides		130 120 mg/L	
Total Dissolved Solids		283.00 250.00 mg/L		Color		9 0 mg/L	
P-Alkalinity		7.00 3.00 mg/L		Phosphate		0.85 0.45 mg/L	
M-Alkalinity		37.00 30.00 mg/L		Ammonia		0.85 0.62 mg/L	
Cal-Hardness		88.00 76.00 mg/L		Aluminum		0.06 0.02 mg/L	
Total Hardness		120.00 100.00 mg/L		pH		9.01 8.63 SU	
Apr-25 Wastewater - RWPF				Monthly Testing			
Average Flow		Monthly Max Day		Influent		Effluent	
Influent		2.38 MGD		4/5/2025		2.68	
Reuse		2.38 MGD		4/18/2025		2.7	
Deep Well		0.038 MGD		4/8/2025		0.193	