



City of Marco Island

Meeting Date: September 9, 2024
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 Water and Sewer (W&S) department is operating within the approved budget. Below is a summary of department activities during the past month.

Annual Temporary Modification to the Drinking Water Disinfection Process

The City of Marco Island (City) will temporarily modify the disinfection process for the potable (drinking) water supply in your area (Both Marco Island and Marco Shores). From September 1, 2024, through September 30, 2024, the water will be disinfected using free chlorine instead of chloramines. This change to free chlorine, a stronger disinfectant, is necessary for the city to conduct an annual water distribution system purge, as recommended by the Florida Department of Environmental Protection for utilities employing chloramines.

The conversion process will commence on September 1, 2024, and aims to ensure the continued safety and quality of our water supply. We anticipate minimal impact on water quality during this period.



Caught in the Act: Heather Smith's Exemplary Handling of a Property Owner's Concerns

Heather Smith, the project manager overseeing the main replacement project on North Collier Blvd. at the Bluebonnet waterway, recently demonstrated exceptional professionalism and communication skills in a challenging situation. During the construction phase, a property owner whose land is adjacent to the project became highly concerned that the City was using their property without authorization and feared that any disturbances would not be properly addressed

Understanding the urgency of the situation, Heather promptly met with the property owner's representative on-site. Despite the property owner being out of state, Heather ensured that their concerns were heard by speaking with them directly over the phone. Through clear and empathetic communication, she was able to alleviate their worries. By the end of the conversation, the property owner expressed their confidence, stating, "Heather has made us feel comfortable with her assurance that she will personally oversee the remediation of any encroachment or damage to our property."



Heather's ability to defuse what could have been a volatile situation and her commitment to maintaining trust and transparency with the community did not go unnoticed. In recognition of her outstanding efforts, Heather was honored with the "Caught in the Act" award. Along with a certificate of recognition, she was presented with a \$50 gift card as a token of appreciation for her dedication and exemplary service.

Progress Report: West HSPS Construction

The construction of the new West High Service Pump Station (HSPS) is back on track following a brief delay due to an incident during the concrete placement for two of the stem walls. During the pour, the formwork separated at the base of the wall, allowing concrete to seep underneath. The contractor responded quickly, bracing the forms and continuing the concrete placement. However, concerns arose that the shift in the formwork might have displaced the reinforcing bars (rebar), potentially creating voids or a cold joint that could compromise the structural integrity of the wall.

To address these concerns, the contractor engaged a specialist to conduct a ground-penetrating radar (GPR) scan on both sides of the wall. The GPR scan was crucial in determining whether the wall's integrity had been compromised. The results of the investigation were reassuring: there were no cold joints or significant shifts in the rebar, and although small voids were detected, they were deemed insignificant and did not affect the wall's structural integrity. The engineer reviewed the findings and confirmed that no remedial measures were necessary.

As a result, the construction schedule remains unaffected by the brief delay. The contractor has since moved forward with the installation of the remaining pipes and gate valves and successfully completed the pressure testing of the pump cans, gate valves, and piping. The project continues to be on schedule and within the approved budget.



Progress Report: Annex 2nd Floor Reconfiguration

The review process for the Annex building permit extended beyond the expected timeframe, necessitating revisions to the construction drawings. These revisions resulted in a change order to the existing construction contract, including adjustments to both the contract scope and timeline. The building permit was ultimately issued on August 15th, allowing the contractor to mobilize immediately that same day. The completion of the project will be in 2025.



Summary of Recent Emergency Expenses and Response Actions

In recent months, the City has faced several unforeseen emergency events requiring immediate action to protect the community's health and maintain infrastructure integrity. These events have resulted in significant expenditures, detailed below:

June Rainfall and Emergency Response

Between June 8th and June 13th, the island experienced a substantial amount of rain, 14-inches of rainfall over six days, which overwhelmed the collection system and posed a serious risk for wastewater spills. To mitigate these risks, City staff promptly collaborated with an external vacuum truck contractor to transport sewage from critical areas back to the treatment plant. The emergency services, authorized by the City Manager, amounted to approximately \$72,275.

Fiberoptic Cable Installation Damage Incident

A subcontractor installing fiberoptic cables accidentally damaged a gravity main on Balmoral Road. Given the depth and severity of the damage, the City engaged a specialized contractor for emergency repairs at a cost of \$65,100. Additionally, vacuum truck services were required to manage wastewater during the repair process, adding \$22,225 to the total expense. The City is actively pursuing reimbursement from the fiberoptic cable company for the damages and associated costs caused by their subcontractor.

Tropical Storm Debby Flooding Response

Tropical Storm Debby brought nearly 11-inches of rain over six days, resulting in widespread flooding across the Island. To prevent potential wastewater spills from the overburdened collection system, City staff once again worked with an external vacuum truck contractor to manage the excess sewage. This proactive measure successfully prevented any spills, incurring costs of \$38,100.

Capri Boulevard Force main Incident

On July 30, 2024, a horizontal directional drilling contractor struck a 6-inch force main located off-island along Capri Boulevard in the Isles of Capri. The damage led to a spill of approximately 250 gallons of raw sewage. The contractor did not have a permit to do the work, nor did they call for underground utility locates. The spill area was immediately cleaned and disinfected with dehydrated lime using vacuum trucks. The incident was promptly reported to the Florida Department of Environmental Protection, as required by regulations. Furthermore, the contractor doing the work was cited by the Collier County Sheriff's Office for working without a permit.

Progress Report: N. Collier Blvd Main Replacements at Bluebonnet Waterway

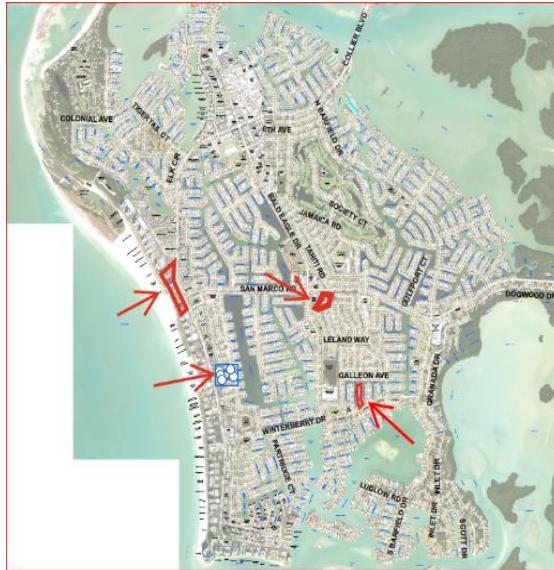
The potable, reclaimed, and wastewater main replacement project along N. Collier at the Bluebonnet waterway is progressing steadily. The aerial crossing installation of the new 20" water main and the 16" irrigation main at the bridge has been successfully completed. The contractor is now focusing on tying in the new mains to the existing infrastructure and removing the irrigation bypass on the southbound side of N. Collier Blvd.

As the project advances, the next phase will involve installing the 20" force main on the northbound side of N. Collier Blvd, from Amazon Court to Caribbean Court, beginning on September 16th. During this phase, please be aware that one lane of N. Collier Blvd northbound will be temporarily closed to accommodate the directional drilling of the force main beneath the Bluebonnet Waterway. Additionally, Amazon Court will be closed at N. Collier Blvd during the installation, while Century Drive will remain closed throughout the entire project. Durnford Way, however, will remain open for the duration of the work. These closures are anticipated to last approximately three months.



Please refer to the attached Maintenance of Traffic (MOT) plan for further details. The project remains on schedule and within the approved budget.

Water Service Interruptions with Boil Water Notice (BWN)			
Month	Number of Service Calls Resulting in a BWN	Number of Customers Affected in the Month	Large Interruptions 50 Customer or More
Aug-23	6	317	Grand Bay Condo-60, Gulfport 93, Mainsail 88.
Sept-23	5	378	1065 Borghese 123; 991 Barfield 60; 1150 N. Collier 76; 1310 Auburndale 52.
Oct-23	4	190	1065 Borghese 123.
Nov-23	2	52	
Dec-23	9	528	Seabreeze W. 70, Tradewinds-204
Jan-24	3	174	Marco Villas 95
Feb-24	0	0	
March-24	3	193	Royal Marco Way-112, Mainsail-80
April-24	5	290	Eagle Cay-126, Madeira-103
May-24	2	403	4 Condos
June-24	4	229	4000 Royal Marco Way-
July-24	4	170	San Marco Villas-65



Treatment Plant Data

Starting Date: **7/1/2024** Rain Fall for Time Period **9.60** Inches
 Ending Date: **7/31/2024** Average Daily Flow (ADF)

Aquifer Storage & Recovery

ASR - Injection Avg. Daily Flow	6.07 MGD	Jul-24	Million Gallons per Day (MGD)
ASR - Recovery Avg. Daily Flow	0.00 MGD		"U" Undetected - results below detection limit

Marco Island Drinking Water

		Max Day	Max Day	Flow
Combined Consumer ADF	9.17 MGD	7/8/2024	11.39	MGD
NWTP Consumer ADF	3.95 MGD	7/8/2024	4.87	MGD
SWTP Consumer ADF	5.22 MGD	7/10/2024	6.86	MGD

Finished Water Testing

Minimum Chlorine Residual **3.00** mg/L

	Maximum	Minimum		Maximum	Minimum
Turbidity	0.01	0.01 NTU	Chlorides	120	96 mg/L
Total Dissolved Solids	314.00	219.00 mg/L	Color	8	3 mg/L
P-Alkalinity	8.00	4.00 mg/L	Phosphate	0.93	0.04 mg/L
M-Alkalinity	43.00	32.00 mg/L	Ammonia	0.9	0.08 mg/L
Cal-Hardness	98.00	76.00 mg/L	Aluminum	0.12	0.04 mg/L
Total Hardness	122.00	96.00 mg/L	pH	8.93	8.8 SU

Jul-24

Wastewater - RWPF

Monthly Testing

	Average Flow	Monthly Max Day	Influent	Effluent
Influent	2.25 MGD	7/4/2024 2.69	BOD	165.3 1.00 mg/L
Reuse	1.42 MGD	7/11/2024 2.05	TSS	147.3 0.6 U mg/L
Deep Well	0.812 MGD	7/29/2024 1.613	Total N	NA 6.52 mg/L
			Total P	4 3.53 mg/L