



City of Marco Island

Meeting Date: July 22, 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.

Collections and Distribution (C&D) Building and Covered Open Storage Structure

The Notice to Proceed for construction of a new C&D Building to relocate the C&D crew from temporary trailers at the South Water Treatment Plant to the North Water Treatment Plant/Reclaimed Water Production Facility campus was issued on May 24 and the building permit was issued on May 29. The new building will be located at the Administration Trailer's parking lot. The project consists of construction of the C&D Building including four offices, two locker rooms, a kitchen/training area, and a storage/workshop; extending a watermain and sewer lateral on East Elkcam Circle to serve the new C&D Building; construction of underground drainage improvements connecting to the East Elkcam Circle drainage system; a parking lot/driveway; and a Covered Open Storage Structure to store some of the C&D team's equipment.



The contractor mobilized at the end of May and began with earthwork operations clearing gravel from the existing parking lot and excavating existing soils to prepare the site for construction. The contractor encountered and subsequently removed unexpected buried concrete pads, concrete blocks, and asphalt. Earthwork operations and building preparation is expected to be completed in the first week of July.

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

Construction of the new West HSPS is progressing smoothly. Within the last month the contractor has completed installation of the rigid inclusions to support the building foundation and installed the pump footer, pump cans, and pump walls. The project is on schedule and on budget.



N. Collier Bridge at Bluebonnet Waterway

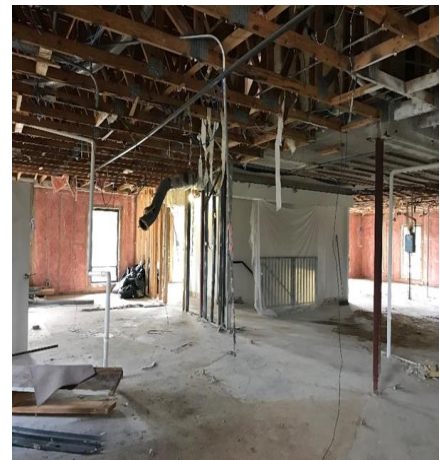
The construction for the replacement water, irrigation and force mains on the bridge at Bluebonnet Waterway will commence on July 12, 2024, and it is expected to be completed by January 6, 2025. Attached is a Maintenance of Traffic Plan showing the lane closure on North Collier Blvd. and partial road closure on Century Drive. The southbound portion of this project is expected to last three months, before the northbound portion of the project begins and will last another three months with a similar southbound lane closure. The north portion of this project will be a directional drill of the force main under Bluebonnet waterway. Century Drive will be closed during the first three months of the project. The work crew will work from 7:00am – 7:00pm from Monday to Friday. This project is on schedule and is within the approved budget.



Annex 2nd Floor Reconfiguration

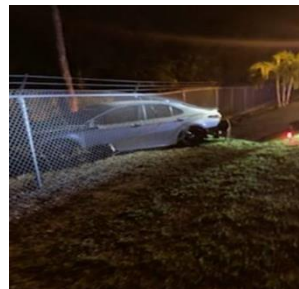
The Annex 2nd Floor Reconfiguration project involves demolishing and reconstructing the second floor of the Annex to meet the needs of the Water and Sewer (WS) Administration team. The demolition permit was issued in late November 2023, and the contractor began demolition shortly thereafter. However, the building permit, submitted simultaneously with the demolition permit, was delayed due to revisions needed to address fire review comments and concerns regarding the 50% FEMA rule. This rule mandates that buildings with finished floor elevations below FEMA's base flood elevation must be flood-proofed if the renovation costs exceed 50% of the building's value.

All concerns have now been addressed, and the building permit is ready to be issued. Staff is currently reviewing and approving shop drawings to enable the contractor to purchase materials and proceed with construction.



SOURCE WATER FACILITY

On June 7, 2024, at 9:00 PM, a vehicle ran off the road, jumped over Henderson Creek, and crashed through the Source Water Facility's chain-link fence along Collier Blvd, just north of US-41. The Collier County Sheriff's Office responded to the incident, and a report was filed. The damage is located approximately 150 yards north of the main gate. While the driver was not seriously injured, the vehicle did damage the facility's fence. The damaged fence has been temporarily restored until permanent repairs can be made. The facility remains secure. The fence repairs are scheduled for mid-July.



| 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 |
| June -23 | 2 | 117 | Seaview-220 |
| July-23 | 7 | 564 | Somerset-122, Shalimar -247 |
| Aug-23 | 6 | 317 | Grand Bay Condo-60, Gulfport 93, |
| Sept-23 | 5 | 378 | 1065 Borghese 123; 991 Barfield 60;1150 |
| 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 |



Treatment Plant Data

Starting Date: 5/1/2024
Ending Date: 5/31/2024

Rain Fall for Time Period 3.80 Inches

| Aquifer Storage & Recovery | | Average Daily Flow (ADF) |
|---------------------------------|----------|--|
| | | Million Gallons per Day (MGD) |
| ASR - Injection Avg. Daily Flow | 0.00 MGD | May-24 "U" Undetected - results below detection limit |
| ASR - Recovery Avg. Daily Flow | 3.05 MGD | |

Marco Island Drinking Water

| | | Max Day | Max Day | Flow |
|-----------------------|-----------|-----------|---------|------|
| Combined Consumer ADF | 11.29 MGD | 5/29/2024 | 12.73 | MGD |
| NWTP Consumer ADF | 4.59 MGD | 5/2/2024 | 6.38 | MGD |
| SWTP Consumer ADF | 6.70 MGD | 5/27/2024 | 7.89 | MGD |

Finished Water Testing

| Minimum Chlorine Residual | | 3.30 mg/L | | | |
|---------------------------|---------|-----------|------|-----------|----------------|
| | Maximum | Minimum | | Maximum | Minimum |
| Turbidity | 0.01 | 0.01 | NTU | Chlorides | 148 134 mg/L |
| Total Dissolved Solids | 424.00 | 347.00 | mg/L | Color | 6 1 mg/L |
| P-Alkalinity | 7.00 | 4.00 | mg/L | Phosphate | 1.01 0.06 mg/L |
| M-Alkalinity | 39.00 | 6.00 | mg/L | Ammonia | 0.99 0.59 mg/L |
| Cal-Hardness | 104.00 | 80.00 | mg/L | Aluminum | 0.07 0.01 mg/L |
| Total Hardness | 140.00 | 120.00 | mg/L | pH | 9.08 8.7 SU |

May-24

Wastewater - RWPF

Monthly Testing

| | Average Flow | Monthly Max Day | | Influent | Effluent |
|-----------|--------------|-----------------|-------|----------|-----------------|
| Influent | 1.91 MGD | 5/8/2024 | 2.29 | BOD | 180.8 1.44 mg/L |
| Reuse | 2.18 MGD | 5/25/2024 | 2.72 | TSS | 158.4 0.8 mg/L |
| Deep Well | 0.002 MGD | 5/9/2024 | 0.055 | Total N | NA 5.98 mg/L |
| | | | | Total P | 4.54 3.78 mg/L |