

M E M O R A N D U M

To: Tom Harmer, Town Manager
From: Isaac Brownman, Public Works Director
Report date: September 2, 2020
Meeting date: September 14, 2020
Subject: Subaqueous Wastewater Line Update

Recommended Action

None, informational only.

Background

The Town of Longboat Key operates and maintains the wastewater collection system for the island. The system consists of 47-lift stations pumping effluent to the Town's primary lift station, Lift Station "D," on Gulf Bay Road. From Lift Station "D", the material is pumped four (4) miles through the Town's force main to the Manatee County Southwest Water Reclamation Facility ("SWWRF") located on 65th Avenue East. The Town's force main is a 20-inch ductile iron pipe installed in 1973 and was put into service in 1975.

The Town shares a solid and professional working relationship with Manatee County requiring regular communication and coordination for both water and wastewater operations. By agreement, Manatee County provides treatment for the Town's wastewater.

Force Main Leak, June 2020

From June 18, 2020 through June 29, 2020, the Town and Manatee County were communicating and coordinating on what was conveyed to the Town and considered to be a Manatee County flow meter issue. The Town promptly supplied information as and when requested by the County. On June 29, between approximately 9:00 and 10:00 am, Manatee County met with Longboat Key staff at the Town's Lift Station D to coordinate valve closures in order to further evaluate the matter. Valve closures were conducted between approximately 10:00 and 11:00 am. Manatee County had personnel pre-positioned at the Manatee valve located on the mainland side in order to coordinate a valve closure while Town staff read flow and wet well levels at Lift Station D. Manatee closed the first valve with no resulting notable increase in Lift Station D wet well level. To further verify the correct valve had been turned and to conduct a double-confirmation, Longboat Key staff closed a second valve on the mainland side on 53rd Avenue with no resulting notable increase in Lift Station D wet well level. Longboat Key and Manatee staff immediately began physically traversing the pipe route on the mainland side to identify any physical evidence of a leak. In addition, during the valve closures, Longboat Key staff deployed a boat to Sarasota Bay to traverse the pipe route and report on any

observed discharge in the Bay waters. No discharge or plume was observed in Bay waters by staff.

On June 29, 2020 at approximately 11:30 am, Town staff and Manatee County staff physically discovered an active leak in the Town's wastewater force main located on the mainland side of the pipe route, approximately 400-feet inland from the edge of Sarasota Bay. The leak occurred on undeveloped, heavily vegetated land owned by Long Bar Pointe LLLP. The Town immediately engaged contractor E.T. MacKenzie of Florida, Inc., ("MacKenzie") who began mobilizing and staging at an adjacent area onsite and began building a stable earthen roadway to the leak point in order to implement a repair. The Town contacted the Florida Department of Environmental Protection ("FDEP") State Watch Office at 1:17 pm the same day to report the leak. Town staff also began coordinating the repair effort with the property owner. Upon creating a stable working platform from which to access the leak point, MacKenzie excavated and dewatered the immediate area of the leak. The pipe was repaired and placed back into service at 5:30 pm on June 30, 2020.

The Town engaged an independent environmental consultant, Environmental Science Associates ("ESA"), to determine if there were any impacts to Sarasota Bay associated with the leak and to identify any actions necessary to mitigate the incident. The preliminary, rough estimate of the discharge to land that was reported at the time of discovery and repair was 25.8 million gallons, which was based on limited, readily available data from the Town and Manatee County. This estimate is being refined to a more accurate number based on third party forensic evaluation into the cause and extent of the leak based on pipe break point, system flow, hydraulic analysis, and the relative accuracy of the meters, which is underway. The Town retained Steinmeyer Fiveash LLP as environmental counsel for this event, and it has retained Berkeley Research Group to perform the independent forensic investigation for the Town.

The Town continues to coordinate fully with FDEP and has worked to keep the public informed by issuing press releases regarding current status, results of water quality sampling data and reports in addition to speaking with the media regarding this event.

ESA Sampling Testing Results and Final Report

ESA began sampling Sarasota Bay waters on July 1, 2020, and continued conducting sampling throughout the month of July 2020 in accordance with their recommended sampling protocol. ESA compiled and analyzed sampling data and produced a final report. ESA's report concludes by stating, "...there was no evidence of even a short term impact of the sewage leak on bacteria levels in Sarasota Bay." The final report is attached.

FDEP Coordination and Consent Order Status

Town staff notified the FDEP State Watch Office ("SWO") on June 29, 2020 at approximately 1:17 pm, and followed up again with the SWO on June 30, 2020. Town staff discussed the status of repair with the FDEP Assistant Director of the Southwest Region on June 30, 2020 and has been communicating with the FDEP

field representative for our area. Town staff, ESA and the property owner met with the FDEP field representative at the location of the leak and repair site on July 1, 2020 at 1:00 pm. As directed by the SWO, once the situation was stable, Town staff submitted an FDEP Pollution Notice on July 2, 2020 with details of the leak discovery and repair effort, which notice was subsequently issued to the public. The FDEP issued a Warning Letter on July 2, 2020 with responses requested, to which Town staff provided written follow-up on July 6, 2020.

The Town Manager, Public Works Director, and Town's counsel met with FDEP by phone on July 9, 2020 to discuss the details surrounding the event and the next steps from an FDEP standpoint. The meeting concluded with documents and data requested by FDEP to continue their investigation. The Town supplied documents electronically to FDEP on July 17, 2020.

Over the course of the next month, the Town continued communicating and coordinating with FDEP, including forwarding ESA Sarasota Bay water sampling results and ESA's final report, supplying a topographic survey of the repair construction area (as requested), and other supplemental details.

On August 24, 2020, the Town Manager and Public Works Director met once more with FDEP to clarify status of consent order and next steps.

The Town is awaiting a draft of the proposed consent order from FDEP and will evaluate it with counsel upon receipt.

Environmental Assessment Efforts

In order to accomplish the repair in a rapid manner, the Town's contractor, MacKenzie, needed to build an earthen roadway through an undeveloped portion of property owned by Long Bar Pointe, LLLP. The property owner was onsite and provided authorization for access and repair. The earthen road was built through a portion of a mangrove and Brazilian pepper fringe. The Town is conducting an environmental assessment of the area to determine actual impacts.

Once this information is gathered, the Town will work with FDEP to determine any necessary restoration efforts.

Status of Redundant Subaqueous Force Main

In 2018, the Town engaged Carollo Engineers to perform a feasibility analysis for a redundant sub-aqueous force main from Lift Station "D" to the SWWRF. In early 2020, the Town further engaged Carollo to perform preliminary design, environmental mitigation planning, and obtain permits, for the redundant force main. Initial pre-application meetings occurred in September of 2019 and a pipeline survey was completed in April of 2020. On June 1st the staff and consultant updated the Commission on the status of the planning and permitting process. The goal of the project is to obtain permits to place a new line into service, preferably along the same or similar route as the existing force main.

Carollo is working with both FDEP and U.S. Army Corps of Engineers to seek expedited permitting. A detailed permit submittal, including information related to the

force main leak to support the permitting effort, is expected to be delivered to the permitting agencies this month. Pre-application meetings are being scheduled with both agencies to further emphasize the request for expedited permitting and also explain the forthcoming deliverables.

The estimated total project cost of the redundant pipeline is not available until more information is known from the regulatory agencies. The Town is using a rough planning estimate of \$16 million dollars. The staff and consultant teams plan to submit grants and funding appropriation requests to both the State and Federal Government to help fund and expedite the project. Our rate consultant is in the process of reviewing the utility rate model and what the impact will be to move this project up on the schedule so construction could start as soon as practical after permits are received.

At the Town's request, Carollo Engineers provided cost estimates to install a "dry line" along the landward path of the force main route to proceed with that portion of the redundant pipe installation sooner rather than later. This option was requested since the easement has been partially cleared already during the repair of the leak. However, until the U.S. Army Corps has agreed to the route, a large portion of that installation would be a waste of time and money if the route is not approved.

An all-in cost for the dry line on the mainland portion of the pipeline is estimated as follows:

- Option 1 – Sarasota Bay to El Conquistador (2,800 LF) \$860,000
- Option 2 – Sarasota Bay N. of El conquistador (3,500 LF) \$1,456,000
- Option 3 – Sarasota Bay to 53rd Avenue West (6,800 LF) \$2,510,000

This segment of dry line installation is currently unfunded and as mentioned, is not advised until authorization from U.S. Army Corps is received. Our project team anticipates the earliest this authorization could be obtained is January 2021. Timeframe to design, permit and install a dry line is roughly 21-months total.

Town and Manatee County Enhancements to Existing Wastewater System

The Town and Manatee County have, and continue to take steps, to enhance monitoring and reporting with our existing wastewater system. These include:

- Manatee County has set up three (3) new alarms using their SCADA system at the SWWRF in order to notify plant operators of any potential issues with the Longboat Key flow. These include a flow range alarm, a 2-minute no change in flow alarm, and low-flow/no-flow alarm recognizing the Longboat Key system minimum diurnal flows.
- Manatee County has replaced its flow meter and is in the process of constructing a brand new flow meter assembly as part of their SWWRF New Headworks project.
- The Town and Manatee County are working together to add components to a Manatee County utility construction project that is currently underway. The components would allow for additional data collection and measurements from the mainland side to cross-check against flow data.

- Manatee County calibrates their custody flow meter twice per year. The Town is exploring costs to enhance or change out our flow meter at Lift Station “D” to enable better calibration with the Manatee County meter.
- The Town Public Works has updated emergency contacts, which includes heavy civil contractors, marine contractors, as well as tanker truck contractors and others.
- Continued coordination and communication between both the Town and Manatee County.

Pipeline Condition Assessment

The 2016/2017 Sub-Aqueous Wastewater Force Main Condition Assessment recommended another assessment in four to five years. A condition assessment is planned for Fiscal Year 2021. We will factor in the results of the current forensic review as we plan for the updated assessment. Town staff will work with current firms within the Town’s master contract to see if the work can be performed within the Town’s existing contracts.

Berkeley Research Group Forensic Report

As mentioned above, the Town retained Steinmeyer Fiveash LLP as environmental counsel during this event. Berkeley Research Group was hired by Steinmeyer Fiveash to perform independent forensic investigation to investigate the cause and extent of the leak. The analysis includes hydraulic flow and pressure analysis with respect to the size of the hole in the pipe, observed field conditions once the pipe was exposed, and other relevant data. This forensic analysis is in progress.

Expenses Incurred to Date

E.T. MacKenzie of Florida (Repair)	\$76,295.28
ESA Sarasota Bay Sampling, Testing and Analysis	\$77,481.00
George F. Young Topographic Survey	\$ 5,000.00
E.T. MacKenzie of Florida (Silt Fence Install)	\$ 2,400.00
ESA Mangrove and Wetland Impact Analysis	\$19,600.00
<u>Berkeley Research Group (Forensic Engineer)</u>	<u>\$61,568.00 (estimate)</u>
	\$242,454.75

Additional On-Going Costs

- Steinmeyer Fiveash Environmental Legal Counsel
- Town Legal Counsel

Additional Future Expenses

- Upon the Town working with FDEP on any necessary restoration efforts, relevant professional consulting, construction, and monitoring expenses related to same.

- Other expenses related to forthcoming FDEP consent order

Town staff are coordinating regarding potential existing, unspent Utility Operations and CIP funding to support these costs.

Capital Project Planning

The timing of the actual construction of the redundant line will be determined based on the results of the permitting process and funding strategies. The project was originally in the 10-year rate model as a future expense. Staff has now moved the project into the planned five (5) year CIP in years FY 24 and 25. This change is reflected in the CIP that the Commission will consider at your upcoming budget hearings. The goal is to advance the project as soon as possible while seeking outside funding to support the project without rate payers having to bear the full, and more immediate, financial burden of the project through additional, more pronounced rate increases in the near term to support debt payments. However, to some degree this scenario may be unavoidable. Town staff will be working with the Town's rate consultant to determine the impacts to rates to advance the project into the five (5) year program and take on the additional debt service. We will continue to provide on-going updates on the status of planning for this capital project.

Conclusion

Throughout this event, the Town has coordinated directly with FDEP. The Town will work diligently to comply with a mutually agreed to consent order with FDEP, and will make every effort to address any impacts to the Long Bar property in accordance with the guidance and counsel we receive. The Town will make every effort to fund and advance the redundant subaqueous force main project. The Town will be reassessing the existing force main pipeline in FY 2021.

Staff Recommendation

None, informational only.

Attachments

- A. PowerPoint Presentation (Available in Town Clerk's Office)
- B. Narratives to FDEP dated July 17, 2020 and August 21, 2020 (Available in Town Clerk's Office)
- C. Description and Photos of Damaged Pipe (Available in Town Clerk's Office)
- D. ESA Final Report (Available in Town Clerk's Office)

End of Agenda Item