

Key Largo Wastewater Treatment District Board of Commissioners Meeting Agenda Item Summary

Meeting Date:

June 18, 2024

Agenda Item Number: M-1

Action Required:

No

Department:

Capital Projects

Sponsor:

Ed Castle

Subject:

Capital Projects Report - May 2024

Summary of Discussion:

Mr. Castle will present the Capital Projects monthly report.

Reviewed / Approved

Operations: _____

Administration: _____

Finance: _____

District Counsel: _____

District Clerk: _____

Engineering: _____

Financial Impact

\$

Funding Source:

N/A

Budgeted:

N/A

Attachments

1. Monthly Report

Approved By: _____

General Manager



Date: _____

6/13/2024

Key Largo Wastewater Treatment District Capital Projects Report

Including updates through May 2024

Current Capital Projects

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Vacuum Stations Modifications	\$ 3,155,800.00	\$3,155,800.00	\$175,000.00	\$3,330,800.00
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	Percentage Complete
	\$142,826.25	\$1,721,406.63	\$1,466,567.12	56%

- The VPS modifications project was awarded to Reynolds Construction in the amount of \$3,155,800.00. The Agreement and the Notice to Proceed were both executed on May 18, 2023.
- Airvac panels were delivered on April 21, 2024 and have since been mounted at all stations. Benson Electric, electrical sub-contractor, has been finalizing conduit connections to panels and preparing core holes through the walls for the receptacles.
- On May 9th, Reynolds hosted a nighttime shutdown to install Tee Tree, Odor Control and Vac Lines at Vacuum Station G.
- Benson Electric has been working on installing conduit at all vacuum stations.
- Control wires were delivered on May 22nd and Benson has started pulling wires starting on May 28th.
- Reynolds replaced effluent plug and check valves at Vacuum Station F during a daytime shutdown on May 29th, 2024.
- Progress meetings were held on May 8th and May 23rd.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Collection System Monitoring	\$7,575,677.00	\$9,581,965.61	\$718,176.00	\$10,300,141.61
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$615,956.25	\$6,757,767.70	\$2,926,417.66	72%

- Work was completed in Basins A, B, D, G & H.
- Current Status:
 - Basin A: **293** installed (Basin complete)
 - Basin B: **383** installed (Basin complete)
 - Basin C: **0** installed (Basin not yet started)
 - Basin D: **240** installed (Basin complete)
 - Basin E: **76** installed (Basin in progress)
 - Basin F: **339** installed (Basin in progress)
 - Basin G: **231** installed (Basin complete)
 - Basin H: **45** installed (Basin complete)
 - Basin I: **224** installed (Basin in progress)
 - Basin J/K: **116** installed (Basin in progress)
 - Total project installed: **1,947** out of **2,984**
 - **Sensor installation is approx. 65 % complete (Note: This is only sensors and does not include other aspects of the project)**
- Construction progress meetings were held on May 14th and May 28th, 2024.
- During May, Flovac and IVC continued work in Basin J/K.
- Valve rebuilds began on May 28th, 2024. Starting at Summerland Rd and working South, targeting approx. 10-15 per day.
- Punchlist walkthrough for Basin E1, E2, F, and I will be completed in the following month.
- KLWTD has officially gained ownership of previously abandoned FKEC power pole from the entity. The power pole in C-905 corridor was pinpointed as being in an ideal location for grinder pump monitoring. This pole will be utilized for the C-905 gateway to facilitate grinder pump monitoring.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Effluent Filtration Upgrades	\$ 3,043,820.00	\$3,043,820.00	\$317,328.00	\$3,361,148.00
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$293,527.50	\$2,087,592.31	\$980,028.19	71%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023. During May, Reynolds construction continued coating the elevated platform using a 3-part Tnemec coating system.
- District staff requested that the filtration high-level overflow be re-routed to the plant pump station rather than to the CCCs. A Work Directive in the amount of \$47,272.43 was issued and a change order will be brought to the Board at a future meeting date.
- On May 21st the filter was delivered to the site. The filter has not been placed as the filter platform is not ready.
- On June 3rd the platform grading was rejected, and Reynolds is working on a plan of action to remedy the situation.
- Piping was delivered on June 5 and is being staged for coating in front yard at the WWTP
- Progress meetings were held on May 8th and May 23rd.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Keys Holdings LLC Pump Station Replacement	\$ 375,555.75	\$375,555.75	\$15,000.00	\$390,555.75
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$8,565.00	\$50,708.25	\$331,282.50	15%

- The District piggybacked on a Marathon bid and awarded the Keys Holdings LLC project to Tropical Underground Contracting, LLC in the amount of \$375,555.75.
- In February, Tropical Underground revealed existing underground conditions that differed from the expected conditions and Tropical proposed change order options to WEC.
- WEC reviewed the confirmed existing conditions and provided Tropical with an updated proposed site layout.
- Tropical underground and WEC have since been in discussion regarding how to proceed with construction. WEC has sent a revised plan set to address the unknown underground conditions
- As of May 23rd, Tropical Underground has remobilized to the site and installed pipe run from the manholes to the lift station as well as the ballast for the lift station.

Upcoming Construction Projects

Project	Estimated Total Cost	Status
Upgrades of Odor Control at All Vacuum Stations and Upgrade of the Generators at Vac A and Vac D.	\$1,200,000 (Anticipated)	Weiler Engineering has been directed to proceed with this project in phases, with Vacuum Stations A and D being the first phase. The design of the odor control upgrades, including structural components and site plans continues. Preliminary plan sets have been created for Vacuum Stations A, D, E, G, I, and J/K. A meeting with the Archdiocese was held on January 16 th and a decision was made to extend the easement at Vacuum Station A. The Archdiocese has agreed to expanding the easement, subject to their suggested terms and conditions. These are currently under review by the District.
Power Conditioning, Lightning Protection & Wiring Upgrades at WWTP	\$3,563,376 (Anticipated)	This project will provide protection from transient surges in power that can damage equipment and potentially cause overflows or inadequate treatment at the WWTP. Installation of a lightning protection system at the WWTP to further reduce the potential impacts due to electrical surges will also be included as part of the project scope. Upgrades to the existing power and instrumentation wiring at the WWTP includes the use of non-corrosive materials and moving wiring above-ground to prevent corrosion and failure. Weiler Engineering's Electrical Engineer conducted a site visit on January 18 th and began updating the electrical design and specifications for the project. This project is currently in the design phase with preliminary site plans and above ground conduit routing plans. Shop drawings have been received from Cummins and UST. A new ATS and SureVolt power conditioning device have been selected that will help to increase the resiliency of the WWTP. Lightning protection system from Nvent have been selected and shop drawings have been received. This project is grant funded.

Direct Potable Reuse Demonstration Project	\$1,504,301.25 (Anticipated)	The District has budgeted funds for a demonstration project to produce potable water from the WWTP's treated effluent. 2021 Florida legislation established Direct Potable Reuse (DPR) as a preferred effluent disposal method and provides for DPR projects to be eligible for grant funding, treating WWTP effluent as an Alternative Water Supply. The District has applied for a planning grant for this project and has requested grant funding to be allocated for the design, permitting, and construction of the DPR demonstration project. Initial estimates indicate that the volume of water produced in the DPR demonstration project would be in the range of 150,000 to 250,000 GPD.
Grinder Pump Lateral Kits Replacement Project	\$590,625.00 (Anticipated)	This project is included in the District's FY24 budget. This project includes installing the new 316 stainless steel lateral kits at a shallower depth and in meter boxes, allowing easy access without excavation for service and replacement. This project's design has been completed and was approved for bidding by the Board on February 20 th , 2024. The original bid of the project was thrown out due to a bidder being non-responsive, and the other bid exceeded the available funding for the project. Therefore, both bids were rejected, and the project was re-bid. The Pre-Bid meeting was held on April 18 th , 2024 and bids are due May 16 th , 2024. Two bids were received for the project. Page Excavating has been recommended for award on this project.
EQ Tank and Headworks Project	\$4,500,000 (Anticipated)	The EQ Tank and Headworks Project involves the installation of a new headworks as an upgrade to the current headworks at the KLWTD WWTP. This project also involves the installation of an influent EQ tank to regulate flow. This project is currently in the design phase with preliminary site plans and structural drawings for the EQ tank. Shop drawings have been received from Hydrodyne and a center flow screen has been selected for the headworks screening, which will reduce the footprint of the headworks space and has a higher catch rate and efficiency than the existing headworks.
Blower Room Modifications Project	\$250,000 (Anticipated)	The KLWTD staff has requested the addition of an access door behind blower #4 to better service the blower. Currently, the other blowers must be removed in order to access blower #4. These modifications will allow for more efficient service of the blowers. This project is currently in the preliminary design phase.

Select Photos from Current May Projects



Figure 1: Reynolds Flooding Top of Concrete Disk Filters Platform at 9:20AM for Flow Test Observation



Figure 2: Filter Platform Side View



Figure 3: Filter Platform Bottom View



Figure 4: Installing new 8" Butterfly valve, 8"x8" PVC TEE, 8"x6" Reducer, and 6" Plug Valve to Odor Control Piping at Vacuum Station JK

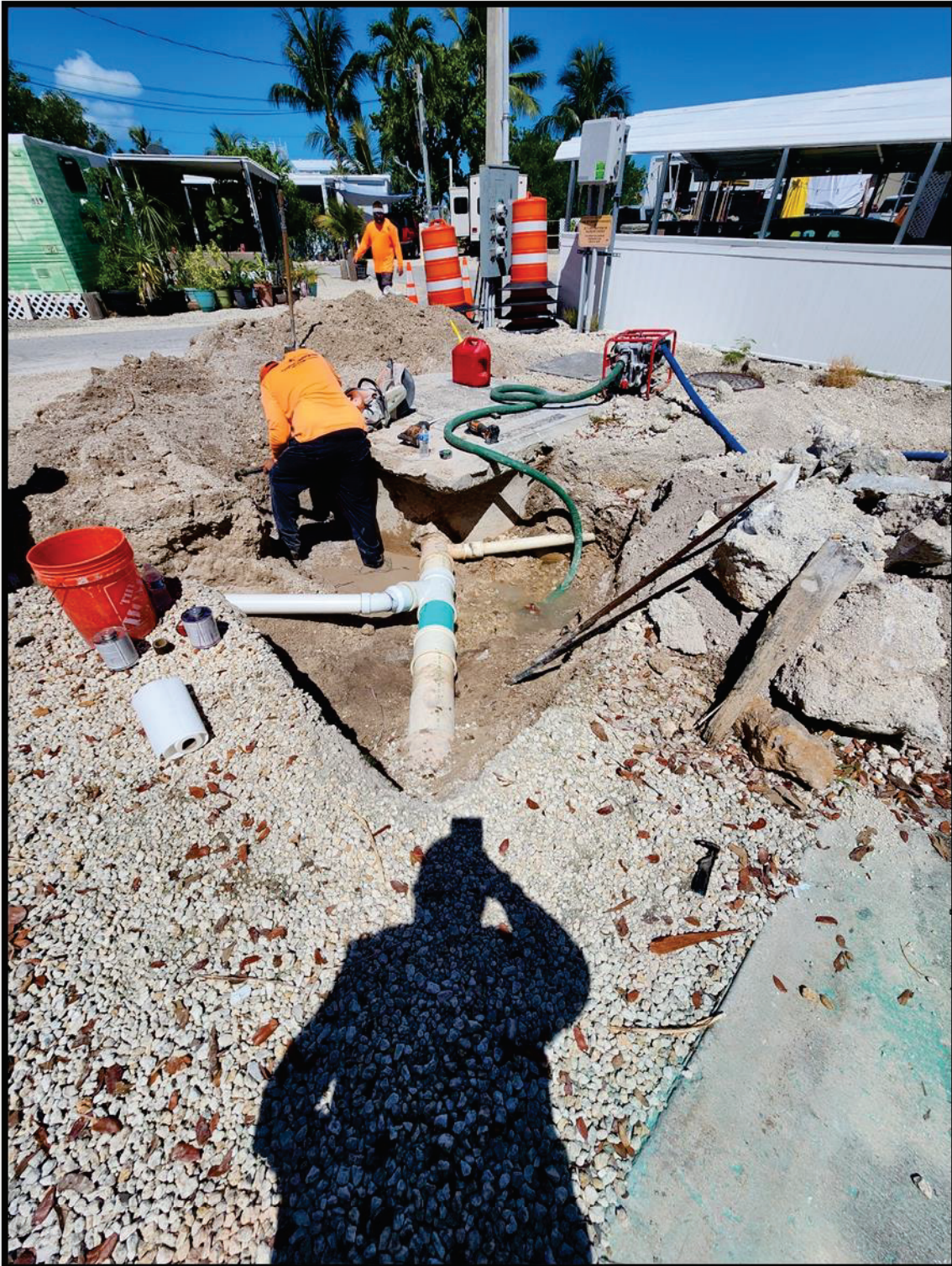


Figure 5: Keys Holding installing new pipe work for the lift station. Section of 8"SDR-26 PVC, 8"x6" PVC WYE, and 6"x4" PVC Reducer Installed at Southeast Side of Existing Lift Station.



Figure 6: Flovac Valve Rebuild Trailer on Site at the WWTP for KLWTD Vacuum Monitoring



Figure 7: Work station inside of the Flovac Valve Rebuild Trailer



Figure 8: KLWTD Vacuum Monitoring Rebuilt Valves