

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

Meeting Date:
July 16, 2024

Agenda Item Number: M-1

Action Required:
No

Department:
Capital Projects

Sponsor:
Ed Castle

Subject:
Capital Projects Report - June 2024

Summary of Discussion:

Mr. Castle will present the Capital Projects monthly report.

<u>Reviewed / Approved</u>	<u>Financial Impact</u>	<u>Attachments</u>
Operations: _____	\$	1. Monthly Report
Administration: _____		
Finance: _____	Funding Source:	
District Counsel: _____	N/A	
District Clerk: _____	Budgeted:	
Engineering: _____	N/A	

Approved By: _____
General Manager

Date: 7-11-24

Key Largo Wastewater Treatment District Capital Projects Report

Including updates through June 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
	\$169,160.00	\$1,933,565.86	\$1,228,074.14	63%

- 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.
- Benson Electric continued installing conduit and pulling power and control wiring at Vacuum Stations A, D, E, G, I and J/K throughout the period.
- Reynolds began replacing the corroded incoming 10" ductile vacuum mains with SDR21 PVCK vacuum mains. The trenches remained open as the piping work continued through the end of the month. Proper barriers were in place while the trenches were open.
- Reynolds replaced the vacuum piping tree, valves and fittings at Vacuum Station E during a nighttime shutdown on June 27th, 2024.
- Reynolds continued priming and painting valves and fittings for the vacuum pump exhaust piping at Vacuum Station J/K.
- The Board approved Change Order No. 4 in the amount of \$104,252.79 at the July 2nd Board meeting. This change order was to replace the ductile iron odor control header piping with stainless steel piping at Vac Stations A,D, and I and for the modification of the Emergency Vac Trailer to install electrical conductors in the Owner supplied conduit. This change order also added time to the Contract for this scope of work.
- Reynolds, WEC staff and KLWTD staff attended construction progress meetings on June 13th and June 27th.

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
	\$647,907.50	\$6,845,567.43	\$2,806,666.68	73%

- 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: **10** installed (Basin in progress)
 - 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: **175** installed (Basin in progress)
 - Total project installed: **2,016** out of **2,984**
 - **Sensor installation is approx. 68 % complete (Note: This is only sensors and does not include other aspects of the project)**
- Construction progress meetings were held on June 11th and June 25th, 2024.
- During June, Flovac and IVC continued work in Basin J/K.
- Valve rebuilds continued in June – 119 rebuilds completed. Targeting approx. 10-15 per day and installing in A and J/K
- Punchlist walkthrough for Basin E1, E2, and F was completed, and substantial completion was issued.
- KLWTD identified 22 open clean outs during the recent rainstorm, leading to water infiltration. Flovac monitoring system was acknowledged to play a crucial role in locating these open cleanouts. Subsequently, all 22 cleanouts have been closed.
- 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. Installation of monitoring equipment on this pole is slated for August.

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	\$3,064,376.67	\$317,328.00	\$3,381,704.67
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$310,278.75	\$2,090,320.05	\$981,105.87	71%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023.
- 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 the July 2nd Board meeting
- On June 3rd the platform grading was rejected due to ponding of water on the surface of the platform. Reynolds submitted a plan for cutting and grinding the low areas, followed by filling with epoxy grout and smoothing to the specified grade. As of the end of June, the re-grading of the platform surface was underway and progressing well.
- Piping was delivered on June 5. The pipe and fittings were delivered with factory prime coat. Throughout the month, Reynolds corrected any damaged prime coat, removing rust and re-priming. Tnemec Series 1094 top coat was applied to pipe and fittings after the touchup of the prime coats was completed.
- The Board approved Change Order No. 4 in the amount of \$267,719.00 at the July 2nd Board meeting. This change order was to re-direct the filter overflow discharge to the plant pump station rather than to the CCCs per KLWTD staff's recommendation as well as the installation of an access walkway to access the new elevated disk filter platform. This change order also added time to the Contract for this scope of work.
- Reynolds, KLWTD and WEC staff attended construction progress meetings on June 13th and June 27th.

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
	\$11,066.25	\$50,708.25	\$328,781.25	16%

- 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.
- Tropical Underground's continuing excavations revealed existing underground conditions that differed from the expected conditions and Tropical is preparing a proposed change order for review by WEC.
- Tropical Underground delivered the pump station and control panel to the work site. During the month of June, the lift station excavation was completed and the lift station was placed in the ground and backfilled.
- Tropical Underground has hydro-blasted the walls of the old pump station and applied protective coatings in preparation for converting the former pump station into a manhole. A penetration will need to be made approximately 10' below grade. WEC is working with Tropical Underground to devise a technique for coring the penetration from the inside due to high groundwater elevations and the impracticality of dewatering the excavation outside the structure.

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. The District has requested an expansion of the easement area. The Archdiocese requested monetary compensation for the expanded easement area and approval to transfer assessment waivers to others, presumably for sale of the waivers. District Counsel has determined that the District has no procedures to allow transfer of the assessment waivers. The District will submit a response and proposed compensation in July.
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. The design of the project will be completed by mid-July. Technical specifications and bid documents have been prepared. The project is expected to go out to bid in late July.
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. Page Excavating has been awarded the project. We are currently reviewing the final bonds and insurance paperwork prior to issuance of the notice to proceed. The notice to proceed will be issued in July. This project will be moved to the Current Projects section in the next update.
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. Due to a lack of a decision by Islamorada on the NPK booster station design, the District is moving forward with completing design, with incorporation of an additive alternate scope of work should Islamorada decide to keep the current booster pump design.
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 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

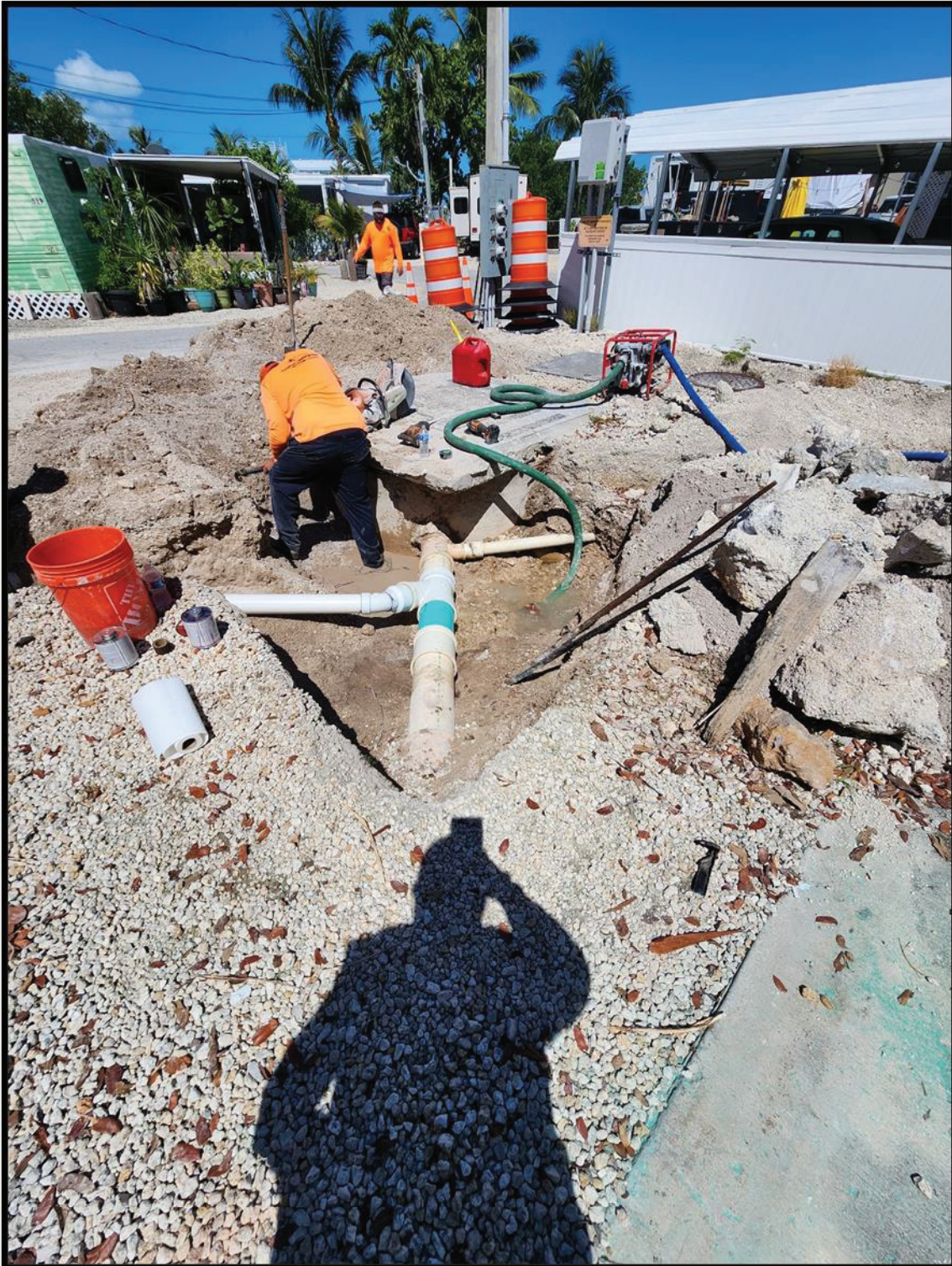


Figure 5: Keys Holding installing new pipe work for the lift station. Section of 8"SDR-26 PVC, 8"x6" PVC WYE, and 6"x4" PVC Reducer Installed at Southeast Side of Existing Lift Station.



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