

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

Meeting Date:
August 20, 2024

Agenda Item Number: M-1

Action Required:
No

Department:
Capital Projects

Sponsor:
Ed Castle

Subject:
Capital Projects Report - July 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: 8-15-24

Key Largo Wastewater Treatment District Capital Projects Report

Including updates through July 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	\$3,260,052.79	\$215,000.00	\$3,475,052.79
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	Percentage Complete
	\$190,333.75	\$2,176,461.10	\$1,108,257.94	68%

- 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 PVC vacuum mains. The trenches remained open with proper MOT as the piping work continued through the end of July.
- Reynolds replaced the vacuum main lines for Basin A-2 and A-3, in a daytime shutdown on 7/29. The rest of the vacuum main lines have been replaced on 7/30 and 7/31 for the left side of Vac station A.
- Reynolds continued priming and painting valves and fittings for the vacuum pump exhaust piping at Vacuum Station A, D, E, G, I and J/K throughout the period.
- 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 the construction progress meeting on July 11th.

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
	\$677,426.25	\$6,845,567.43	\$2,777,147.93	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: **39** 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: **225** installed (Basin in progress)
 - Basin J/K: **336** installed (Basin in progress)
 - Total project installed: **2,207** out of **2,984**
 - **Sensor installation is approx. 74 % complete (Note: This is only sensors and does not include other aspects of the project)**
- Construction progress meeting was held on July 23rd
- During July, Flovac and IVC continued work in Basin J/K. Crews also shifted from basin J/K to Basin C to beat the road raising construction (Shaw, Crain and Adams)
- Valve rebuilds continued in July – 280 rebuilds completed. Targeting approx. 10-15 per day and installing in A and J/K
- Crews are working through completing punch list items for final completion of Basin E1, E2 and F.
- KLWTD has taken over the abandoned FKEC power pole in the C-905 corridor for grinder pump monitoring, with installation planned for August. Resident letters have been sent to notify homeowners of the upcoming work.

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	\$3,332,095.76	\$350,000.00	\$3,682,095.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	Percentage Complete
	\$323,012.50	\$2,121,366.05	\$1,237,717.21	66%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023.
- 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 July the platform has been approved and coated for use.
- 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.
- Disk Filter was set on top of the completed platform on the 25th of July. On the following workdays after the filter was set, the metal railings were placed on the edge of the platform.
- Coating of both platform and piping materials continued throughout the month of July and have been tested by WEC inspectors.
- Reynolds, KLWTD and WEC staff attended the construction progress meeting on July 11th.

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
	\$14,408.75	\$50,708.25	\$325,438.75	17%

- 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 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.
- Installed new electrical box for lift station and have run PVC conduit pipe from box, underground, to lift station well.
- 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 was made approximately 10' below grade.

Project	Original Contract Amount	Current Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Grinder Pump Lateral Kits Replacement Project	\$346,065.33	\$346,065.33	\$130,000.00	\$476,065.33
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	Percentage Complete
	\$74,070.00	\$23,600.00	\$378,395.33	21%

- The Grinder Pump Lateral Kits Replacement Project was awarded to Page Excavation in the amount of \$346,065.33. The Agreement was executed on the 1st of July 2024. The notice to proceed was executed on the 12th of July 2024.
- The Pre-Construction meeting was conducted July 22nd 2024.
- CO #1 will be going to the board for the ODP of the Stainless-Steel Lateral Kits for the project.
- Page Excavation is conducting Pre-Construction Videos and photos of all 142 addresses where the Grinder Pump Lateral Kits are to be replaced.

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-September. Technical specifications and bid documents have been prepared.
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.

EQ Tank and Headworks Project	\$4,500,000 (Anticipated)	<p>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 in moving forward with completing design, with incorporation of an additive alternate scope of work should Islamorada decide to keep the current booster pump design.</p>
Blower Room Modifications Project	\$250,000 (Anticipated)	<p>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.</p>



Figure 1: New Disk Filter Has Been Placed at Top of Concrete Platform and Handrails have been installed on South and East sides of deck



Figure 2: Filter Platform Side View



Figure 3: Filter Platform Bottom View



Figure 4: Installing New 8"SDR-21 PVC with 2 New 8"SDR-21 PVC 45 Bends at North Exterior of Vacuum Station A



Figure 5: New Bases Installed to Interior of New Lift Station Well at Keys Holdings Lift Station



Figure 6: Flowable fill installation in Basin J/K



Figure 7: Flovac work truck on site