

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

Meeting Date:
April 15, 2025

Agenda Item Number: M-1

Action Required:
No

Department:
Capital Projects

Sponsor:
Ed Castle

Subject:
Capital Projects Report - March 2025

Summary of Discussion:
Mr. Castle will present the Capital Projects monthly report.

Reviewed / Approved

Financial Impact

Attachments

Operations: _____
Administration: _____
Finance: _____
District Counsel: _____
District Clerk: _____
Engineering: _____

\$

Funding Source:
N/A

Budgeted:
N/A

1. Monthly Report

Approved By:  Date: 04/10/2025
General Manager

Key Largo Wastewater Treatment District Capital Projects Report

Including updates through March 2025

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 (LPA0136)	\$ 3,155,800.00	\$3,270,999.76	\$315,000.00	\$3,585,999.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Completed (Anticipated)	Percentage Complete
	\$311,698.75	\$2,478,994.07	\$795,306.94	78%

- 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.
- A preliminary Punch List walkthrough was requested by Reynolds with WEC staff on 3/12, and it was determined that the work required to finish the project did not warrant substantial completion. WEC corresponded with Reynolds about the open items which need to be addressed before another walkthrough can occur.
- In March, WEC continued correspondence with AirVac to review and add any necessary details to the SOP for use of the Emergency Vacuum Trailer. The updated SOP and exhibit now clearly identify which valves are to be opened and which are to remain closed during emergency operation.
- WEC worked with Reynolds to obtain pricing for a blow-off valve, valve position indicators, and the main trailer power disconnects to be included in an upcoming change order and Phase 2 construction work. Reynolds submitted pricing for the above items. Due to the high cost of each option, WEC initiated discussions on an alternative fail-safe mechanism.
- Commissioner Schwartz suggested use of a pressure switch to shut down the vacuum pumps in lieu of valve position indicators. This option appears to be feasible and is currently being pursued, along with the automatic pressure blow-off device.
- Reynolds, Benson, WEC staff and KLWTD staff attended the construction progress meetings on March 13th and March 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 (LPA0424)	\$7,575,677.00	\$9,581,965.61	\$850,000.00	\$10,431,965.61
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$867,037.50	\$7,558,883.34	\$2,006,044.77	81%

- Work was completed in Basins A, B, D, G, H, F, I and JK
- Current Status:
 - Basin A: **316** installed (Basin complete)
 - Basin B: **376** installed (Basin complete)
 - Basin C: **117** installed (Basin in progress)
 - Basin D: **232** installed (Basin complete)
 - Basin E: **308** installed (Basin in progress)
 - Basin F: **338** installed (Basin complete)
 - Basin G: **221** installed (Basin complete)
 - Basin H: **27** installed (Basin complete)
 - Basin I: **227** installed (Basin complete)
 - Basin J/K: **443** installed (Basin Complete)
 - Total project installed: **2,605** out of **2,899**
 - **Sensor installation is approx. 90 % complete (Note: This is only sensors and does not include other aspects of the project)**
- During March, Flovac, IVC, WEC, and KLWTD completed walkthroughs in Basin E0 (KLTV & KLTP). Punchlist was distributed and Substantial Completion was executed.
- Flovac and IVC continued working in Basin C (C-1 and C-2). Crews installed conduit and monitoring equipment, and rebuilt valves were installed.
- Valve rebuilds continued – 1,162 rebuilds completed.
- Biweekly construction progress meetings were held on March 11th and 25th and attended by KLWTD, WEC, Flovac and Island Villa staff.

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 (LPA0243)	\$ 3,043,820.00	\$3,332,095.76	\$410,000.00	\$3,742,095.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$406,895.00	\$2,720,372.62	\$614,828.14	84%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023.
- Coating of piping materials continued throughout March and was tested by WEC inspector. Areas of low coating thickness were marked for recoating.
- Reynolds coated the slab underneath the elevated filter platform and recoated the deep injection well pad with Tnemec primer and topcoat.
- Benson Electric worked on installing conduit for the flow meter and grounding rod, as well as pulling power and control wiring for the turbidimeter and flow meter display.
- Reynolds has begun placing the effluent 90 pipe support bracket and Benson has rerouted the wiring to allow for the bracket to be installed.
- Aqua Aerobics continued the programming upload of the filter, flow meter, valve position indicators, and turbidity meter into SCADA. WEC provided I&C checklists for testing alarms and programming all the new equipment into SCADA.
 - Initial I&C testing occurred on 1/30 and revealed the need for more work to be done before completing the checklist. Programming work continued throughout the month of March and I&C testing will be conducted when all programming is completed and issues resolved with the filter.
- Reynolds received a work directive to allow for the installation of the spread footer for the catwalk.
- Reynolds submitted a PCO that included the change in scope for the larger spread footer and an additional 50 days for the lead time for the aluminum railings.
- Reynolds, Benson, WEC staff and KLWTD staff attended the construction progress meetings on March 13th and March 27th.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Power Conditioning and Electrical Upgrades at the WWTP (LPA0426)	\$2,670,450.00	\$2,670,450.00	\$485,000.00	\$4,359,916.00
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$318,424.80	N/A	N/A	7%

- The Power Conditioning and Electrical Upgrades at the WWTP was awarded to Pedro Falcon in the amount of \$2,670,450.00 on January 29th, 2025.
- Pre-construction meeting was held on February 7th, 2025.
- The construction start date was February 10th, 2025.
- Pedro Falcon has begun to submit products to be used for the project and WEC staff has reviewed the submittals that have been received.
- Pedro Falcon has completed much of the trenching in the areas around the perimeter of the site for the new installation of the site lighting as well as other exploratory trenching.
- The A/C Mini Split has been ordered and is ready to be installed in the ATS room.
- The trenching for the deep injection and monitoring well conduit and wiring has begun and will continue throughout the next month during low tides, when wire and conduit is able to be pulled.
- Pedro Falcon is obtaining pricing for a proposed change order to install a switch panel to provide for temporary power to the WWTP during construction when the main feeders are being upgraded. This change order will be brought to the Board for consideration at a future meeting.
- Pedro Falcon, KLWTD and WEC staff attended the construction progress meetings on March 12th, 2025 and March 26th, 2025.

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 Odor Control	TBD	TBD	TBD	TBD
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$TBD	N/A	N/A	0%

- The Odor Control project went out to bid on December 9th, 2024.
- Total Estimated Construction Cost: \$3,939,280.00
- The bid amount in the proposals were received as shown below:
 - Belle Construction: Total Bid: \$4,009,141.26
 - Reynolds Construction: Total Bid: \$4,417,000.00
- The proposal ranking committee ranked the proposals on February 11th, 2025 and recommended that the project be awarded to Belle Construction.
- The full Odor Control project was awarded to Belle Construction, LLC in the amount of \$4,009,141.26 on March 28th, 2025.
- The Pre-Construction meeting has been scheduled for Thursday, April 10th at the KLWTD Plant.

Upcoming Construction Projects

Project	Estimated Total Cost	Status
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)	The EQ Tank and Headworks Project involves the installation of 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. Permitting efforts are underway with FDEP.
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 to access blower #4. These modifications will allow for more efficient service of the blowers. This project is currently in the preliminary design phase.



Figure 1. Flovac Crew Installing Vacuum Pit Monitoring Equipment in Basin C (Jewfish Ave)



Figure 2 and 3. IVC Crew Installed Detection Tape Over the Conduit in the Trench, and the Compacted the Site Afterward (Plante St. In Basin C)



Figure 4 and 5. Newly Coated and Positive Draining Injection Well Pad



Figure 6 and 7. Placement of New Railings on Bottom of Filter Platform



Figure 8 and 9. Trench Connecting the Monitoring Pad next to the Solar Shade Structure



Figure 10 and 11. Exploratory Trenching to Expose Conduits Between Light Poles and Replace with New Conduit and Wires