

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

Meeting Date:
June 3, 2025

Agenda Item Number: M-1

Action Required:
No

Department: Capital Projects Sponsor: Ed Castle

Subject:
Capital Projects Report - April 2025

Summary of Discussion:
The Capital Projects Update Report for April 2025 will be presented.

<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:  Date: 5-29-25
General Manager

Key Largo Wastewater Treatment District Capital Projects Report

Including updates through April 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	\$325,000.00	\$3,595,999.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Completed (Anticipated)	Percentage Complete
	\$320,841.25	\$2,478,994.07	\$796,164.44	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.
- WEC met with AirVac to discuss receiving their final review/approval of the SOPs and Exhibits, they stated they will need to provide a separate proposal for this additional work due to this work being outside of their original scope. Awaiting this proposal from AirVac.
- WEC worked with Reynolds to obtain pricing for a blow-off valve, pressure transducer, 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 on 4/30. Due to the extended time extension request and high direct labor costs in addition to subcontractor costs without proper justification, the PCOs were rejected. Per Board direction (on 5/6) WEC explored other competitive bids for the disconnect installations that could achieve completion in a timeline which aligns with the Districts Hurricane Preparedness Plan.
 - These change orders are on for discussion at this board meeting (5/20).
- Reynolds installed the pressure blow-off valve on the trailer, in alignment with their work directive, on 5/9. This work will be added to Reynold’s contract by change order.
- Reynolds, Benson, WEC staff and KLWTD staff attended the construction progress meetings on April 10th and April 24th.

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	\$910,000.00	\$10,491,965.61
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$904,006.25	\$7,732,064.50	\$1,855,894.86	82%

- 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 April, 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 – 1,217 rebuilds completed.
- WEC created multiple details based on the type of pipe that is to be tapped into for force main pressure sensor installations to obtain pricing and be incorporated into the project scope by FloVac.
- Biweekly construction progress meetings were held on April 8th and 22th 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	\$3,343,823.76	\$420,000.00	\$3,763,823.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$414,493.75	\$2,720,372.62	\$617,229.39	83%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023.
- Reynolds has completed placing the effluent 90 pipe support bracket and Benson has rerouted electrical conduit temporarily to allow for the bracket to be installed.
- It was determined that the filter had some manufacturer’s defects and/or contained the presence of acid producing microbes that may have caused the corrosion in multiple places on the filter, predominately on the welds. Reynolds met with Evoqua several times in April in efforts to come to a resolution for removing the filter and fixing this issue at the factory. WEC also met with Alex Mass to discuss ongoing resolution to warrantee and cost issues. This resolution will continue in the coming period.
- Alex Mass was on site during this period to collect additional samples for microbial testing, which he will provide to WEC/KLWTD. WEC is looking into additional testing through a separate company as well.
- Reynolds may conduct I&C testing in May, before removing the filter, to receive beneficial use of booster pump #4. They will be required to re-test again once the filter returns to the site.
 - Initial I&C testing for alarms and programming occurred on 1/30 and revealed the need for more work to be done before completing the checklist.
- The Board approved a CO at the 4/15 Board Meeting for the spread footer that was required for the access walkway, as well as increase in contract time to allow for the fabrication of the railing for the catwalk due to material shortages.
- The catwalk metals were delivered on site for installation, the footers have been poured in early May, and the catwalk will be erected throughout the month ahead.
- Reynolds, Benson, WEC staff and KLWTD staff attended the construction progress meetings on April 10th and April 24th.

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	\$2,947,904.87	\$485,000.00	\$3,432,904.87
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$348,682.30	N/A	N/A	10%

- 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.
- The A/C Mini Split was mounted in the ATS room and pending complete hookup. The existing A/C unit is temporarily mounted to allow for the ATS to be cooled and prevent it from overheating.
- Conduit has been run on both sides of the CCC to allow for the wiring to be brought to the deep injection well and monitoring well.
- Conduit has been run along the tops of the SBRs to allow for the lighting and outlets to be ready to be pulled when the project is going on to its next phase.
- Pedro Falcon worked with WEC staff to provide several pricing options for the change order which was approved at the 5/6 Board Meeting. This change order allows for the upgrade of the power conditioning device to 2500kVa, as well as the upgrading of the system conduit/wiring to allow for increased amperage of the system which will be required for the EQ Tank and Headworks project or any other future expansions. This change order is included in the costs above.
- Pertaining to the VPS project additional safety work, Pedro Falcon provided a competitive bid for installing the disconnects at each vacuum station with a significantly improved cost and schedule that aligns with the Districts Hurricane Preparedness Plan. This is on for discussion at this Board Meeting, 5/20.
- Pedro Falcon, KLWTD and WEC staff attended the construction progress meetings on April 9th, 2025 and April 23th, 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	\$4,009,141.26	\$4,009,141.26	\$400,000.00	\$4,409,141.26
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$139,182.50	\$153,817.66	N/A	7%

- 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 occurred on Thursday, April 10th at the KLWTD Plant.
- Belle Construction has submitted submittals for WEC review including relocation of existing odor control tank plans, fuel tank relocations, concrete and rebar submittals.
- The Easement Agreement at Vac Station A was approved at the May 6th Meeting. Belle Construction plans to begin placing the new fence line and clearing the vegetation in the next period.
- The existing Odor Control systems have been relocated at Vacuum Stations G, I, & JK and routed through only the smaller tank, with no fan. Odor Control effectiveness remains the same. Belle plans to relocate the Odor Control system at Vacuum Station E in the next period.
- The fuel tank at Vacuum Station D has been replaced with a 500-gal temporary tank which has been wired into the existing generator while construction of the new generator slab commences. A similar process will occur at Vacuum Station A in the next period.

Upcoming Construction Projects

Project	Estimated Total Cost	Status
<p style="text-align: center;">Direct Potable Reuse Demonstration Project</p>	<p style="text-align: center;">\$1,504,301.25 (Anticipated)</p>	<p>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.</p>
<p style="text-align: center;">EQ Tank and Headworks Project</p>	<p style="text-align: center;">\$4,500,000 (Anticipated)</p>	<p>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.</p>
<p style="text-align: center;">Blower Room Modifications Project</p>	<p style="text-align: center;">\$250,000 (Anticipated)</p>	<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 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. Flovac Crew Installing Vacuum Pit Monitoring Equipment in Basin C (SE Marlin Ave)



Figure 2 and 3. IVC Crew Installed Conduit in the Trench, and the Compacted the Site Afterward (Hialeah In Basin C)

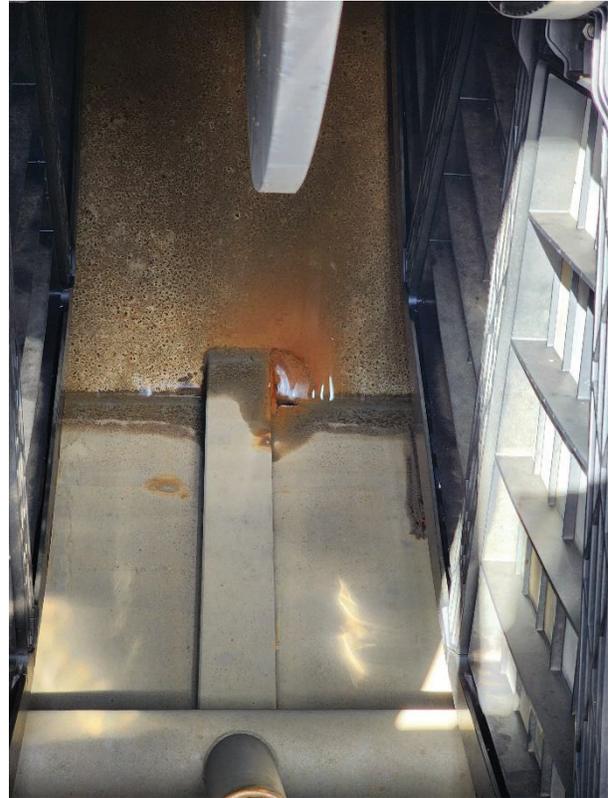


Figure 4 and 5. Corrosion on the welds of the 316SS Evoqua 40X filter

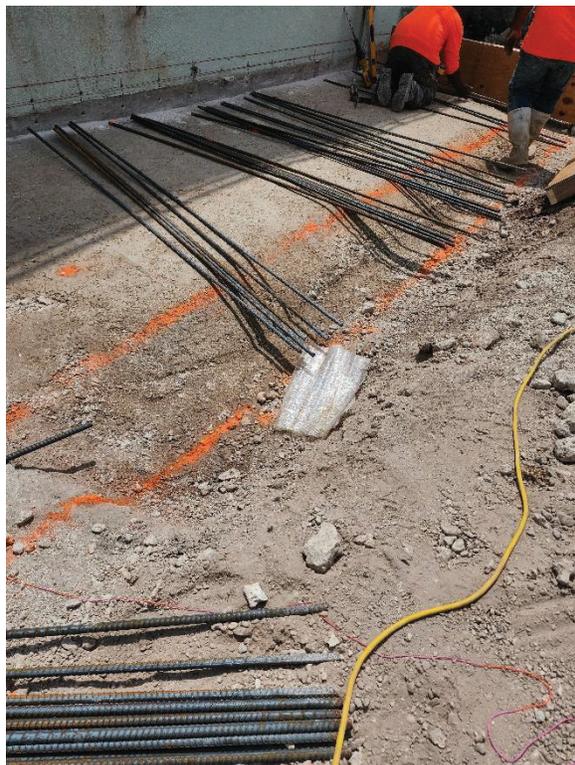


Figure 6 and 7. Embedment of rebar in existing wall of the plant pump station



Figure 8 and 9. Conduit stubbed up to both the monitoring and deep injection well



Figure 10 and 11. Conduit run along the side of the chlorine contact chamber and stubbed up to the end of the CCC ready to be run along the bottom of the catwalk



Figure 12 and 13. Temporary Fuel Tank has been installed at Vacuum Station D by BOI and passed pressure testing.



Figure 14 and 15. Odor Control relocation at Vacuum Stations JK and I.



Figure 16 and 17. Pressure testing of force main piping for the VPS job at Vacuum Station D