



Coco Bay Community Association

Irrigation System Overview

8/15/2025

Coco Bay Community Association

Overview of the Irrigation System

- This document is an overview of the CCB irrigation System
- The intent of the document is to provide an informative review of the system and not intended to be a technical inter working of the system.

8/15/2025

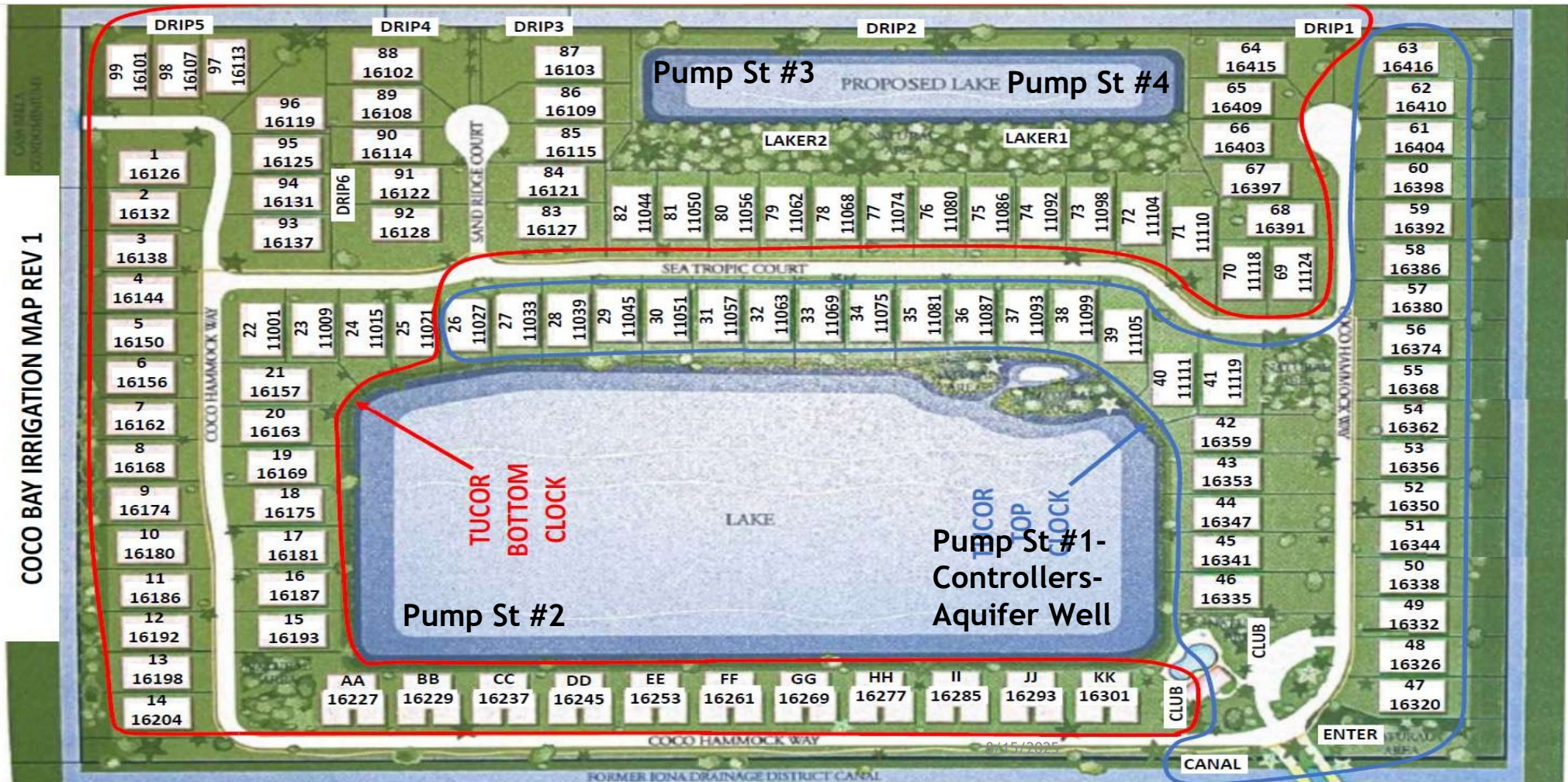
Coco Bay Community Association A little History

- The backbone infrastructure for the irrigation system was installed between 2005-2011
- The Individual home irrigation systems were installed as the homes were being constructed by various vendors with no continuity.
- A legacy system that has been in operation for approx. 20 years.
- The systems were maintained by various vendors, including Stahlman-England Irrigation, Mainscape & Pelican.
- The system sustained damage by Hurricane Ian and approx. \$250 K has been spent/reserved to restore the system to working order. Far less then the \$500 K that was estimated to install a new system.
- Expenditures 2023-2025 include, Pelican labor, main line repairs, pump/motors/drives repairs/ replacements, drip lines ,clean out of irrigation boxes, replacement of boxes & covers, replacement of decoders, valves, spray heads, wire, conversion of system for reverse pumping, drive enclosures panels, electrical disconnect upgrades and various supplies.
- Some would say we have a good operational robust system. (**thanks to Jerry & John costs were mitigated since some projects were done in house**).

Coco Bay Community Association Components of the “Irrigation System”

- **The Coco Bay Association Irrigation System is Permitted through the SFWMD**
- **The irrigation system consists of :**
 - **1–200-ft deep Recharge Aquifer Well**
 - **2 Lakes**
 - **4- Pump Stations (pumps, drives, motors, filters castings, and flow water meters)**
 - **2-Tucor Controllers**
 - **Irrigation water lines-main line & lines to homes**
 - **Thousands of feet of wiring that controls the irrigation system**
 - **Irrigation boxes that contain valves, decoders and solenoids**
 - **Approx 240 zones ,over 2,500 irrigation sprays & rotors**
 - **Coverage includes-99 homes , 44 condos & common areas**
- **The four pump stations are synchronized and balanced for proper water pressure and even distribution to the system.**
- **The lakes are used to supply water to the irrigation system; the recharge well replenishes the lakes.**
- **The Controllers send signals to the decoder, which turns on the solenoids, which opens the valves to open the zone for the sprinkler's heads to apply the water**

Coco Bay Irrigation System- Map Overview



Coco Bay Community Association State of the “Irrigation System” Components

- **1 Aquifer Recharge Well-** A new pump, motor & VF drive was installed in 2024
- **2 Lakes-Salinity levels are improving** July's reading small lake 1.7 ppt, large lake 2.5 ppt from a high over 20 ppt after Ian
- **Station 1 - original pump, motor & casting- VF Drive was replaced.**
- **Station 2 – motor and VF drive replaced in 2025**
- **Station 3 - drive replaced since Hurricane Ian-Motor & pump was replaced before Ian**
- **Station 4- drive replaced since Hurricane Ian, flow meter replace in 2025**
- **2-Tucor Controllers- bottom controller was replaced in July 2025 to current technology: the top controller will have to be upgraded as well. Tucor will no longer support older version controllers as of 1-1-27.**
- **Tucor is a respected name in the commercial field.**
- **Irrigation line-main line & lines to homes- lines are functionable, repaired as needed.**
- **Valves, solenoids, decoders, wiring , sprinklers heads- many have been replaced/repared since Hurricane Ian, with on-going routine maintenance.**

Coco Bay Community Association

- **South Florida Water Management District-Permit- requirements :**
 - **Annual Allocations 34.30 MG –Monthly Allocation 4.60 MG**
 - **Provide Monthly water meter reading–water usage**
 - **Provide Flow meter accuracy verification calibration certification every year 5 yrs**
 - **Provide Ten-year compliance report-with reuse water availability**
 - **All three are in compliance**
 - **Permit expires in 2031**
- **Water Equipment Technologies of Southwest FL .LLC**
 - **Maintains the system from the pumps to the controllers**
 - **Provides- Quarterly inspections-pumps, motors, drives & meters.**
 - **Provides -5-year, flow meter accuracy verification calibration certification**
 - **Provides-maintenance as needed / directed**
- **Pelican**
 - **Maintains the irrigation system from the controllers to the sprinklers**
 - **Provides weekly wet checks & routine maintenance**

Water Equipment Technologies of Southwest Florida LLC

State of Florida Certified Plumbing Contractor #CFC1429137

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Example of the
inspection
report

IRRIGATION PUMP SYSTEM REPORT

		DATE	07-29-2025
CUSTOMER	CoCo Bay	LOCATION	Pump Station #1

✓	INCOMING VOLTAGE	241	VOLT	SINGLE PHASE	✓	THREE PHASE	
N/A	JOCKEY PUMP	A		B		C	
✓	LAKE PUMP #1 AMPERAGE	A	15.7	B	16.3	C	16.9
✓	WELL PUMP #1 AMPERAGE	A	14.2	B	13.1	C	15.2
N/A	PUMP #3 AMPERAGE	A		B		C	
✓	CHECK & RECORD HOUR METER READINGS	801 / 8015 HRS					
✓	CHECK & RECORD FLOW METER READINGS	75236953 / 2964058 GAL					
N/A	MEG MOTOR AND RECORD READINGS						

N/A	CHECK MOTOR STARTER CONDITION
N/A	CHECK VOLTAGE OUTPUT ON STARTER
✓	VISUALLY INSPECT & INFRARED HEAT CHECK ALL WIRES FOR HEAT DAMAGE & HOT SPOTS
✓	CHECK ALL CONTROL DEVICES FOR PROPER OPERATION
✓	DRAIN AND CLEAN CONTROL LINES
✓	VISUALLY INSPECT ALL SWITCHES AND INDICATOR LIGHTS
✓	CHECK PIPE AND FITTINGS FOR LEAKS
N/A	CHECK MOTOR FOR EXCESSIVE HEAT
N/A	GREASE MOTOR BEARINGS
N/A	CHECK FOR ANY EXCESSIVE VIBRATION
N/A	CHECK MECHANICAL SEAL FOR LEAKS
N/A	CHECK CONTROL VALVES, CLEAN WYE STRAINER AND TUBING
N/A	CHECK ALL PRESSURE SWITCHES AND TRANSDUCERS FOR PROPER OPERATION
✓	CHECK GAUGES FOR ACCURACY
✓	CHECK AND OPERATE ALL VALVES
✓	MANUALLY FLUSH ANY FILTERS
✓	CHECK HYDRO-PNEUMATIC TANKS FOR PROPER AIR PRESSURE
✓	CHECK VFD SCREEN
✓	CLEAN VFD FANS, HEAT SINKS AND FILTERS

COMMENTS:

SERVICE TECHNICIAN	Justin Burnett
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Water Equipment Technologies of Southwest FL LLC

Flow Meter Accuracy Verification Form

Facility	Cocoa Bay			Meter Purpose	PS3 - Irrigation		
Address				WUP #			
				District ID#			
Contact	Jerry Campbell			District Well Tag	NO		
Phone				Tag ID#			
Flow Meter	Manufacturer	Netafim		Model	3IRT		
Serial	19-80077935		Size	3 inch		Type	Propeller
Vanes	No		Range			Read	X1000
Type of Recorder			Output				
Pipe Material	PVC		O.D.	3.5		Schedule/Class	40
Wall Thickness-Gauge	.216		Chart				

Flow Meter			Test Meter			
Elapsed Time	Totalizer		GPM (A)	GPM (B)	GPM (C) (A-B)	Percent Error C/B X100
5	Start	44175900	55	53.1	1.9	3.6
	Stop	44176175				
	Total	275				
5	Start	44176175	56.2	55.3	.9	1.6
	Stop	44176456				
	Total	281				
5	Start	44176456	58.8	56.9	1.9	3.3
	Stop	44176750				
	Total	294				
				Percent Error Average		2.8
Test Meter Model	G E PT900			Serial #	M06210050	
Sound Speed	4808.7			Test meter Calibration Date	6/26/2024	
Checked By	H. H. "Tom" Morgan III			Date	1/14/2025	

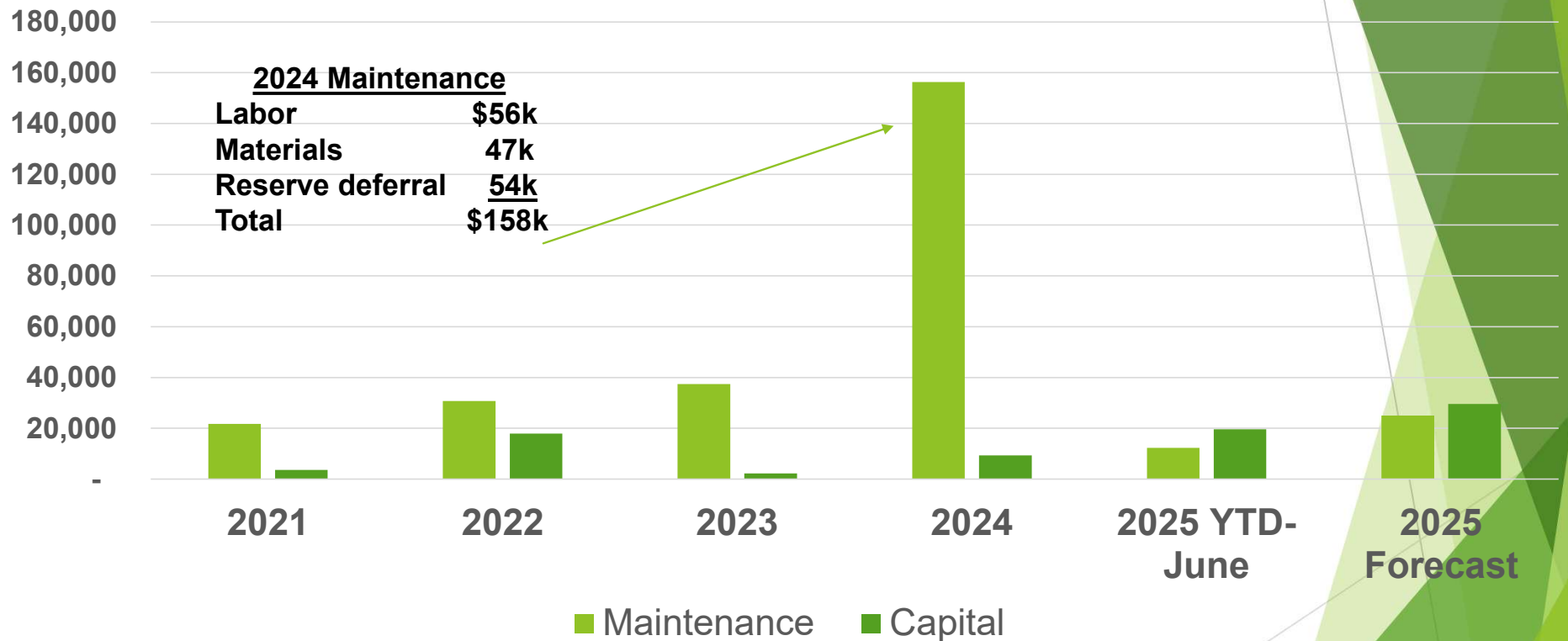
Comments: _____

Corrections Needed: _____None_____

Corrections Made: _____

Example of the meter verification inspection

Coco Bay Community Association Irrigation Expenditures 2021-2025 Forecast



2025 forecasted maintenance expenditures are in line with 2021
2024 expenditures result of saltwater intrusion, corrosion, of all components

Coco Bay Community Association Current & Future projects

- **Balance of 2025:**
 - Install isolation valves for Aquifer well & Station 1
 - Install pumps monitoring pressure system
 - Replace Top Controller-to current technology
 - Weekly routine maintenance of valves, solenoids, decoders, wiring , sprinklers heads
 - Install drip line for new plantings
- **Future projects:**
 - Station 1-replace motor & pump (if & when required)
 - Station 2-replace pump (if & when required)
 - Station 3-replace motor & pump (if &when required)
 - Station 4-replace motor & pump (if & when required)
- **Next step:**
 - Third Party-Evaluation of the System -
 - Strengthens / Weakness
 - Future capital expenditures

Components of the Irrigation System

**Yaskawa VF
drive**



**150 GPM
pump**



**7.5 HP
motor**



**Water meter
to measure
water usage**



The brains that provides water from the lakes to the main line, the aquifer pump, motor and drive has the same configuration, pumps water from the aquifer into the lakes

Components of the Irrigation System

**Tucor
Decoder**



**Valve
boxes**



**Valve
with
solenoid**



**Tucor
Controller**



**The brains that sends signals to supply
water to the homes**