

## Third Monthly Progress Report

July 2024

Currituck Water & Sewer, LLC

CPCN Proceeding for Carolina Village MHP

W-1333 Sub 5

### **Introduction**

Currituck Water & Sewer, LLC's ("Currituck") monthly report is prepared for and submitted to the North Carolina Utilities Commission ("NCUC" or "Commission"), with a copy to the Public Staff of the North Carolina Utilities Commission ("Public Staff") consistent with the Commission's *Order Acknowledging Partial Settlement Agreement, Staying Show Cause Proceeding, Canceling Show Cause Hearing, And Continuing CPCN Proceeding* ("Order") issued May 2, 2024.

The Commission's Order adopts Currituck's and the Public Staff's *Joint Motion for Approval of Partial Settlement Agreement, Cancellation of Hearing on Motion to Show Cause, and Agreed Revised Scheduling Order* (Partial Settlement Agreement) dated May 1, 2024.

The Partial Settlement Agreement requires Currituck, in part, to communicate with the Public Staff and provide monthly updates on the progress of certain capital projects and other relevant activities (e.g., environmental matters, customer service) connected to the Carolina Village MHP. On April 24 (site visit) and May 8, 2024, representatives of Currituck and the Public Staff met or otherwise meaningfully communicated regarding Currituck's progress at the Carolina Village MHP. On May 6, 2024, Currituck filed with the Commission a capital project Gantt chart as its initial submission. Currituck will review, revise, and update this and future monthly reports consistent with the Commission's Order, the Partial Settlement Agreement, and its initial submission.

### **Capital Projects Summary**

#### **Immediate Renewal & Replacement (R & R)** **(preliminary engineering estimate - \$100,000)**

The purpose of this project is to address immediate items related to the condition of the facilities with the goal to improve reliability and increase the effectiveness of the existing wastewater treatment plant (WWTP) and drinking water treatment plant (WTP) to maximize the effectiveness of the existing facilities while more substantive improvements are completed. For the WWTP, the immediate R&R items address items at the WWTP, while the

permanent facility is upgraded to a to a facility incorporating new tankage, blowers, and pumps while also utilizing existing tankage for equalization and sludge holding. The upgraded facility will provide the required treatment units necessary to achieve permit limit requirements. For the WTP, the immediate R&R items address items at the well house, while the design, permitting, and construction of the upgraded facilities is completed. The project consists of chemical feed upgrades, air compressor replacement, booster pump repairs, well house painting, new signage, and electrical modifications.

The project began on February 19, 2024. Beginning on or about March 27, 2024, Currituck undertook numerous immediate repairs as outlined in its response to the Public Staff's Motion to Show Cause. Work is expected to be ongoing as the effectiveness of the WWTP and WTP is continually analyzed. Currently, the planning, procurement, and mobilization phases will continue as needed. The initial construction phase began on March 10, 2024, and is largely complete with a few items such as additional removal of unnecessary equipment and materials and the installation of additional safety/security items to be completed on May 31, 2024. The existing WWTP plant will be repurposed when the new treatment facilities are commissioned. Some of the tankage and equipment will then be repurposed for use with the new plant. The scope of the immediate WTP improvements includes items that will largely be used as part of the planned additional upgrades. Previously provided as Exhibits A-1 through A-13 were pictures, Notices to Proceed, and Purchase Order Requisitions connected to the project. Note that while Exhibit A-13 shows the storage building was for operation & maintenance ("O&M"), it is in fact a capital improvement.

#### June Update

Currently, this project is materially complete.

#### July Update

Currently, this project is materially complete.

#### Carolina Village Collection System R & R (preliminary engineering estimate - \$275,000)

The purpose of this project is to raise one manhole that sank, rehabilitate the four (4) Carolina Village MHP wastewater lift stations, improve the reliability of the facilities, decrease the potential for environmental harm (i.e., sanitary sewer overflows (SSOs)), and enhance public safety. Specifically, Currituck completed a CCTV of the collection system and the inspection of the four (4) lift stations. As part of these inspections, Currituck identified a single manhole that had settled, making it unserviceable. Currituck also found

that the four (4) lift stations required renewal. Renewal of the lift stations will include installation of a new lift station control mounting station, upgrade of the electrical service, new controls, new pumps, new pump mounts, and new telemetry to bring the lift stations up to Currituck's lift station standards. Additionally, the existing wet wells have been determined to be suitable for continued use. The sunken manhole will be raised approximately 24 inches. This will include realignment of 850 feet of six-inch PVC sewer main and eight four-inch services.

The project began on March 26, 2024, and is expected to be completed on May 31, 2024. Currently, the planning, procurement, and mobilization phases have been completed. The construction phase began on April 30, 2024, and is expected to conclude on or about May 31, 2024. Commissioning of the manhole and each lift station will occur as construction is complete. Previously provided as Exhibits B-1 through B-12 were pictures, quotes, Notices to Proceed, and Purchase Order Requisitions connected to the project.

#### June Update

David May of the North Carolina Department of Environmental Quality ("DEQ") conducted a site visit on May 31, 2024. Mr. May was pleased with the lift station work and plans to return for a final inspection once telemetry units are installed. As previously indicated, the telemetry units have been ordered but have not yet arrived to be installed. Despite not having the units, the pump stations are online and running on the new pumps.

Additionally, to correct what was believed to be a sunken manhole, it was determined that the manhole in fact was not sunken, but rather, the road around the manhole had sunk due to a water leak. The leak has been fixed and the issue has been resolved.

Attached as Exhibits A-1 through A-6 are pictures connected to the project.

#### July Update

Currituck completed commissioning, including addressing electrical issues at two of the four lift stations. To ease future removal and installation of pumps, a portable Davit crane has been ordered as well as mounting bases for each lift station. The crane is portable and can be moved to each lift station as needed. Attached as Exhibit A-1 is the requisition form for the purchase.

#### WTP Modifications

(preliminary engineering estimate - \$100,000)

The purpose of this project is to construct structural enhancements, install a valve bank at the Carolina Village MHP wellhouse that meets Currituck standards, and properly

connect the existing 5,000-gallon hydro-pneumatic tank to the system. More specifically, the project includes demolition, removal, and scrapping of the 100,000-gallon ground water storage tank (as well as other equipment) that is no longer required. Renovations will include the well house and valve bank and re-piping to remove the ground storage tank and booster station. Booster pumps will be decommissioned, and the valve bank to the hydro-pneumatic tank will be modified to meet Currituck's tank standards.

The project began in March 2024 and is expected to be completed by October 31, 2024. Currently, the planning phase has been completed. Final commissioning for the project is expected to occur on or about October 31, 2024. Previously provided as Exhibits C-1 through C-3 were pictures, Notices to Proceed, and Purchase Order Requisitions connected to the project.

#### June Update

Currently, Currituck is working on permitting. It is anticipated that the permit application will be finished and submitted by the middle of June.

#### July Update

The design is 60% complete. The redesign of the system converts from pumping to an open atmosphere reservoir directly to the hydropneumatic tank. After consult with NC PWS, Currituck needs to collect additional information on the wells and pumps to ensure the proper combination of pump capacity, storage, and well capacity. Currituck anticipates purchasing a new well pump. Currituck, through ELJ and MacConnell & Associates, is working with the DEQ Washington Regional Office to determine the most appropriate solution and then will coordinate with DEQ to address their concerns and/or requirements.

#### Water Distribution System Modifications

(preliminary engineering estimate - \$50,000)

The purpose of this project is to remove fire hydrants as the achievement of fire flow is not possible with the Carolina Village MHP drinking water system and presents a liability. This project includes initially bagging of the fire hydrants so fire crews are fully aware that fire flow is not feasible on the existing Carolina Village water system, and, eventually, removing the fire hydrants, requiring fire crews to obtain water from an alternative source more suitable for providing water for fire fighting activities. Since fire hydrants will be removed, installation of blow-off assemblies at system dead end will allow Currituck to flush the water system with the intent to maintain high water quality throughout the system.

The project began in February 2024 when Currituck bagged the existing hydrants and coordinated this action with the local fire department. Currently, the planning,

procurement, and mobilization phases have been completed. The construction phase will begin when Currituck crews have completed work on other projects. Construction completion is scheduled for October 31, 2024.

#### June Update

There is no material update on this project.

#### July Update

There is no material update on this project.

#### Water Metering Project

(preliminary engineering estimate - \$200,000)

The purpose of this project is to allow Currituck to determine monthly water use by individual users and promote the responsible use of water by each customer. In addition, this will ensure customer billing accuracy and allow more efficient operation of the water system. Currituck will install approximately 124 meter boxes, meter setters, and meters.

The project began with the purchase of water meters and is expected to be completed by October 31, 2024. The construction phase will begin when Currituck crews have completed work on other ongoing projects. Final commissioning for the project is expected to occur on or about October 31, 2024. Attached as Exhibit D-1 through D-4 were quotes and invoices connected to the project.

#### June Update

There is no material update on this project.

#### July Update

There is no material update on this project.

#### WWTP Upgrade

(preliminary engineering estimate - \$700,000)

The purpose of this project is to replace the existing extended aeration wastewater treatment plant in operation at Carolina Village MHP by moving and installing an existing membrane WWTP to Carolina Village MHP that has the capability of achieving treatment results compatible with Engineered Option Permit (EOP) standards. The 60,000 gpd membrane plant includes three (3) tanks (pre-anoxic tank, aeration tank, and membrane tank), mixers, blowers, permeate pumps, and recycle pumps. The extended aeration plant's twelve (12) 5,000 gallon concrete aeration tanks are to be repurposed for use as two (2)

5,000-gallon equalization tanks, and ten (10) 5,000-gallon sludge holding tanks with two (2) approximately 260 cubic feet per minute (cfm) blowers for aeration. The existing tablet chlorinator, flow meter, and back up generator will be used for disinfection and backup power.

The project began on April 30, 2024, with the evaluation of the mobile plant and beginning of roadbed preparation for plant delivery and is expected to be completed on December 31, 2024. Currently, the planning phase is still underway, but the major elements of the WWTP have already been procured. A hydrogeologist has identified a new location for the EOP fields as the previously identified location was not feasible based upon well point tests. MacConnell & Associates approved the location. ELJ cleared vegetation for further investigation by the hydrogeologist.

The mobilization and construction phases have yet to begin. Final commissioning for the project is expected to occur on or about December 31, 2024. Attached as Exhibits E-1 through E-7 were pictures connected to the project.

#### June Update

Currently, Currituck is working on completion of a preliminary design for the treatment plan. Currituck is working with MacDonnell & Associates and ELJ for the design. Additionally, site selection for the EOP fields is complete. The hydrogeologist has performed preliminary and field evaluations and provided to Currituck preliminary loading rates.

#### July Update

Currituck has received the report for the EOP fields. David May from DEQ reviewed the site on June 28, 2024, and expressed his general approval and noted there were multiple options for disposal site locations. Engineer's continue to work on the design and have completed the subsurface drip field layout. ELJ continues to work on an access road from the park at Carolina Village MHP to the WWTP.

### **Environmental Summary**

Currituck achieved compliance with all relevant and appropriate drinking water quality legal obligations at Carolina Village MHP during April 2024. With respect to wastewater obligations at Carolina Village MHP, Currituck is waiting on all sample results to confirm status of compliance and will provide same as part of its next status report. As is known by the Public Staff and the North Carolina Department of Environmental Quality ("DEQ"), however, the Carolina Village MHP wastewater treatment plant effluent remains non-compliant with nitrogen standards until the completion of Currituck's WWTP capital project (see above).

Previously attached as Exhibit F-1 was the Monthly Operating Report (“MOR”) for April 2024 as submitted to DEQ.

#### June Update

As stated above, David May conducted a site visit on May 31, 2024. Mr. May indicated that the basin the system was discharging into is in compliance. He also requested Currituck prepare a pump and haul application (without submitting it) in the event the level of the infiltration pond would violate the freeboard requirement during a major storm like a hurricane. Mr. May indicated the application could be quickly turned around if implementation was necessary.

Attached as Exhibits B-1 through B-3 are the April DMR (which indicated the system is in compliance, including for nitrogen) and sampling results from May.

#### July Update

Attached as Exhibit B-1 and B-2 is the May DMR and June MOR, respectively. The MOR indicates the water system is in compliance. The May DMR indicated the WWTP was non-compliant for the parameters of BOD and Total Nitrogen. The BOD exceedance was due to a broken return activated sludge line on one of the clarifiers. The line was repaired and placed back into service. The current wastewater treatment facility in operation at Carolina Village is not designed to remove Total Nitrogen by biological treatment and lacks the processes for nitrogen removal, an issue Currituck is addressing through the repairs and improvements previously reported. It is worth noting that the issues with the return activated sludge line also impacts the conversion of ammonia to nitrate and potential denitrification to nitrogen gas.

### **Customer Service Summary**

During April 2024, Currituck received three (3) customer service contacts regarding Carolina Village MHP. The first matter was reported on April 15 and involved Lift Station B. Envirolink responded the same day and determined that the electrical panel had “tripped” requiring the successful reset of the breakers. The second matter involved a report on April 19 of a main break. Envirolink responded that same day and determined there was no main break and notified the customer. Finally, on April 25, Envirolink resolved an earlier report of a malfunctioning pump by replacing it with a new pump and motor. Each customer service contact was fully and timely resolved by Envirolink staff.

#### June Update

There were no customer contacts in May.

July Update

In July, there were four (4) customer service calls regarding potential leaks. Three (3) calls were received and investigated on June 5 and determined to be rain puddles. The other call came on June 26 and was repaired the same day.

**Operational & Administrative Improvements**

Currituck is developing certain operational and administrative improvements. Currituck will timely report on each operational and administrative improvement in future monthly reports.

June Update

Currituck is currently working with Envirolink to transition away from Envirolink's subcontractor to a new Envirolink lead operator.

July Update

Currituck, though Envirolink, has hired a new operator for the Carolina Village MHP system. The new operator is undergoing training on Envirolink's systems.