



**PRECISION**  
ENGINEERING, LLC

EXCEEDING EXPECTATIONS

...

**CORRECTIVE ACTION PLAN (CAP)**

**FOR**

**THE CITY OF CELINA**

**CLAY COUNTY, TENNESSEE**



**NOVEMBER 14, 2022**

## **Remedial Measures:**

### **A) Facility's Current Condition**

The City of Celina currently owns and operates a wastewater treatment plant (WWTP) facility which was constructed in 1988. The sewer collection system and WWTP serve many customers throughout the local area. The City of Celina has recently been proactive in its efforts to properly operate the sanitary sewer system. The city entered into a self-imposed sewer moratorium recently and this will remain in affect until certain corrections are made to address the excessive infiltration/inflow (I/I).

Recently, the City of Celina began efforts to remove and replace their Headworks unit with a new Mechanical Screen. This project is nearing completion and should be functioning by the end of 2022. During construction, Lagoon #1 was drained for the installation of the headwork effluent piping. While drained it was evident that the sludge build-up in Lagoon #1 was excessive.



*Figure 1: Lagoon #1 - Drained*

Other efforts throughout the system are also being planned. The City of Celina secured CDBG funds to rehabilitate roughly 5,000 linear feet of existing 8" sewer line by means of pipe-bursting. This project will be on November 15<sup>th</sup>, 2022 and will increase the size of the line to 12" diameter. This effort is intended to reduce the amount of I/I entering the system and increase the size of the lines which discharge into an existing lift station.

projects are completed and fully operational.

Every effort to properly maintain the system will be made until the new

### **B) Proposed Upgrades & Corrective Actions**

The City of Celina's collection system has experienced an extensive amount of infiltration and inflow (I/I) during storm events in the past, which in-turn has produced occurrences of excessive flow to the WWTP and some overflows within the system. This excessive flow has caused strain on the plant's modules.

The City of Celina will receive \$630,000.00 of CDBG funding to complete approximately 5,000 linear feet of sanitary sewer upgrades throughout the system (as described above). This project is bidding on November 15<sup>th</sup>, 2022 and should be completed in the summer of 2023. The proposed project tasks to be completed within this project are:

- Pipe-burst 5,000 LF of 8" sewer with a 12" HDPE sewer,
- Rehabilitate 12 problematic manholes,

The City of Celina will also pursue a project to correct all three (3) lagoons in 2023. The City of Celina was recently granted \$1,406,575.00 of ARP funds. A portion of these funds, by City resolution passed in October of 2022, will be allocated to completing a project at the WWTP intended to remediate all three (3) lagoons. The project will include the proper removal and disposal of all deposits collected within the lagoons. Removing these deposits will provide adequate lagoon volumes for proper detention time and treatment. The aeration system will also be rehabilitated to provide proper air distribution throughout the lagoons.



Figure 2: Lagoon #2

This project has yet to be designed, but design will begin in early 2023, with an anticipated project bid date of August of 2023. We anticipate the method of construction to be as follows:

- Connect bypass lines (existing or new) to the new headworks to carry influent to Lagoon #2.
- Drain the raw water from Lagoon #1 and place in Lagoon #2
- Remove excess deposits with heavy equipment
- Properly collect deposits and transport to landfill (by permit)
- Repair aeration lines, diffusers, supports, etc.
- Verify by survey that the lagoon is at its designed grade
- Valve off the bypass and begin utilizing Lagoon #1
- Repeat the process for Lagoons #2 and #3 until

completion.

We anticipate the following completion dates for each lagoon:

- Lagoon #1 – Complete and operational Fall/Winter of 2023
- Lagoon #2 – Complete and operational Spring of 2024
- Lagoon #3 – Complete and operational Summer of 2024

The City of Celina will also begin developing and preparing a new policy for managing the acceptance of septic pumpers and/or other sources of outside sewage being transported to

the WWTP. Once a complete draft of this policy is complete, the city will submit this policy to you for review, comments, and recommendations.

**C) Completion & Final Compliance Dates**

Permits from the Tennessee Department of Environment and Conservation (TDEC) will be sought following the project’s design. We feel the following is a realistic timeframe for compliance. The timeframe may need to be adjusted slightly if there are time limitations from the finding source(s).

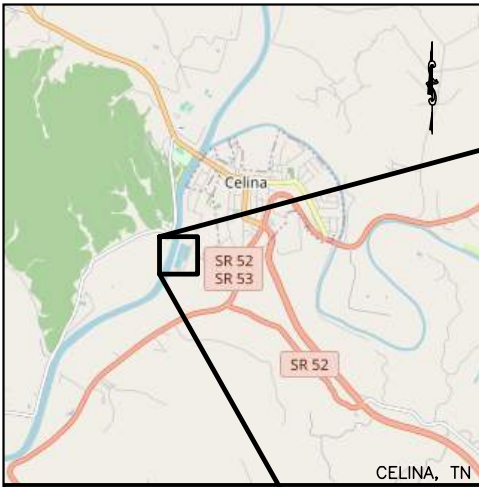
- Begin Design of Project – January 2023
- Design Complete – April 2023
- Permits Secured – April 2023
- Bid Project – May 2023
- Award Contract – June 2023
- Contract Start Date – July 2023
- Lagoon #1 Rehabilitated – October/November 2023
- Lagoon #2 Rehabilitated – January/February 2024
- Lagoon #3 Rehabilitated – May 2024
- Contract Closeout – June 2024
- Final Compliance – July 2024

**D) Funding Source(s) Available**

• TDEC ARP	\$1,406,575.02	Approved (Oct - 22)
• Celina Match	\$248,220.00	Approved by Resolution (Oct - 22)
TOTAL:	<b>\$1,654,795.02</b>	







VICINITY MAP



CELINA WWTP REHABILITATION PROJECT

GENERAL LEGEND


SCALE:	N.T.S.
JOB NO.	22-01-053
DETAILED BY:	TJB
REVIEWED BY:	SRH
DATE:	Oct. 27, 2022
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CITY OF CELINA, TN  
 LOCATION MAP  
 CLAY COUNTY, TENNESSEE



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