City Council Work Session
July 11, 2022

The City Council of the City of Elizabeth City met in work session on Monday, July 11, 2022 in Council Chambers, located on the 2nd floor of the Municipal Administration Building, 306 E. Colonial Avenue, Elizabeth City, NC.

MEMBERS PRESENT: Mayor Kirk Rivers
Mayor Pro Tem Kem Spence
Councilman Johnson Biggs
Councilman Joseph Peel
Councilman Javis Gibbs
Councilwoman Rose Whitehurst
Councilwoman Katherine Felton
Councilwoman Barbara Baxter
Councilman Johnnie Walton

MEMBERS ABSENT: None

OTHERS PRESENT: Interim City Manager Montique McClary
City Attorney Bill Morgan
Chief of Police Larry James
Deputy Chief of Police James Avens
Interim Human Resources Director Monica Cole
Parks and Recreation Director Sean Clark
Grants Administrator Jon Hawley
Community Development Director Kellen Long
Fire Chief Chris Carver
ECDI Director Debbie Malenfant
IT Director Matthew Simpson
IT Systems Analyst Pedro Holley II
City Clerk April Onley

Mayor Rivers called the Work Session to order at 6:00 p.m. The invocation was delivered by Councilman Gibbs, after which Councilman Biggs led the Pledge of Allegiance.

1. **Agenda Adjustments and Approval:**

Mayor Rivers asked the Council's pleasure on the prepared agenda.

Mayor Rivers requested that the Council add a TDA Presentation from Executive Director Ruffieux and a Financial Presentation from Councilman Biggs to the agenda.

> **Motion was made by Mayor Pro Tem Kem Spence, seconded by Councilman Johnson Biggs to approve the agenda as presented. Those voting in favor of the motion were: Biggs, Peel, Gibbs, Whitehurst, Spence, Felton, Baxter and Walton. Against: None. Motion carried.**

2. **Presentations:**

a. WithersRavenel;

Director Bell introduced WithersRavenel who would be providing a presentation to the Council. In 2021, the City enlisted WithersRavenel to identify best practices to improve the City's wastewater system. Currently, the wastewater treatment plant has 4.5 MGD capacity and serves about more than 7,000 customers, both residential and commercial. To best analyze this, WithersRavenel looked at several factors, including where the City was expecting and experiencing the most growth, how is the system currently performing, the inflow and infiltration, and long-term funding strategies amongst others. They used GIS sewer data for some of their analysis, but found that much of the needed information was missing. To properly assess the condition, they sought to determine which areas drained to the main or major pump stations because those should be priority. Secondly,

they identified the types of pipe they were looking at; PVC pipes were obviously newer, but they did find sections where clay pipes were in the ground, which indicated extremely old lines. They also had to assess the situations during both wet weather and dry weather because that causes capacity to change. The outcome of the pump station evaluations was that the stations were not performing to their intended capacity.

A breakdown of the priorities based on the most critical problems was provided, which was further separated over the course of several years. The Main and Pearl Streets gravity sewer basins were the most expensive and critical, followed by Holiday, Charles and Providence. The engineering strategy recommendation was to begin with improved mapping and verification, followed by pump station improvements, sewershed inflow and infiltration reduction. At some point, there would need to be pump station expansion in the areas that targeted growth had been identified, as well as overall plant improvements to accommodate that growth. If the City hits 80% capacity, the state will need to evaluate our plan before we can be authorized for more capacity.

Financial recommendations for capital improvement in sanitary sewer were provided for 2022-2024. The total recommendations for 2022 came to $1,673,000; 2023 was $1,743,000; and 2024 was $1,837,000. Those recommendations included GIS inventory and field equipment, data modeling and lift station upgrades primarily. The Council was encouraged to begin identifying potential funding for some of these projects for the future. It was also encouraged to perform CCTV and mapping to perform a better analysis and zero in on project costs. Labor and goods are extremely expensive right now and change from day to day, so it's hard to budget for what you may actually need. The Council was encouraged to continue to seek grant funding from the state to try to tackle some of these issues.

b. Timmons Group;

Director Bell advised that the companion presentation would be from Timmons Group, who had also performed an engineering analysis report. Timmons Group personnel explained that they'd also began work with the City in August of 2021, and had been working with City staff and WithersRavenel on this project. The City's wastewater treatment plant was constructed in 1996-1997, and it discharges directly into the Pasquotank River. The design capacity is 4.5 MGD. The annual average flow for 2020 was 3.599 MGD, or about 79.99% of capacity. The average flow for 2021 was 3.367 MGD or about 74.8% of capacity. There was a decrease in the 2021 flows due to less rainfall during that calendar year. The single highest day of flow was February 7, 2020, which was 14.2 MGD. There was a week in February of 2021 with two individual days over 10 MGD each day, which brought the entire week to an average of 8.9 MGD. It was also during February 2021 that the City received a notice of violation from DEQ for bacteria and solid suspended liquid limits and was subject to a penalty. The wastewater treatment plant is equipped to treat high flows, but not high flows that stay as steady as these have been and it is approaching capacity.

When there are deficiencies in the collection system, groundwater and rainwater enter the sewer, which ends up at the treatment plant. That water gets treated unnecessarily and then burns up even more capacity. Additionally, heavy rains sometimes lead to overflow, which in turn can lead to violations. DEQ will not allow additional capacity unless the City also has a plan to address the sewer collection system, and they do have the right to impose a sewer moratorium if the City does not address the concerns.

The Timmons Group evaluated several alternatives in their particular study including expansion of the currently wastewater plant, new treatment technology, recommissioning the old wastewater plant, and building a new wastewater plant at a new location in the city. Overall, a four-phase approach is recommended to help break up the improvements so the cost is more manageable The first phase would be the EQ storage system and upgraded headworks to address peak flow and I&I. Phase two would be the solids treatment train upgrade and conversion to UV disinfection to prepare for future expansion. Phase three would be increasing capacity from 4.5 MGD to 6 MGD with improved treatment technology. Phase four would be upgrading capacity to 9 MGD with improved treatment technology.

Another option is creating a new "South" wastewater treatment plant. This may be a potential consideration as the current plant has a minimal amount of available space and

is surrounded by wetlands. Additionally, expansion of the current plant will not be able to go over 9 MGD; however, constructing a new site is extremely costly, especially when taking required permitting and land acquisition into consideration.

Mayor Pro Tem Walton asked how long each of the suggested phases in the four-phase approach might take. The Timmons Group suggested that they'd estimated phase one to need to happen sometime in the next three to five years. Phase two would need to be implemented in five to 10 years. Phase three would be 10 to 15 and phase four would be 15 to 25 years. They pointed out that this was just a general guideline and could always change based on growth or other facts that would require it needing to be sped up or even slowed down. Likewise, the costs could change as well. Right now, the cost of phase one is estimated at $14,260,000; phase two is estimated at $13,180,000; phase three is estimated at $36,960,000; and phase four is estimated at $24,070,000. There are also permitting requirements that the City will have to contend with that can take about two to two-and-a-half years to sort out.

The most cost-efficient path for addressing the problem at this time is to either move forward with mitigating I&I in the collection system or begin the four-phase approach. The Timmons Group can provide a proposal for the four-phase approach to the City, beginning with the phase one improvements. They can also help with permitting. An engineering alternatives analysis is one of the steps required in getting a permit for modifying a wastewater treatment plant, and the Timmons Group would be able to provide that for the City. If the DEQ approved the EAA, it could help the City win grant funding for the project.

Mayor Rivers noted that there would not be sufficient time to hear the TDA and Finance presentations during the Work Session, and asked that the Council add them to the Regular Session agenda during adjustments when that meeting was called to order.

3. Adjournment:

There being no further business to be discussed, Mayor Rivers adjourned the meeting at 6:57 p.m.

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E. Kirk Rivers
Mayor

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April D. Onley
City Clerk, NCCMC