

**CITY OF LAURINBURG
CITY COUNCIL SPECIAL MEETING
AUGUST 20, 2019
CITY HALL AND POLICE DEPARTMENT
303 WEST CHURCH ST.
6:00 p.m.**

Minutes

The City Council of the City of Laurinburg held a special meeting on Tuesday, August 20, 2019 in the Council Chambers of the City Hall and Police Department at 6:00 p.m. with the Honorable Mary Jo Adams, Mayor Pro Tem, presiding. The following Councilmembers were present: Mary Evans, James J. Garby, Jr., Curtis B. Leak, and Andrew G. Williamson, Jr. Mayor Matthew Block, MD was absent.

Also present were: Charles D. Nichols III, City Manager; Jennifer A. Tippett, City Clerk; Stacey McQuage, Public Utilities Director; Harold Haywood, General Services Director; Dixon Medlin, Treatment Plants Director; and Carrie H. Neal, Finance Director.

Mayor Pro Tem Adams called the meeting to order at 6:00 p.m.

Councilmember Leak gave the invocation.

FINAL REPORT ON THE ASSET INVENTORY ASSESSMENT GRANTS FOR WATER AND WASTEWATER

The City Manager explained that Ms. Jean Klein and Mr. Jim Perry of the Lumber River Council of Governments (COG) were going to present the findings of the two (2) year process involving two (2) grants the City received Asset Inventory Assessment Grants, one for the City's water assets, and the other for the City's wastewater assets.

Ms. Jean Klein, Regional Planner of the COG, explained that the two (2) projects were completed and the report completed on the water and wastewater assessments. She added that the City has a dense water system and a dense wastewater system with large footprints; therefore a lot of maps were required to map out the entire system.

Books contain final reports for both projects. Available at COG to answer any questions. And do any follow-up Purpose of both was to introduce the concept of asset management to the City and what we learned was that you were already practicing pretty good asset management. Have nice CIP and then rolling most recent year of CIP into budget. You have a nice established process and you follow the process. She then presented a PowerPoint with highlights as follows:

- Asset management is the practice of managing infrastructure capital assets to minimize the total cost of owning and operating these assets while delivering the desired level of service.

- It is also about understanding the condition of the assets, the useful life of the assets, and the age of the assets and planning for replacement of assets along the way.
- The objective is to get it so you can minimize the cost of owning and operating the asset while getting the most out of the asset that you can before it needs to be retired. And simultaneously delivering the level of service that you are required to deliver.
- On the water system, you are under contract with the State of North Carolina by your permit to deliver safe drinking water. You have set of parameters that you have to meet in terms of the quality of the drinking water. The level of service that you need to provide is to make sure that those parameters are always met so that the public health is protected and the environment is protected. Asset management is holistic management concept.
- Process that was followed:
 - Identified and inventoried water and wastewater (sewer) assets.
 - Contracted with Willis Engineers to conduct the technical asset assessments of wells, water storage facilities, lift stations and treatment plants.
 - Conducted a condition assessment of assets (age, use, expected useful life, likelihood of failure) coordinated closely with staff and engineer.
 - Conducted a risk assessment - if this asset were to fail, what is the impact? Some assets are essential to the functioning of the two (2) systems, so the assets were rated according to the critical nature of the entire system.
 - Updated the inventory of assets in the City's database, each asset having a unique identification.
- Each Asset Management Plan includes:
 - Asset Inventory and Condition Assessment, analysis of risk/impact of failure.
 - Capital Improvement Plan.
 - Operations and Maintenance Plan Review.
 - Financing and rate adjustment scenarios.

WATER SYSTEM:

The City's water system assets include:

- 15 Active Wells
- One (1) central Water Treatment Plant
- Three (3) active Elevated Storage Tanks
- Two (2) active Ground Storage Tanks
- 205 miles of waterline (194 finished water and 11 miles raw water)
- 1,926 Valves
- 828 Hydrants
- 88 Master Meters
- 6,421 active individual water meters, serving approximately 17,000 people

What was found with the City's water system:

- 15 groundwater wells found: various normal rehab and replacement needs exist; capacity evaluation shows declining yield - as a result, the wells can produce today approximately 6.8 MGD, or roughly half of the original published capacity per well. Very relevant to keep track of yield.

- Yield of several high producing wells near the plant are constrained by the fact that they all feed into the same line which has a limiting effect on the hydraulic capacity of each well. This was not as bad as the engineer anticipated.
- City supplies water to Laurinburg-Maxton Airport Commission (LMAC) and to the Scotland County Water Districts. These sales provide important revenue for the operation of the City's system.
- Water Storage:
 - WTP Clearwell: Built 1979; 1.5 million gallons; significant corrosion on interior; no security; no electronic monitoring.
 - McGirt's Bridge Road Tank: Built 1930s; 500,000 gallons; significant corrosion on interior; no security; no electronic monitoring. This tank is old and it is time to begin planning replacement.
 - McKay St. Elevated Tank: Built 1920-29; 250,000 gallons; poor condition; no security; no electronic monitoring. Also very aged facility, clearly in poor condition. Based on engineer's recommendation should come down.
 - South Caledonia Elevated Tank: Built 1976; 750,000 gallons; lead found in exterior coating; fence damage. Painting on this tank should be completed before the McKay Street Tank comes down.
 - US 401 South Elevated Tank: Built 1997; 500,000 gallons; good condition.
 - US 401 North Elevated Tank: FCC Tank built 2014. Industry only.
- Water Lines:
 - 11 miles of Raw Water Line: PVC and Asbestos Cement (AC); good to poor condition; need for replacement exists for AC sections.
 - 97 miles of Finished Water Line: 50% is PVC and in good condition; 25% is cast iron in fair condition; 25% is Asbestos Cement in fair-poor condition; about 60,000 LF of small diameter, undersized line; numerous dead ends; AC pipe due to its location and diameter has high consequence of failure. Finished line between WTP and South Caledonia Tank has significant risk and consequence of failure- a documented need for replacement exists.
- Valves: 1,926 valves inventoried; 80% are on the finished water lines; many beyond their useful life period; age alone results in about two-thirds being in fair-poor condition.
- Hydrants: 800 hydrants ranging in age from 5 to 60+ years; most in good working order.
- Master Meters: 88 in the inventory; age beyond useful life period is prevalent.
- Water Meters: Just over 6,000 in the inventory; City has an active meter replacement program; those in poor condition account for only 2% of the inventory.
- Water loss is only about 9%. Difference in what comes out of plant and what is billed, so water is not being sold to anybody and is being lost in the system. NCDEQ considers anything under 10% to be "acceptable".
 - Accurate water readings are vital to the financial success of the water system.
 - Sewer charges are a function of the metered water sales.
 - Water loss is the difference between what you pull out of the ground, send to the plant to be treated, and billed to customers.
- The City's drinking water system has had no violations within the last seven years.
- A significant vulnerability exists in the finished water piping from the water plant to the first elevated storage tank on the system. This line is old and is in need of being replaced.

If this line fails it will be catastrophic for the City. So this project needs to be fast tracked for the line to be replaced.

CAPITAL IMPROVEMENT PLAN

- Of the 234 assets or asset categories inventoried, 149 are rated as critical to system function and compliance.
- \$17.5 million in backlogged capital needs as of February, 2019; figure is reduced only to \$11.9 million if consider only HIGH RISK assets. Many projects that have been sitting, everyone knows they need to be done, but they have not been done. Most critical improvement is replacing the water line from the Water Treatment Plant to the elevated tower on South Caledonia Road.
- The recommended projects in the table below are a combination of ones that the engineer has worked with finance. Some are in the budget that was recently adopted for the current fiscal year. Other projects need to be adopted and cued up into the budget.

	2019	2020	2021	2022	2023	2024	2025-2029
All CIP Projects	\$17,543,365	\$115,750	\$2,355,100	\$0	\$170,00	\$819,000	\$18,842,175
High-Risk, Critical Projects	\$11,833,735	\$17,100	\$55,100	\$0	\$170,000	\$654,000	\$18,724,675

- The recommended projects total \$37.5 million as shown below:

Recommended Improvements	Cost	Time to Perform
Annual Testing and Maintenance Program	\$25,000	Year 1
Well Replacement Program	\$850,000	Years 1-3
Well Replacement Program	\$400,000	Years 4-10
New Wells and Water Line Development	\$8 million to \$10 million	Years 1-10
Replace flash mixer, chemical process piping and cascade aerator	\$350,000	Year 1
Filter Renovation Project	\$1.5 million	Years 1-5
Replace High Service Pumps at McGirt’s Bridge Road Facility	\$1.2 million	Years 5-10
Replace 20-inch asbestos cement pipe from Water Treatment Plant to South Caledonia Tank	\$6 million	Years 1-2
In-Ground Water Storage Tank Improvements	\$1 million	Years 1-3
Elevated Storage Improvements	\$1 million	Years 1-3
Rehab or Replace Critical Waterlines (annually) recurring	\$750,000	Years 1-10

- Finance Department managed the Capital Asset Program very closely for staggered investment working closely with the engineer on financing projects, how to finance and terms of financing or if the projects could be accomplished with funds on hand as shown on Attachment “A” which is incorporated in these minutes
- Study also looked at how the system is functioning in terms of what it is taking in, in terms of revenue and what is being expended on an annual basis. In order to do that on the revenue side is look at the rates.
 - The City’s current in-City residential water rate is \$20.02 for 5,000 gallons per month.
 - The state median for in-city residential water is \$34.60 for 5,000 gallons per month, so the City is well below the state median.
 - Conclusion is that the City should seriously consider adjusting water rates upward.
 - For the past three (3) years, the City has taken in more revenues than it has expended in the Water Fund; therefore, funds are available for some of the projects.
- Examined taking out \$5 million loan from North Carolina Department of Environment Quality (NCDEQ) with 2.5% interest, 20 year term, and annual payments. Likely enough with \$1 million from Fund Balance to address the \$6 million replacement of the 20” finished water line. The City’s operating ratio would remain positive.
- Financing recommendations:
 - Rates currently - \$20.02 for 5,000 gallons.
 - Rates have not been increased since FY 2013-2014. Prior to that, rates not increased in over 10 years.
 - Recommend incremental increases beginning this year, perhaps two percent (2%) to three percent (3%) each year.

Ms. Klein then reviewed the actions needed to improve the City’s water infrastructure, as shown on the chart attached to and incorporated in these minutes as “Attachment B”.

WASTEWATER SYSTEM

Ms. Klein then reviewed the findings on the Wastewater System which includes:

- 33 Active Sewer Lift Stations
- One (1) Wastewater Treatment Plant
- 128 miles of Sewer line
- 20 miles of Forcemain
- 2,604 Manholes
- 24 Air Release Valve (Manholes)

Items found in the wastewater collection system included:

- Gravity Sewers – 56% of line inventory is Unlined Clay pipe; 1% Lined Clay pipe; majority in poor condition. PVC pipe in fair to excellent condition. Majority pipe types are 8” clay and 8” PVC.

- Sewer Forcemains - 20 miles of PVC and Ductile Iron pressure line in average to good condition. Only 12% considered poor condition.
- Manholes – Of 2,604, half are brick or brick and block combination. Remaining is precast concrete. Inverts are known in about 37% of inventory.
- Sewer Lift Stations:
 - 33 in varying condition.
 - South Network- includes 21 lift stations. Bridge Creek & College park are stand alone stations pumping directly to the WWTP. Crestline is also stand alone but it is offline. Other 17 flow into/through a single station – Elm Street (#19).
 - North Network- 12 stations north of US 74.
 - Expect that most of the Infiltration and Inflow (I&I) is coming from the South Network.
 - Site security, bypass mechanisms and generators do not exist for many stations and present an ongoing challenge aside from operational considerations.
- The Wastewater Treatment Plant:
 - Basic treatment structures and equipment built/installed in 1968 and 1984- two treatment processes.
 - Well maintained but important assets/equipment aged beyond useful life period.
 - Influent Pump Station not equipped to manage periods of high flows. Biggest challenge faced.

Ms. Klein discussed the Capital Improvement Plan for the Wastewater Treatment Plant as follows:

- Of the 350 assets assessed - \$46.4 million backlogged need in 2019.
- If address only 2019 backlog in HIGH RISK projects only- \$42.4 million.

	2019	2020	2021	2022	2023	2024-2028	Total 10-Year CIP	Total Number of Projects
All CIP Projects	\$46,443,750	\$830,600	\$0	\$270,000	\$100,900	\$5,766,700	\$53,411,950	186
High-Risk, Critical Projects	\$42,392,965	\$800,000	\$0	\$0	\$46,900	\$1,194,500	\$51,634,365	51

- The recommended projects for FY 20 are as follows:

Project	Total Cost
Collection System Analysis – Bridge Creek and College Park basins	\$100,000
Rehab Program for Lift Stations (recurring)	\$500,000
Pump Station #19 Bar Screen Upgrade	\$400,000
New Influent Pump Station at Wastewater Treatment Plant	\$3,000,000
Aeration Basin Repairs	\$500,000
Collection System Rehab (recurring)	\$2,500,000
TOTAL	\$7,000,000

- Rates:
 - Current inside city limit residential rate is \$29.18 for 5,000 gallons
 - The state median is \$42.75, so again the City is below the media rate for the state.
 - Rates have not been increased since 2013-2014; prior to then, rates not increased for over 10 years.
 - The City needs to be on a program to make planned, regular increases every year, so that the customers can carry. Incremental increases are much easier to deal with for customers than huge increase all at once.
- For the last three (3) years, operating revenues have exceeded operating expenses, including debt-service.
- The margin of revenue exceeding expenses is not as large on the wastewater side as on the water side. It is more expensive to pay for and manage a wastewater system than a drinking water system.
- City should strongly consider staged investment in repairs and replacements in the wastewater system supported by regular increases in rates.
- Financing Scenario:
 - Examined taking out \$7 million loan from NCDEQ (2.5%, 20 year term, annual payments). Likely enough to cover the 2019 identified High Priority needs:
 - Collection System Analysis- Bridge Creek and College Park basins
 - Rehab Program for Lift Stations (recurring)
 - Pump Station #19 Bar Screen Upgrade
 - New Influent Pump Station at WWTP
 - Aeration Basin Repairs
 - Collection System Rehab (recurring)

Ms. Klein explained that there are needs for the City’s wastewater system much greater than \$7 million, and without increasing rates, it cannot be accomplished. She then discussed the actions needed within the wastewater system, as shown on Attachment C which is incorporated in these minutes.

Ms. Klein explained that it was great to work on these projects and with City Staff.

Upon questions by Councilmember Williamson, Ms. Klein explained that the number of grant funding for infrastructure projects was much less today than in the past. She added that there were low interest loans and deferred loans available; however, the recommendation was for Council to implement incremental increases in water and sewer rates in order to cover the majority of the costs of infrastructure projects as well as to keep the City’s margin in the Water/Sewer Fund adequate.

ADJOURNMENT

Motion was made by Councilmember Garby, seconded by Councilmember Williamson, to adjourn the meeting. The meeting was adjourned at 6:49 p.m.

James T. Willis, Mayor

Jennifer A. Tippet, City Clerk