

MINUTES
CHATHAM COUNTY BOARD OF COMMISSIONERS
WORK SESSION
JANUARY 03, 2005

The Board of Commissioners (“the Board”) of the County of Chatham, North Carolina, met in the Agricultural Auditorium Building, 45 South Street, located in Pittsboro, North Carolina, at 11:00 AM on January 03, 2005.

Present: Chairman Bunkey Morgan; Vice Chair, Tommy Emerson; Commissioners Patrick Barnes, Mike Cross, and Carl Outz; County Manager, Charlie Horne; County Attorney, Robert L. Gunn; Assistant County Manager, Renee Dickson; and Clerk to the Board, Sandra B. Sublett

The meeting was called to order by the Chairman at 11:16 AM.

Work Session

Water System Update

WATER SYSTEM UPDATE

Tim Carpenter and Joe McGougan presented an update on the Chatham County water system update as follows:

Since January 2004, Chatham County has undertaken several improvements to the Jordan Lake Water Treatment Plant. These improvements are summarized in the following and illustrated by the attached before and after progress photos:

January 2004 to March 2004:

- Filter Piping Modifications
- Filter Media Replacement
- Repair of FRP Settling Plates
- Replacement of the Ammonia Feed System (Chloramines)
- Miscellaneous Piping Repairs
- Concrete Crack Injection of the Basins
- Flash Mix Improvements
- Pressure Wash Basins
- Carbon Feed System

Final Project Cost - \$236,062

March 2004 to August 2004: Plant Instrumentation:

- Raw Water Surface Turbidimeter
 - Settled Water Turbidimeter
 - Filters 1-4 Turbidimeters
 - Combined Filter Turbidimeter
 - Finished Water Turbidimeter
 - pH Meters – Raw, Filtered and Finished
 - Free Chlorine Residual Analyzers – Settled, Filtered and Finished Water
 - Ammonia/Monochloramine Analyzer
 - TOC Analyzer
- Project Cost - \$86,000**

August 2004 to November 2004: Alum Lagoon Effluent Metering Station:

- Effluent Meter Vault and Meter
 - Control Wire from Meter to WTP Operations Building
 - Repaint and Rehab Piping at the Effluent Pump Station
- Project Cost - \$22,000**

November 2004 to Present: Alum Sludge Lagoon Cleaning:

- Dredge Lagoon
 - Dewater Sludge with a mobile belt press
 - Dispose of dewatered sludge.
- Project Cost - \$164,000**

July 2004 to Present: 453 Project and Other Miscellaneous Improvements:

- Ammonia Scales with Readout to SCADA (Pending)
- Bulk Feed system for Phosphate and Fluoride
- Totalizers in Operations Building for Raw and Finished Water Flows (Pending)
- Repair Bulk Tanks (Complete)
- Repair Blow-Down valves and solenoid controllers (Complete)
- Enclosure for Vacuum Blowers (Pending)
- Heat tape and insulate all exposed chemical feed lines and water lines in the filter area (Complete)
- Convert from Chlorine Gas to Sodium Hypochlorite Solution (Under construction)
- Raw Water sample line to the plant (Complete)

July 2004 to Present: 453 Project and Other Miscellaneous Improvements:

- Flushing lines to chemical feed lines (Under construction)
- Chemical Containment for corrosion inhibitor (Under construction)
- Miscellaneous repairs to the WTP building (Under construction)
- New chemical feed pumps and tanks (Complete)
- Repair ladders on bulk storage tank (Complete)
- Repair vent system in Carbon Room (Complete)

- Repair copper lines in the High Service Pump Station (Complete)
- Service Generator and perform preventative maintenance (Complete)
- Repairs to the wastewater spray field (Complete)
- Painting of pumps and all outside fixtures and piping (Complete)
- Side Gate Entry for the Spray Field System (Complete)

Filter Rehabilitation (Completed in March of 2004) Filter Effluent Piping:

Carbon Feed System (Completed in March of 2004) See attached photos.

Flash Mix Improvements (Completed in March of 2004) See attached photos.

Replacement of the Ammonia Feed System (Completed in March of 2004) See attached photos.

Chlorine Dioxide Generator (Completed in Summer of 2004) See attached photos.

Plant Instrumentation (Completed in Summer of 2004) See attached photos.

Plant Instrumentation (Completed in Summer of 2004) See attached photos.

Miscellaneous Valve and Piping Rehab (Completed in Summer of 2004) See attached photos.

Sludge Lagoon Effluent Metering Station (Completed in November of 2004) See attached photos.

On site wastewater treatment: Included replacing filter piping, filter media, installing influent metering flume and effluent “Mag Meter”, associated controls and access man gate. (completed December 2004) See attached photos.

Chemical Feed System (Under Construction)

Corrosion Inhibitor and Miscellaneous Improvements See attached photos.

Conversion from Chlorine Gas to Sodium Hypo-Chlorite (Under Construction) See attached photos.

Conversion to Sodium Hypo-Chlorite (Under Construction) See attached photos.

Miscellaneous Valve and Piping Rehab (Under Construction) See attached photos.

Miscellaneous Valve and Piping Rehab (Under Construction) See attached photos.

Lagoon Dredging (Underway) See attached photos.

Recently Chatham County went through a “Comprehensive Performance Evaluation” (CPE). This CPE was done on a voluntary basis and was conducted by NCDENR-Public Water Supply and included Regulatory Agencies from South Carolina and Alabama.

A CPE is a thorough evaluation of a surface water treatment plant or wastewater treatment plant that results in a prioritized list of design, maintenance, operations, and administrative factors that adversely affect plant performance. It is one part of the Composite Correction Program developed jointly by EPA and Process Applications, Inc. The major focus of a CPE is to assess the ability of treatment plants to meet goals that are consistent with regulatory requirements and optimized performance. The CPE that Chatham County went through targeted the turbidity standards.

Based upon the preliminary findings of the CPE at the Jordan Lake Water Treatment Plant, the plant currently meets the established standards for turbidity.

However, it was noted that the level of staffing at the water plant could improve, in terms of the number of personnel. The final report should be sent to the County in about three months.

Recently Chatham County hired a new Operator in Responsible Charge (ORC) for the Water Treatment Plant.

Mr. Brandon Garner started on December 6, 2004. Mr. Garner has a Bachelor of Science degree from the University of North Carolina at Chapel Hill in Public Health and Environmental Science. He has his "A" Surface Certification and Grade I Physical/Chemical. He will also be attempting to receive a Spray Field Certification. With his current certifications and the upcoming Spray Field Certification, he will not only be qualified to operate the WTP and ORC for the Alum Sludge Lagoon, he will also be the ORC for the Spray Field System. Currently the services for the ORC of the Lagoon and the Spray Field are contracted services. Upon Mr. Garner's completion of the required certifications, Chatham County may discontinue these contracted services and perform these duties "in- house".

Recently Chatham County hired a new Operator in Responsible Charge (ORC) for the Distribution System.

Mr. Roy Lowder was previously the Public Works Director for the Town of Parkton, NC. His duties include operating the water and sewer system and other duties within the County. He currently holds certification as "A" Distribution Certification, Grade II Wastewater license and Grade I Collection license. With these certifications he will operate the Distribution Systems and the Bynum Wastewater Plant and Collection System. Mr. Lowder began his employment with Chatham County on December 30, 2004.

UPDATE OF ALL CHATHAM COUNTY WATER SYSTEM PROJECTS:

Group "B" Pea Ridge Road 16" Transmission Mains:

- All Permits have been secured.
- All Easements have been negotiated.
- FONSI has been prepared and awaiting State approval.
- Bid date is pending.
- Need support from the Board of Commissioners for proceeding with the Raw Water Pump Station.
- Funding Source – State Revolving Loan Funds – Low Interest Loans
- Estimated Total Project Cost - \$4.8 Million**

UPDATE OF ALL CHATHAM COUNTY WATER SYSTEM PROJECTS:

Group "B" High Service Pump Station:

- All Permits have been secured.
- This project will not be bid until the Pea Ridge Road Main and the North Chatham Hydraulic Improvements are underway due to the change in the operating parameters.
- Funding Source – State Revolving Loan Fund – Low Interest Loan
- Estimated Total Project Cost - \$350,000**

UPDATE OF ALL CHATHAM COUNTY WATER SYSTEM PROJECTS:**Western Transmission Mains:**

- Design is complete and permits submitted.
- Approximately 40 miles of 16" and 12" Ductile Iron Transmission Mains, one 0.50 MG elevated tank, one booster pump station
- To supply water to the SW Water System and SW Water District
- Project has been submitted to NCDENR-State Revolving Loans for consideration of low interest loan funding.
- Environmental Assessment is underway.
- Land for tank site has been secured.
- Estimated Total Project Cost - \$7.5 million**

UPDATE OF ALL CHATHAM COUNTY WATER SYSTEM PROJECTS:**North Chatham Hydraulic Improvements:**

- Design is complete and permits obtained.
- Includes one 0.50 MG elevated tank, One triplex booster pump station, control valves, approximately 5,000 lf of high pressure 12" transmission main.
- Land has been secured for the tank site and control valve station.
- Chatham County School Board is in the process of removing the timber from the site. Upon removal of the timber, the County will need to perform a geotechnical investigation prior to bidding the project.
- Bid date to be set in January, 2005.
- Estimated Total Project Cost - \$1.6 million**

UPDATE OF ALL CHATHAM COUNTY WATER SYSTEM PROJECTS**Silk Hope School Water Main Extension:**

- Design is complete and permits obtained.
- Includes approximately 27,000 lf of 12" and 8" water main to serve the Silk Hope School with water.
- Water will be obtained from a bulk water meter connection to Siler City.
- Need direction from the Board of Commissioners to proceed with the project.
- Estimated Total Project Cost - \$750,000**

Southwest Chatham Water District:

- The Southwest Chatham Water District has been submitted to USDA-Rural Development for funding consideration.
- The project will include the construction of approximately 48 miles of 6" through 8" water distribution mains and one elevated storage tank and one booster pump station.
- The current project could provide service to approximately 541 new customers based upon the number of households along feasible road segments
- The current total number of sign-ups in the Southeast Water District is approximately 385 for the entire district.
- The Environmental Assessment for the project is underway.
- The Board of Commissioners needs to schedule an Environmental Scoping Meeting to receive input from the public.

Southeast Chatham Water District:

- The Southeast Chatham Water District has been submitted to USDA-Rural Development for funding consideration.
- The project will include the construction of approximately 23 miles of 6" through 8" water distribution mains and one elevated storage tank.
- The current project could provide service to approximately 383 new customers based upon the number of households along feasible road segments
- The current total number of sign-ups in the Southeast Water District is approximately 310 for the entire district.
- The Environmental Assessment for the project is underway.
- The Board of Commissioners needs to schedule an Environmental Scoping Meeting to receive input from the public.

Bynum WWTP:

- Recently Chatham County received the results of an evaluation of the plant. The evaluation recommends much need improvements to the WWTP. These improvements included but not limited to:
 - Chemical Feed System
 - Equalization
 - Aeration Blowers
 - Aeration Piping
 - Influent Screen
 - Clarifier Renovation
 - Sludge Handling
 - For a total estimated modification cost of \$140,000.
 - Including engineering, contingencies, construction administration the Total Project **Costs were estimated to be \$170,000.**
- Upon Chatham County's request to review the report, Hobbs, Upchurch & Associates suggested that in lieu of modifying the existing plant it may be cost effective to investigate the opportunity to replace the plant with a new package treatment plant.
- After some investigation a package plant of relatively the same size has been located. The plant

is of steel construction and has been in service in a previous location. The owner has discontinued the use of this plant and is willing to sell the plant. We have had a contractor to provide a quote for relocating the system complete with new equipment and recoating the steel. The quote provided for installation of this plant is approximately \$125,000 as compared to \$140,000 for renovations of the existing plant.

- Possible limitations of this relocated plant are the existing site conditions.

Staffing:

- As mentioned previously in this presentation Chatham County has recently hired two key employees for the water system.
- The County is continuing to seek a qualified person to manage the system. As part of the duties of Hobbs, Upchurch & Associates we are developing a Staffing Plan and making recommendations as to the structure of the system. Our preliminary recommendation is to re-organize the structure to a Utilities Department so that the Director can concentrate on the water and wastewater segments.
- The preliminary findings of the CPE and Staffing Plan show that the water system is currently understaffed by at least two people at the water plant and three people on the distribution staff.
- If the County concurred with the recommendations of the staffing plan that would bring the total employees at the WTP to six and the distribution staff to eleven.

Capital Improvements:

- As shown previously in this presentation Chatham County has made great strides in the upgrades at the WTP as well as upcoming projects such as the Group "B", North Chatham, Western Transmission and Silk Hope projects which are all very close to getting underway.
- The Water District projects have been submitted for funding and are moving forward. The environmental portion of these projects will take some time to be approved depending upon the comments received.
- Projects on the horizon include:
 - Raw Water Pump Station (part of Group B)
 - New 1.0MG Clearwell
 - Long Term: Upgrade of the Water Treatment Plant

After considerable discussion, Chairman Morgan moved, seconded by Commissioner Cross, to investigate the best method to install meters and taps for those customers adjacent to existing water lines in the Southeast District for those customers who have expressed interest in becoming a customer of the County water system. The motion carried five (5) to zero (0).

ADJOURNMENT

Commissioner Outz moved, seconded by Commissioner Barnes, to adjourn the meeting. The motion carried five (5) to zero (0) and the meeting was adjourned at 12:28 PM.

Bunkey Morgan, Chairman

ATTEST:

Sandra B. Sublett, CMC, Clerk to the Board
Chatham County Board of Commissioners