

**MINUTES OF THE
WORK STUDY SESSION
HELD BY THE MOORE CITY COUNCIL
FEBRUARY 6, 2023 – 5:15 P.M.
UPSTAIRS CONFERENCE ROOM
301 N. BROADWAY, MOORE, OKLAHOMA**

The City Council of the City of Moore met at Moore City Hall in the upstairs conference room, 301 North Broadway, Moore, Oklahoma on February 6, 2023, at 5:15 p.m. with Mayor Glenn Lewis presiding.

Adam Webb
Councilman, Ward I

Danielle McKenzie
Councilwoman, Ward I

Melissa Hunt
Councilwoman, Ward II

Mark Hamm
Councilman, Ward II

Jason Blair
Councilman, Ward III

Louie Williams
Councilman, Ward III

PRESENT: McKenzie (arrived 5:20 p.m.) Blair (arrived 5:20 p.m.) Hunt, Williams, Hamm, Lewis
ABSENT: Webb

STAFF MEMBERS PRESENT: City Manager, Brooks Mitchell; Assistant City Manager, Jerry Ihler; City Clerk, Vanessa Kemp; Community Development Director, Elizabeth Weitman; Finance Director, John Parker; Fire Chief Greg Herbster; Human Resources Director, Christine Jolly; Manager of Information Technology, David Thompson; Parks & Recreation Director, Sue Wood; Public Works Director, Deidre Ebrey; and Veolia Water Project Manager, Robert Pistole.

Agenda Item Number 2 being:

RECEIVE A PRESENTATION FROM FREESE AND NICHOLS, INC. REGARDING THE WATER SYSTEM CAPITAL IMPROVEMENT PLAN AND WATER MASTER PLAN FOR THE CITY OF MOORE.

Jerry Ihler, Assistant City Manager, stated that the City Council retained Freese and Nichols in May 2020 for preparation of a federally mandated Risk and Resilience Assessment ("RRA") on the City's water system. Mr. Ihler advised that the assessment was completed in June 2021. During the process it was determined that the City needed a Water Master Plan to help the City maintain its ISO Class 1 Rating and would provide hydraulics used to determine improvements needed for new subdivisions. Because Freese and Nichols was already familiar with the City's water system through their work on the RRA they were hired to prepare a Water Master Plan. Mr. Ihler introduced Jeremy Rice, Project Manager and Jennifer Wasinger, Account Director, with Freese and Nichols who would give a presentation regarding the Water System Capital Improvement Plan ("CIP") and the Water Master Plan.

Jeremy Rice, Project Manager, advised that Freese and Nichols began work on the Master Plan in the fall of 2021 and presented staff with a draft report at the end of 2022. Mr. Rice indicated that they would be presenting the results of that report which would focus on the Capital Improvement Plan for 2025, 2030 and 2040. Mr. Rice acknowledged the contribution of the Project Team comprised of staff members Jerry Ihler, Assistant City Manager; Elizabeth Weitman, Community Development Director; Ken Sanmann, GIS Analyst; Robert Pistole, Veolia Project Manager; and Randy Hegi, Veolia Environmental Compliance Specialist.

Mr. Rice stated that population projections were obtained utilizing the 2017 Comprehensive Plan which closely matched census data. Demand projections were obtained for five years beginning in 2021 using billing data and water usage and production data. This information reflected an average water usage of 7 MGD. The average water usage was then divided by population to get a gallon per capita per day usage. It was determined that water usage would be just under 120 gallons per capita per day. Mr. Rice noted that the rate could be applied to future populations since it was assumed that the average water usage would be about the same per person per day. Mr. Rice advised that historical field data and the water usage rate of gallons per capita per day was multiplied for future projections on average demand for years 2025, 2030, 2035, and 2040. Average usage for 2025 was calculated at 8 MGD going up to 9.4 MGD in 2040. A multiplier of 1.5 was used for summer months when usage would be higher. Mr. Rice indicated that they used the 2017 Land Use Plan and looked at current and future developments to determine population distribution throughout the system. Water system models were built with the existing system in mind. He advised that currently there are 41 groundwater wells, five metered water connections with the City of Oklahoma City, pipes ranging from 1" to 24", three pump stations, three water towers, one standpipe, one underground storage tank at the Eastern pump station, and two pressure planes.

EXISTING WATER SYSTEM EVALUATION:

Mr. Rice stated that the water system evaluation was based on the following items:

1. A minimum pressure of 25 psi based on ODEQ requirements
2. Ensuring no high velocity in any pipes
3. Head loss as part of hydraulics
4. Available fire flow throughout the system
5. ODEQ's recommendation of greater than or equal to 24 hours of storage providing minimum of 25 psi
6. Firm pumping capacity greater than maximum daily demand.

EVALUATION FINDINGS:

Mr. Rice stated that the north pressure plane boundary should be shifted further south to solve the pressure area. Some of the projects recommended for 2025 would help solve the pressure areas between the boundaries. He stated that some of the dead end lines do not have as much flow and there are some potential fire flow issues along the pressure plane boundary. Mr. Rice felt that none of the areas highlighted were in dire need but could be better.

Mr. Rice stated that in order to determine future water system distribution they took the future land use plan, assigned each parcel to the decade they thought it would be developed, and looked at its proximity to existing water lines. From this information they anticipate the majority of development would occur in the southeast area of the City.

GOALS FOR FUTURE SYSTEM IMPROVEMENTS:

- Improve minimum pressure challenges at the South Pressure Plane/North Pressure Plane boundary.
- Meet hydraulic performance criteria for velocity, headloss, and pressure.
- Balance the need for additional emergency storage while minimizing water age that could lead to water quality concerns.
- Have sufficient pumping capacity to meet maximum daily demands.
- Increase resiliency and reliability.
- Understand source water mixing throughout the system.

STORAGE EVALUATION:

Mr. Rice stated that the City should work to achieve 24 hours of storage within the system. Based on current demand levels going out to 2025 there is a deficit in storage. They looked at phasing in storage in 2025, 2030, 2040, to attain the 24 hour requirement and adding elevated storage tanks as part of the CIP projects.

PUMPING CAPACITY EVALUATION – SOUTH PRESSURE PLANE:

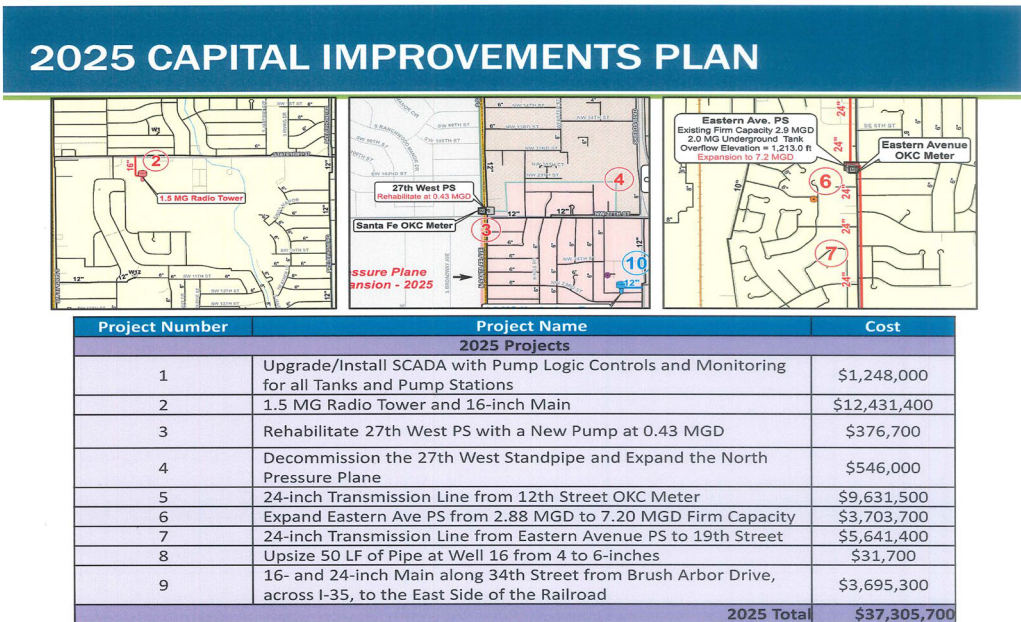
Mr. Rice advised that the north pressure plane had two relatively small pump stations. The south pressure plane only has the Eastern pump station. The modeling of the resilience analysis looked at the impact to the system if the Eastern pump station was lost. They looked at adding a redundant pump station on the west side of I-35 to allow additional pressure in the system and to help keep the pressure within the south pressure plane.

CIP – KEY TAKEAWAYS:

- Expansion of the north pressure plane
- Consideration of flow meters for wells and pump stations to determine production.
- Installation of a more robust SCADA system. Noted that Robert Pistole was already working on implementation for the system.
- Implementation of seasonal pump controls.
- Additional storage is critical to meet future needs and improve resiliency.
- Eastern Avenue pump station is critical. A fully redundant pump station is recommended at the 34th Street Oklahoma City meter. This would allow the system to maintain pressure throughout the south pressure plane.

Mr. Rice stated that the timing of the proposed CIP projects would vary depending on growth rates. Some of the expansions could be phased in. He recommended that the master plan be reassessed and updated every five years to accommodate changes in the growth patterns.

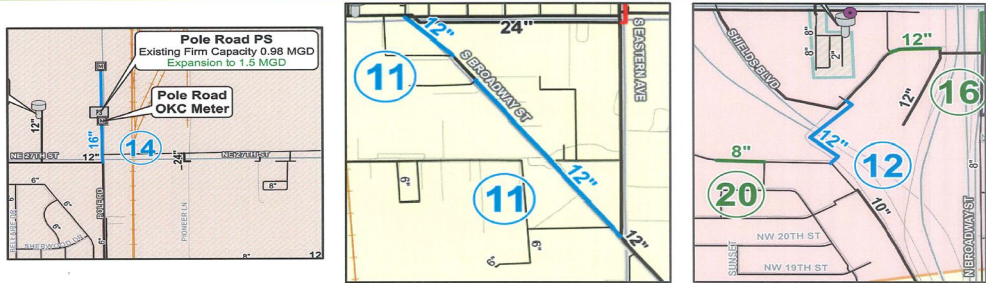
2025, 2030 AND 2040 CAPITAL IMPROVEMENTS PLAN:



Mr. Rice indicated that the projects scheduled for 2025 could be done between 2025 and 2030 and some could be phased projects. Councilman Hamm asked if Project No. 4 meant that the Toby Keith water tower located at the Public Works facility would be taken down. Jerry Ihler, Assistant City Manager, stated that staff recommended the tower be decommissioned since it wasn't being utilized. Mr. Ihler also mentioned that Project No. 9 had been submitted for ARPA funding and the City received notification that the project was selected as an alternate.

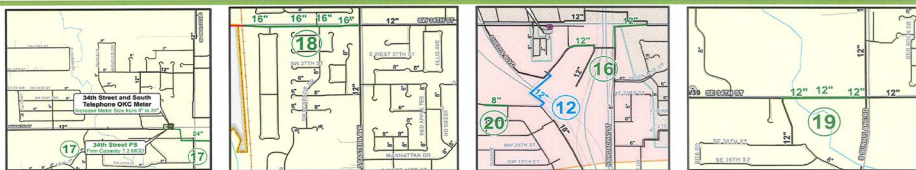
Councilman Williams confirmed that the model could be used on an ongoing basis.

2030 CAPITAL IMPROVEMENTS PLAN



Project Number	Project Name	Cost
2030 Projects		
10	1.0 MG Nottingham Tower and 12-inch Main	\$8,209,000
11	12-inch Mains Along Broadway Avenue Between 19th Street and Eastern Avenue	\$2,269,000
12	12-inch Main Along North Moore Avenue Across N Shields Boulevard	\$1,013,700
13	1.5 MG Bryant Tower and 12-inch Main	\$11,872,600
14	Upsize Pipe from 8 to 16-inches Along Pole Road from the OKC Meter to the South Side of 27th Street	\$1,579,000
2030 Total		\$24,943,300

2040 CAPITAL IMPROVEMENTS PLAN



Project Number	Project Name	Cost
2040 Projects		
15	Pole Road PS Expansion from 0.98 MGD to 1.5 MGD Firm Capacity	\$509,300
16	Upsize Mains from 6 and 8-inches to 12-inches on Either End of N. Moore Avenue I-35 Crossing and Connect to 27th Street	\$1,323,600
17	34th PS with 7.2 MGD Firm Capacity and 24-inch OKC Meter Replacement/Upsize	\$10,841,900
18	Upsize Mains from 12 to 16-inches along 34th Street from the Railroad to Eastern Avenue	\$2,069,000
19	Complete Loop Along 34th Street with 12-inch Main from Sunnyslane Road to East of Stratford Place	\$1,210,600
20	Complete Loop on Vermeer Drive with 8-inch Main	\$360,900
21	1.5 MG Noah Tower and 16-inch Main	\$11,887,000
22	Upsize Bottleneck Pipe from 8 to 12-inches at Eastern Avenue and SW 30th Street	\$47,300
23	Upsize Pipe from 6 to 8-inches on Renita Court	\$200,600
24	Upsize 150 LF of Pipe at Well 29 from 6 to 8-inches	\$120,400
25	Upsize 850 LF of pipe at Well 31 from 6 to 8-inches	\$681,600
2040 Total		\$29,252,200

Councilwoman Hunt stated that within the next 17 years approximately \$95 million in projects must be completed. Brooks Mitchell, City Manager, stated that the projects were recommendations. Mr. Rice advised that he had incorporated cost escalations that have been seen recently. However, he noted that constructions costs would vary over the coming years. Councilman Hamm asked how the projects would be funded. Mr. Mitchell stated that the current sewer surcharge would expire in 2033. He felt that if the sewer charge was kept in place money could be borrowed from the OWRB to finance a good number of the projects. Robert Pistole, Veolia Project Manager, advised that some of the projects could be done in-house. He stated that Project No. 19 had been completed. Councilman Blair asked if any of the projects in 2025 could be performed in-house. Mr. Pistole indicated that Project No. 1 could be piggy backed off of the SCADA controls that were installed with the new lift station. Project No. 8 had also been completed. Mr. Rice stated that Project No. 6 could be accomplished with dropping in a single pump and then phase in the full cost later as growth occurs. Councilman Blair asked what the cost would be for the pump. Mr. Ihler estimated the cost to be around \$1.2 million. Councilman Hamm asked if the project would necessitate an increase in utility rates. Mr. Mitchell stated that possible funding sources would include increases in utility rates or the issuance of G.O. bonds. Councilman Blair inquired about the possibility of grant monies being available. Mr. Rice advised that potential funding sources had been identified below:

- Building Resilient Infrastructure and Communities ("BRIC")
- Drinking Water State Revolving Fund ("DWSRF")
- Bureau of Reclamation ("WaterSMART")
- Financial Assistance Loan Program ("FAP")
- Water Infrastructure Finance and Innovation Act ("WIFIA")

Mr. Rice then discussed various scenarios as part of the resilience and reliability part of the presentation.

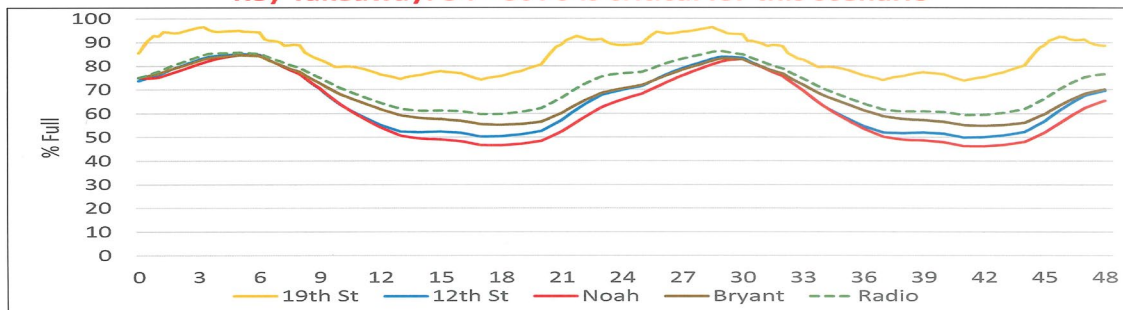
RESILIENCE AND RELIABILITY

Evaluate 3 Scenarios - What If?

1. *Loss of Eastern Ave PS/48-inch OKC Line*
2. Loss of Interstate Crossing (19th Street)
3. Loss of All OKC Connections

Scenario 1 - 2040 South Pressure Plane

Key Takeaway: 34th St PS is critical for this scenario



He advised that the graphs show how the system would survive various scenarios for 2040 if the Eastern Avenue pump station was lost for a 48 hour period. With all of the improvements in place there would be a drop but they are all staying relatively full with the 34th Street pump station.

Agenda Item Number 3 being:

ADJOURNMENT

Councilman Williams moved to adjourn the City Council meeting, second by Councilman Blair. Motion carried unanimously.

Ayes: McKenzie, Blair, Hunt, Williams, Hamm, Lewis
Nays: None
Absent: Webb

The meeting was adjourned at approximately 5:54 p.m.

TRANSCRIBED BY:

RHONDA BAXTER, Executive Assistant

FOR:

MELISSA HUNT, MPWA Secretary

These minutes passed and approved as noted this ____ day of _____, 2022.

ATTEST:

VANESSA KEMP, City Clerk