



CITY OF NORMAN, OK
AIM NORMAN COMPREHENSIVE PLAN
WATER/WASTEWATER SUB-COMMITTEE

Development Center, Room B, 225 N. Webster Ave., Norman, OK 73069
Friday, July 12, 2024 at 9:00 AM

MINUTES

The AIM Norman Comprehensive Plan Water/Wastewater Sub-Committee of the City of Norman, Cleveland County, State of Oklahoma, met in Regular Session in Conference Room B at the Development Center, on the 12th day of July, 2024, at 9:00 a.m., and notice of the agenda of the meeting were posted at the Norman Municipal Building at 201 West Gray, Development Center at 225 N. Webster and on the City website at least 24 hours prior to the beginning of the meeting.

CALL TO ORDER

Chair Dan Bergey called the meeting to order at 9:04 am.

Present

Dan Bergey, Chair
Kyle Arthur
Mark Daniels
Doris Kupfer
Karen Goodchild
Dr. David Sabatini – left 11:50 AM
Bill Scanlon – left 11:30 AM
James Chappel (Alternate)

Absent

Hossein Farzaneh
Dr. Robert Knox (Alternate)

Guests Present

Inger Giuffrida, AIM Steering Committee Co-Chair
Amanda Nairn, AIM Steering Committee Member
Lee Hall, AIM Steering Committee Member

Consultants

Michael “Cole” Niblett, Garver
Mary Elizabeth Mach, Garver
Michael Nguyen, Garver
Evan Tromble, Garver

Staff

Anthony Purinton, Assistant City Attorney
Chris Mattingly, Utilities Director
Nathan Madenwald, Utilities Engineer

Peter Wolbach, Staff Engineer
Michele Loudonback, Environmental and Sustainability Manager
Gay Webb, Administrative Technician

Chair Dan Bergey welcomed everyone to the meeting.

MINUTES

1. CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE MINUTES AS FOLLOWS:

AIM NORMAN COMPREHENSIVE PLAN WATER/WASTEWATER SUB-COMMITTEE MEETING MINUTES OF MAY 14, 2024.

Motion by Mark Daniels to approve minutes of May 14, 2024, AIM Norman Comprehensive Plan Water/Wastewater Sub-Committee meeting minutes, Second by Bill Scanlon.

The motion passed unanimously with a vote of 6 - 0. Karen Goodchild abstained.

DISCUSSION AND POSSIBLE ACTION ITEMS

2. DISCUSSION AND POSSIBLE ACTION ON BASELINE TECHNICAL MEMOS

Dr. Sabatini shared micro-group comments on the Water Baseline Technical Memorandum.

1. How much well water is available, and what are the limits of this source?

To date, Norman has not maxed out groundwater rights or capacity. Norman has a permit with the Oklahoma Water Resources Board for 10 billion gallons of water per year. We currently use approximately 2 billion gallons per year and have 43 active wells.

2. Are microplastics being addressed in this plan, and if so, how?

Currently there are no EPA regulations for microplastics in drinking water; however, we will build in some future assumptions particularly for reuse. To date, we have no data showing microplastics in the Garber-Wellington.

3. How does the state respond on the low chlorine residuals, what are the causes besides groundwater dilution, and how can low chlorine residuals be mitigated?

Norman is currently working on a project to disinfect all groundwater wells at a centralized location. The current practice of pumping unchlorinated groundwater to system is the primary cause of low chlorine residuals within the distribution system. Disinfection byproducts and water age appear are the challenges also leading to low chlorine residuals within the distribution system. This project along with eliminating dead end lines will help address low chlorine residuals within the distribution system.

4. The 150 gallons per capita per day for average day demand and 275 gallons per capita per day for maximum day demand are conservative values, further compounded by 10%

reserve capacity. While this helps expand our water supply infrastructure, it impacts acquisition/construction cost estimates. How can this be factored in when scheduling capital improvements?

We want a conservative plan to allow for things such as a new significant industrial water user but we also don't want overly conservative cost estimates that make a plan less feasible. Our improvements plan will include demand triggers. This plan will allow us to reactively balance water needs when we reach 75% to 90% demand versus not knowing if the demand will be realized.

5. Section 3.4: The water loss indicator value is an important adjustment factor. Identifying the causes of water loss is a significant inquiry as we move forward with Norman's water needs. Additional comment/clarification on water loss is warranted.

Norman's current water loss is 15% - 20% which is comparable to other utilities and their non-revenue water percentage. We are working to tighten the distribution system as much as economically possible, but we don't want to account for that as a water supply component.

Additionally, we are implementing an automated meter reading infrastructure program for all water system customers that will provide real-time water usage.

Mark Daniels shared micro-group comments on the Wastewater Baseline Technical Memorandum.

1. Recommend expanding definitions of technical terms used throughout the report.
2. Recommend re-examining 1-foot minimum freeboard in sanitary sewer manholes versus 3-foot to minimize future capital improvements in the collection system.
3. Report states planning and design must begin when treatment facility reaches 75% of design capacity. The sub-committee is concerned this may be too early for that process to begin. Suggest using a trigger such as 90% of design capacity to begin construction of the improvements.

Bill Scanlon shared micro-group comments on the Indirect Potable Reuse (IPR) Baseline Technical Memorandum.

1. The report recommends a biologically based solution to IPR. Biologically based solutions require acclimation, which cannot be easily turned on and off. A biological based solution could be a challenge, in times of need when you to turn things on and off.
2. If we introduce IPR into Dave Blue Creek, are infrastructure costs known? Yes, conveyance costs are included in the full-scale cost estimate detailed in the IPR Pilot Report.
3. Recommend an IPR educational component.

The sub-committee discussed indirect potable reuse versus direct potable reuse.

3. DISCUSSION AND POSSIBLE ACTION ON PRELIMINARY FINDINGS OF LAKE THUNDERBIRD PREDICTIVE LAKE OPTIMIZATION TOOL (PLOT) STUDY

Cole provided an update on the recently completed PLOT study. It is a modeling effort funded by a grant to optimize reservoir augmentation with recycled water. A machine learning model and a level-based model were studied to suggest pumping schedules to augment the lake without discharging excessive reuse water into the flood pool. A comment was made that we should avoid discharging excessive amounts of reuse water into the flood pool, as other communities downstream may not be designed to handle large amounts of flow all the time.

The results of the study show an opportunity to reduce annual operating costs associated with reservoir augmentation.

4. DISCUSSION AND POSSIBLE ACTION ON WATER SUPPLY NEEDS AND ALTERNATIVES

Cole asked members to focus on how the last 2060 Strategic Water Supply Plan (2060 SWSP) was created, decision-making criteria used to recommend water supply portfolios, and how alternatives were prioritized. Garver assessed the existing water system and is now looking at supply alternatives.

Cole presented slides and discussed the following:

- Current water supply sources: Lake Thunderbird, Groundwater wells and OKC
- Norman consistently exceeding its surface water allotment
 - Staff added that a portion of this is due to the lake being in the flood pool with this temporary water being prioritized while available thereby meaning less usage of groundwater
- Projected average day demand includes a 10% reserve – similar to 2060 SWSP
- Projected maximum day demand - similar to 2060 SWSP
- Projected annual supply gap of approximately 11 MGD
- Maximum day demand capacity gap approximately 25 MGD by 2060
- Water supply options evaluated in 2060 SWSP
- 14 water supply portfolios
- 3 water supply portfolios short-listed
- Weighted and non-monetary criteria

Members will receive a summary of how the 2060 SWSP portfolios were scored, scoring criteria examples, and estimated capital and operating costs. At a future meeting, the committee will decide how they want to select and rank water supply options.

5. DISCUSSION AND POSSIBLE ACTION ON THE WATER DISTRIBUTION SYSTEM HYDRAULIC MODEL UPDATE AND EXISTING SYSTEM ASSESSMENT

Cole said Garver has completed fieldwork and flow testing to calibrate the hydraulic model for the distribution system. These calibration elements include:

- Updated existing system hydraulic model infrastructure using GIS data
- Updated hydraulic model demands with 5 years of billing data
- Updated diurnal curve, daily fluctuation of demand in the distribution system

Preliminary distribution system model results are:

- Max day conditions pressures are generally between 40-80 pounds per square inch (psi)
- Fire Flow is generally greater than 2,500 gallons per minute (gpm)
- High velocity issues mostly in well field transmission lines

6. DISCUSSION AND POSSIBLE ACTION ON WASTEWATER TREATMENT NEEDS AND ALTERNATIVES

The group reviewed the Steering Committee's draft land use map. To plan for future development, Garver is evaluating drainage basins, assessing expansion of the existing WRF or possibility of a north or southeast WRF, and assessing IPR possibilities.

7. DISCUSSION AND POSSIBLE ACTION ON THE WASTEWATER COLLECTION SYSTEM MODEL UPDATE AND EXISTING SYSTEM ASSESSMENT

Permanent and temporary flow monitoring data was used to calibrate the wastewater collection system model.

- Updated existing system hydraulic model infrastructure using GIS data
- 5 year design storm, major interceptors to WRF become surcharged using 3' freeboard criteria

MISCELLANEOUS COMMENTS/NEXT STEPS

Members will receive copies of the presentation slides, updated reports on modeling efforts and a packet of water supply non-monetary scoring criteria to review.

A poll will be sent to members to determine August and September meeting dates and if the meeting time should be extended from 9 AM – noon.

Dan asked members to review the draft land use plan maps.

ADJOURNMENT

The meeting adjourned at 12:20 PM.

Passed and approved on this _____ day of 2024.

Dan Bergey, Chair