



**City of Bloomington  
Committee of the Whole  
Regular Session Meeting  
June 15, 2026**



## Components of the City Council Agenda

### Recognition and Proclamation

This portion of the meeting recognizes individuals, groups, or institutions publicly, as well as those receiving a proclamation, or declaring a day or event.

### Public Hearing

Items that require receiving public testimony will be placed on the agenda and noticed as a Public Hearing. Individuals have an opportunity to provide public testimony on those items that impact the community and/or residence.

### Public Comment

Each Committee of the Whole meeting shall have a public comment period not to exceed 30 minutes. Every speaker is allotted up to 3 minutes to speak. Individuals wishing to email public comment or speak remotely must email comments and/or register online at least 15 minutes before the start of the meeting. Individuals wishing to speak in-person must register up to 5 minutes before the start of the meeting. Speakers will be selected at random.

Public comment is a time to provide feedback. Committee of the Whole does not respond to public comment. Speakers who engage in threatening or disorderly behavior will have their time ceased.

### Consent Agenda

All items under the Consent Agenda are considered to be routine in nature and will be enacted by one motion. There will be no separate discussion of these items unless a Committee of the Whole Member, City Manager, or Corporation Counsel so requests; in which event, the item will be removed from the Consent Agenda and considered in the Regular Agenda.

The City's Boards and Commissions hold Public Hearings prior to some Committee of the Whole agenda items appearing on the Committee of the Whole's Meeting Agenda. Persons who wish to address the Committee of the Whole should provide new information that is pertinent to the issue before them.

### Regular Agenda

All items that provide the Committee of the Whole an opportunity to receive a presentation, ask questions of City Staff, seek additional information, or deliberate prior to making a decision will be placed on the Regular Agenda.

### Mayor and Council

**Mayor** - Dan Brady

#### City Council Members

Ward 1 - Jenna Kearns  
Ward 2 - Micheal Mosley  
Ward 3 - Sheila Montney  
Ward 4 - John Danenberger  
Ward 5 - Michael Straza  
Ward 6 - Cody Hendricks  
Ward 7 - Mollie Ward  
Ward 8 - Kent Lee  
Ward 9 - Abby Scott

**City Manager** - Jeff Jurgens  
**Sr. Deputy City Manager** - Billy Tyus  
**Deputy City Manager** - Sue McLaughlin

### City Logo Design Rationale

The **CHEVRON** Represents:  
Service, Rank, and Authority  
Growth and Diversity, A Friendly and  
Safe Community A Positive, Upward  
Movement and Commitment to Excellence!

#### Mission, Vision and Value Statement

##### Mission

To Lead, Serve and Uplift the City of  
Bloomington

##### Vision

A Jewel of the Midwest Cities

##### Values

Service-Centered, Results-Driven, Inclusive

#### Strategic Plan Goals

- Financially Sound City Providing Quality Basic Services
- Upgrade City Infrastructure and Facilities Grow the Local Economy
- Strong Neighborhoods
- Great Place - Livable, Sustainable City
- Prosperous Downtown Bloomington



**Committee of the Whole - Regular Session Meeting Agenda  
Government Center Boardroom, 4th Floor, Room #400  
115 E. Washington Street, Bloomington, IL 61701  
Monday, June 15, 2026 - 6:00 PM**

**1. Call to Order**

**2. Pledge of Allegiance to the Flag**

**3. Remain Standing for a Moment of Silent Prayer and/or Reflection**

**4. Roll Call**

**5. Public Comment**

Individuals wishing to provide emailed public comment must email comments to [publiccomment@cityblm.org](mailto:publiccomment@cityblm.org) at least 15 minutes before the start of the meeting. Individuals wishing to speak in-person or remotely may register at [www.cityblm.org/register](http://www.cityblm.org/register) at least 5 minutes before the start of the meeting for in-person public comment and at least 15 minutes before the start of the meeting for remote public comment.

**6. Consent Agenda**

Items listed on the Consent Agenda are approved with one motion; Items pulled by Committee of the Whole from the Consent Agenda for discussion are listed and voted on separately.

- A. Consideration and Action to Approve the Minutes of the May 18, 2026, Regular Committee of the Whole Meeting, as requested by the City Clerk Department.**  
(Recommended Motion: The proposed Minutes be approved.)

**7. Regular Agenda**

- A. Presentation on the City of Bloomington Supplemental Water Source Review Draft Report, as requested by the Water Department.** (Recommended Motion: None; Presentation Only.) (Presentation by Brett Leuschen, Water Department Director; and Scott Joyce, Water Department Asst. Director, and Farnsworth Representatives, 25 minutes; and City Council Discussion, 20 minutes.)

**8. City Manager's Discussion**

**9. Executive Session**

- A. None planned; although the City Council may go into Executive Session as needed and allowed by law (5 ILCS 120/2).**

**10. Adjournment**

Individuals with disabilities planning to attend the meeting who require reasonable accommodations to observe and/or participate, or who have questions about the accessibility

of the meeting, should contact the City's ADA Coordinator at 309-434-2468 or [mhurt@cityblm.org](mailto:mhurt@cityblm.org).



**Consent Agenda Item No. 6.A.**

**For Committee of the Whole:** June 15, 2026

**Ward Impacted:** City Wide

**Subject:** Consideration and Action to Approve the Minutes of the May 18, 2026, Regular Committee of the Whole Meeting, as requested by the City Clerk Department.

**Recommended Motion:** The proposed Minutes be approved.

**Strategic Priorities:**

**Core Government Function.** This item fulfills a statutory, regulatory, fiduciary, or essential operational responsibility necessary to maintain continuity of municipal services and sound governance.

**Background:** The minutes of the meetings provided have been reviewed and certified as correct and complete by the City Clerk. In compliance with the Open Meetings Act, minutes must be approved 30 days after the meeting or at the second subsequent regular meeting whichever is later. In accordance with the Open Meetings Act, minutes are available for public inspection and posted to the City's website within 10 days after approval.

**Community Groups/Interested Persons Contacted:** N/A

**Financial Impact:** N/A

**Attachments:**

1. Minutes



**Minutes  
Committee of the Whole - Regular Session Meeting  
Monday, May 18, 2026 - 6:00 PM**

The Committee of the Whole convened in regular session in the Government Center Boardroom. Mayor Dan Brady called the meeting to order and led the Pledge of Allegiance, ending with a moment of silent prayer/reflection.

**Roll Call**

**Present:** Council Member Jenna Kearns Mayor Dan Brady  
Council Member Micheal Mosley  
Council Member Sheila Montney  
Council Member John Danenberger  
Council Member Michael Straza  
Council Member Cody Hendricks  
Council Member Mollie Ward  
Council Member Kent Lee  
Council Member Abby Scott

**Public Comment**

Mayor Brady read a public comment statement of procedure. The following spoke in person: (1) Ruth Burke; (2) Bridget Larkin; (3) Zachary Gittrich; (4) Aaron Harwick; (5) Lindsay Marshall; (6) Kenneth Jones; (7) Nicholas Frillman; (8) Adam Heenan; (9) Michael Perez; (10) Nick Sittinger; (11) James Estep; and (12) Kathy Petty.

**Council Member Ward made a motion, seconded by Council Member Montney, to extend public comment time to allow for two additional speakers.**

**Mayor Brady directed the Clerk to call roll:**

**Ayes:** Kearns, Mosley, Montney, Danenberger, Straza, Hendricks, Ward, Lee, Scott

**Motion Carried.**

In-person comments continued with (13) Peggy Bentley and (14) Chris Gibbons. Barb Stuart was registered to speak, but declined. Kelli Outlaw emailed public comment, as did the following regarding data centers: (1) Randy White; (2) Willemina Esenwein; (3) Joseph Hale; (4) Thomas Hale; (5) Jill Christiansen; (6) Vickie Smith; (7) Lynn Bradtke; (8) Patsy Fortune; (9) Theresa (no last name provided); (10) Andrea Canales; (11) Becky Howell; (12) Laretta Oblinger-Hammond; (13) Teagan Bohlen; (14) Albert Stabler; and (15) Patricia Morin.

**Regular Agenda**

The following Item was presented:

Item 6.A. Discussion of Council Considering the Adoption of a Formal Ethics Policy, as requested by the Administration Department.

Mayor Brady introduced the Item proposed by the Bloomington-Normal ("BN") Ethics

Committee, an external committee not affiliated with the City.

Council Members Scott, Ward, and Mosley voiced their support for the Item.

Council Member Hendricks too voiced strong support, noting his year-long work with Barbara Stewart, BN Ethics Committee founder, and other stakeholders. He highlighted that both Normal and McLean County had adopted it.

Mayor Brady confirmed with Sr. Deputy City Manager ("DCM") Billy Tyus that the Item would appear on the May 26, 2026, Council Meeting.

The following Item was presented:

Item 6.B. Discussion and Direction on Next Steps Related to Data Centers, as requested by the Administration Department.

Mayor Brady introduced the Item, noting that the City had held two public forums recently on the topic, as well as having received significant emailed and in-person public comments.

Council Member Mosley supported the moratorium, urged setting clear parameters, bringing in an outside expert to explain the technical pros and cons, and stressed the need for factual, transparent public information.

Council Member Scott supported the Item along with stronger regulations modeled on other jurisdictions. She acknowledged residents' mistrust of big tech and local government, and expressed hope that the moratorium would rebuild trust through transparency and continued stakeholder engagement.

Council Members Lee and Hendricks also supported the Item. Council Member Lee noted Ward 8 would be directly affected by a proposed site. Both recommended using the moratorium to meet with stakeholders (affected Home Owner Associations, McLean County, and regional partners), as well as studying experiences from other communities, and developing appropriate controls. Council Member Hendricks supported extending the moratorium if more time was needed.

Council Member Ward also supported the Item, emphasizing the importance of nuanced policy that distinguishes among types of data centers, and urged ongoing open dialogue.

Council Member Mosley asked staff to research which types of data centers might fit Bloomington, what infrastructure protections would be required, and how to balance economic development with water and land use. He emphasized that not all data centers were the same and that companies should bring tangible benefits to the community.

Council Member Montney supported the Item and reflected that earlier Council involvement might have avoided some public fear. She expressed concerns after having seen a 1,500-acre hyperscale data center elsewhere, and urged taking time to educate all involved to best determine what, if anything, would be appropriate for Bloomington.

Council Member Straza supported the Item, emphasizing his concerns about long-term water and energy resources and end-of-life impacts. He stressed the need for expert input, strong guardrails, and clear enforcement mechanisms before any development moved forward.

Council Member Danenberger expressed support, thanked commenters for raising water, environmental, and financial concerns. He highlighted speakers who framed the debate around Bloomington's neighborhood character and identity, arguing the data center question could be community-defining and should be treated with a high level of importance.

Council Member Kearns expressed support, saying Council's responsibility was to leave the City better than they found it and emphasized time was needed to set strong, lasting protections around data centers so future Councils and residents would be safeguarded.

Mayor Brady confirmed with DCM Tyus that the Item would appear on the May 26, 2026, Council Meeting. DCM Tyus clarified that staff were focusing on hyperscale facilities and explained that while state law likely prevented an outright ban, the City could impose very strong regulations to protect community interests.

The following Item was presented:

Item 6.C. Discussion on the Process for Council Amending Items Being Considered During Council Meetings, as requested by the Mayor.

Mayor Brady explained that, after consulting Legal, the City Clerk, staff, and Council Members, he proposed a formal process and deadlines for submitting substantive amendments to Council items being considered during meetings. He stressed that defining process and timeframes for submission would ensure wording was prepared in advance rather than dictated during meetings, ensuring clearer, more transparent votes.

Council Member Kearns voiced concern that the proposed amendment rules were too restrictive and instead favored better training on Robert's Rules and shared best practices so Council could handle on-the-fly amendments.

Council Members Montney and Danenberger both expressed support for adding more structure to the amendment process, so staff could prepare clear written language in advance to avoid errors.

Council Member Mosley supported additional structure around amendments, but wanted a defined distinction between substantive and minor changes, so Council could handle decisions more consistently.

Council Members Ward and Scott voiced reservations that limiting amendments on the floor reduced Council-public collaboration and undermined open democratic deliberation.

Council Member Montney reiterated her support, stressing that she valued open discussion, but stressed the importance of staff capturing clearly written language to avoid unintended consequences.

Council Member Hendricks said he saw value in the Item, but questioned whether it needed to be rigidly codified, suggesting instead that Council hold itself to informal deadlines and improve its use of Robert's Rules. Council Member Ward agreed with Council Member Hendricks and suggested colleagues should simply vote it down rather than adopt rigid rules.

Council Member Kearns was concerned that rigid amendment rules could be used for political advantage; she preferred enhanced training on Robert's Rules and agreed upon best practices to allow Council to work through amendments collaboratively during meetings.

Council Member Mosley reaffirmed his support and believed submitting competing proposals by noon would aid collaboration during open Council discussion at meetings.

Mayor Brady concluded that Council generally favored adding more structure to how amendments were handled, stressed the need for clear wording so members and the public fully understood what was being voted on, and said staff would refine the proposal and bring a formal amendment proposal back for Council action.

## City Manager's Discussion

DCM Tyus reported that Dutch Bros had opened a new store in Bloomington with strong customer turnout and that Urban Equity Properties had begun preliminary work on a major Downtown housing redevelopment with a ribbon-cutting anticipated in early June. He reiterated that, based on staff's research, the City likely could not impose an outright ban on data centers through zoning, but could adopt very stringent regulations to protect community interests.

## Executive Session

Item 8.A. The Council will enter into Executive Session under 5 ILCS 120 Section 2(c)(1) for Personnel to discuss the annual review of City Manager Jeff Jurgens and Section 2(c)(12) to discuss a Claim Settlement. The Council reserves the right to go into Executive Session for other reasons as needed and allowed by law (5 ILCS 120/2).

**Council Member Hendricks made a motion, seconded by Council Member Danenberger, to enter into Executive Session per 5 ILCS 120 Section 2(c)(1) for Personnel to discuss the annual review of City Manager Jeff Jurgens and Section 2(c)(12) to discuss a Claim Settlement.**

**Mayor Brady directed the Clerk to call roll:**

**Ayes:** Kearns, Mosley, Montney, Danenberger, Straza, Hendricks, Ward, Lee, Scott

**Motion Carried.**

Council entered into Executive Session at 7:25 PM.

## Adjournment

**Council Member Hendricks made a motion, seconded by Council Member Danenberger, to return to open session and adjourn the meeting.**

**Mayor Brady directed the Clerk to call roll:**

**Ayes:** Kearns, Mosley, Montney, Danenberger, Straza, Hendricks, Ward, Lee, Scott

**Motion Carried.**

The meeting adjourned at 9:05 PM.

**CITY OF BLOOMINGTON**

**ATTEST**

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Dan Brady, Mayor

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Amanda Stutsman, Deputy City Clerk



## Regular Agenda Item No. 7.A.

**For Committee of the Whole:** June 15, 2026

**Ward Impacted:** City Wide

**Subject:** Presentation on the City of Bloomington Supplemental Water Source Review Draft Report, as requested by the Water Department.

**Recommended Motion:** None; Presentation Only.

### **Strategic Priorities:**

**Priority Area 1: Infrastructure.** Improving and maintaining the City's infrastructure, including water, sewer, streets, sidewalks, and other physical assets. This priority includes identifying and prioritizing maintenance needs, defining service levels in line with City appropriations, understanding and communicating costs, reducing backlogged maintenance, and ensuring residents can rely on safe, functional infrastructure.

**Background:** The City's Water Department continually evaluates the long-term sustainability, reliability, and resiliency of the community's water supply system to ensure the continued delivery of safe and adequate drinking water to residents and businesses. As part of this commitment, the City engaged Farnsworth Group to conduct a comprehensive review of potential supplemental water sources and alternatives to enhance the City's long-term water supply portfolio.

The Supplemental Water Source Review was initiated in response to increasing regulatory requirements, evolving water supply demands, climate variability, and the need to ensure adequate water resources for future residential, commercial, and industrial growth. The study evaluates the City's existing water supply system, including Lake Bloomington, Evergreen Lake, and the Mackinaw River Pumping Pool. It assesses potential supplemental water source alternatives that could strengthen system reliability during periods of drought or increased demand.

The draft report provides an analysis of existing and projected water demands, source water availability, infrastructure requirements, environmental considerations, permitting challenges, implementation timelines, and estimated costs associated with various supplemental water supply alternatives. This study is intended to serve as a planning tool to help City leadership evaluate future water supply investments and establish priorities for long-term water resource management.

The purpose of this presentation is to provide City Council with an overview of the draft findings and recommendations contained within the Supplemental Water Source Review. The presentation will allow Council to receive information, ask questions, and provide feedback regarding the draft report before final recommendations are developed. No formal action is requested at this time. The presentation is intended to facilitate discussion and provide direction as the City continues its evaluation of long-term water supply strategies to meet the needs of the Bloomington community for generations to come.

**Community Groups/Interested Persons Contacted:**

**Financial Impact:**

**Attachments:**

1. COB Technical Summary

# *TECHNICAL SUMMARY*

City of Bloomington

Supplemental Water Source Review



**DRAFT**



Side Channel Pumping Pool

Submitted by:

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August 13, 2025

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August 13, 2025

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## 1.0 INTRODUCTION

This update of supplemental water supply options reviews available water sources for a multi-generational strategic approach to meet future water capacity needs for the City of Bloomington, Illinois. Review of previous research and investigations was conducted and applied to the current and forecasted needs. Current regulations, technical constraints, new technologies, budget constraints, and potential partnerships must all be considered when deciding which supplemental water source option(s) are the best fit for the City's short and long-term needs.

This update was not intended to repeat previous studies' findings but was a review to bring forth key findings serving as a guide to move forward with the City's current supplemental water supply goals and regulations in place.

Many communities consider their water supply adequate because that community is maintaining a stable population and water demand. However, if significant increases in water demand were seen, many communities would require investigation to develop additional water sources. Interestingly, efforts to plan for immediate, mid-term, and long-term needs are not new for the City. Planning and expanding the City of Bloomington's water supply has been a continual process beginning with the creation of the public water supply in 1875. Other communities in Illinois that use reservoirs for their water supply experience the same supplemental planning needs as Bloomington.

The City water supply has evolved from a groundwater well supply, to Lake Bloomington, to Evergreen Lake and to implementing 'drought proofing' measures including the Mackinaw River side pool. The ever-changing regulatory environment, recent near-drought conditions, changes in the water quality of the existing supply, and the continued growth and economic vitality of the City drive the need for a report that consolidates and updates both the water supply condition and the options for supplemental supply.

The goal of this work was to summarize the available sustainable water sources that can supplement the current supply for several potential scenarios including:

1. Long-Term Drought Impacts
2. Daily Water Use Increases from Population Growth
3. Peak Water Demand Days
4. New Large Water User Demands

Similar conclusions in previous studies provide robust, peer-reviewed confidence in the various alternatives summarized in this report. This current update addresses and updates several variables including updated water demands, new regulations, recent climatic conditions, and new treatment and technological advances. Another value of embracing the findings of past studies is that new decisions can utilize the recommendations but also fine-tune the implementation of the improvements, while considering current regulations and updated long-term water supply goals. Past work has produced a tremendous amount of research and study, conducted over several decades, resulting in an understanding of the opportunities and limitations of the various water supply options for the City. Today, the challenge is reviewing this work in current regulatory, climate, and economic/growth conditions to begin to implement a strategy through multiple opportunities to meet the goals. The recommended strategy will require long-term commitment.

## 2.0 HISTORY OF INVESTIGATIONS

In assembling this update, it was found that today's water source planning topics are the same topics, questions, and language that have been addressed since the beginning of the City's public water supply. It is our responsibility to now implement the next planning stages for the future.

The City of Bloomington has consistently been anticipating water supply and treatment needs for the community. We have reviewed available records dating to 1919 with reference to the initial creation of a public water supply. There is much to be gained from recognizing previous research that provides robustness in making decisions at this time to serve future generations. The following is a chronology of some of the most significant water supply advancements for the City:

- **1875** – Public Water Supply System established.
  - Multiple wells were utilized to provide groundwater to meet growing demands.
- **1930** – Lake Bloomington began as the new water supply, replacing the well supply.
- **1957** – Lake Bloomington Dam was raised 5 feet, increasing water volume.
- **1970** – Evergreen Lake was constructed as a second source of water supply.
- **1990** – Mackinaw River Side Channel Pumping Pool constructed for drought proofing.
- **1995** – Evergreen Lake dam was raised 5 feet; storing an additional 100-120 days of average daily water use.
- Ongoing water conservation practices.
  - Drought Response Plan, **2006**
  - Water Conservation Plan, **2008**

### 2.1 PAST REPORT SUMMARIES

Reports that were found and reviewed are summarized below for the context of each of the efforts. It is understood that additional evaluations have been carried out, but these reports are considered benchmark reports in developing a strategy to implement improvements.

- Water Planning Memorandum Reports from **1919 to 1929**
- *City of Bloomington Preliminary Report on the Present Public Water Supply System and the Present Municipal Electric Light & Power Plant and Distribution System and Their Proposed Improvement Extension and Rehabilitation.* Bloomington, IL. Woltman J.J. and Warren & Van Praag Inc. **1941.**
- PRC Engineering Reports and Updates. *City of Bloomington, IL Engineering Report on Water Supply, Treatment and Distribution.* Chicago. **1984 -1991**
- **Planning Impacts of 1987-1989 Drought**  
Although there have been several droughts since the creation of the surface water supply, the drought of 1987-1989 was the most recent catalyst that stimulated detailed studies for alternative water sources to supplement the lake supply. For reference to the severity of the drought, in

November 1989, the combined lake deficit below spillway elevations was a record -33.74 feet (this was prior to raising the Evergreen Lake dam 5-feet).

Additionally, from that water supply shortage, the City, Town, and County collaborated to commission cutting edge hydrogeological research of the Mahomet Buried Bedrock Valley Aquifer system and the study of Regional Water Supply Needs and Feasibility Analyses for 18 regional communities.

The following are listings of key studies performed to evaluate alternative supplemental water supplies that can act to drought proof and increase the water supply capacity for growth needs.

- Farnsworth and Wylie, P.C. / Hanson Engineers, Inc. **(1989)**. *Drought Emergency Water Sources and Options to Improve Existing Lake Supplies for The City of Bloomington, IL*.
- Responses to the Concerns, raised by letters and comments, Received by the U.S. Army Corps of Engineers, regarding the proposed City of Bloomington Pumping Pool Project. **(1989)**.
- Department of Energy and Natural Resources. **(1992)**. *Regional Groundwater Resources in Western McLean and Eastern Tazewell Counties with Emphasis on the Mahomet Bedrock Valley*. Champaign: Illinois State Geological Survey / Illinois State Water Survey.
- Illinois State Geological Survey / Illinois State Water Survey. **(1995)**. *Hydrogeology and Groundwater Availability in Southwest McLean and Southeast Tazewell Counties - Part 1: Aquifer Characterization*. Department of Natural Resources. Champaign: State of Illinois - IL Department of Natural Resources.
- Illinois State Geological Survey / Illinois State Water Survey. **(1998)**. *Hydrogeology and Groundwater Availability in Southwest McLean and Southeast Tazewell Counties - Part 2: Aquifer Modeling and Final Report*. Department of Natural Resources. Champaign: State of Illinois.
- Farnsworth Group, Inc. **(2002)**. *Regional Water Supply Preliminary Infrastructure Plan (Presented to Long-Range Water Plan Steering Committee)*. Bloomington: Farnsworth Group, Inc.
- Farnsworth Group, Inc. **(2008)**. *City of Bloomington Highland Park Golf Course Irrigation Water Source Study*. Bloomington, IL.
- Farnsworth Group Inc. **(2008)**, Source Water Quality Assessment and Treatment
- Wittman Hydro Planning Associates. With contributions by Farnsworth Group, Inc. **(2010)**. *Interim Water Supply Plan*.
- Farnsworth Group, Inc. **(2014)**. *Supplemental Water Supply Investigations Southwest Well Field - Sugar Creek Alluvial Aquifer Guidance Document*.
- CDM Smith - Bill Davis. **(2018, February 23)**. *City of Bloomington Water Infrastructure Master Plan - Task 3: Water Demand Forecasting and Water Supply Planning. Technical Memorandum*. Bloomington, IL.
- Hanson. **(2024)**. *Dredging Investigation and Options for Lake Bloomington and Evergreen Lake*. Bloomington.

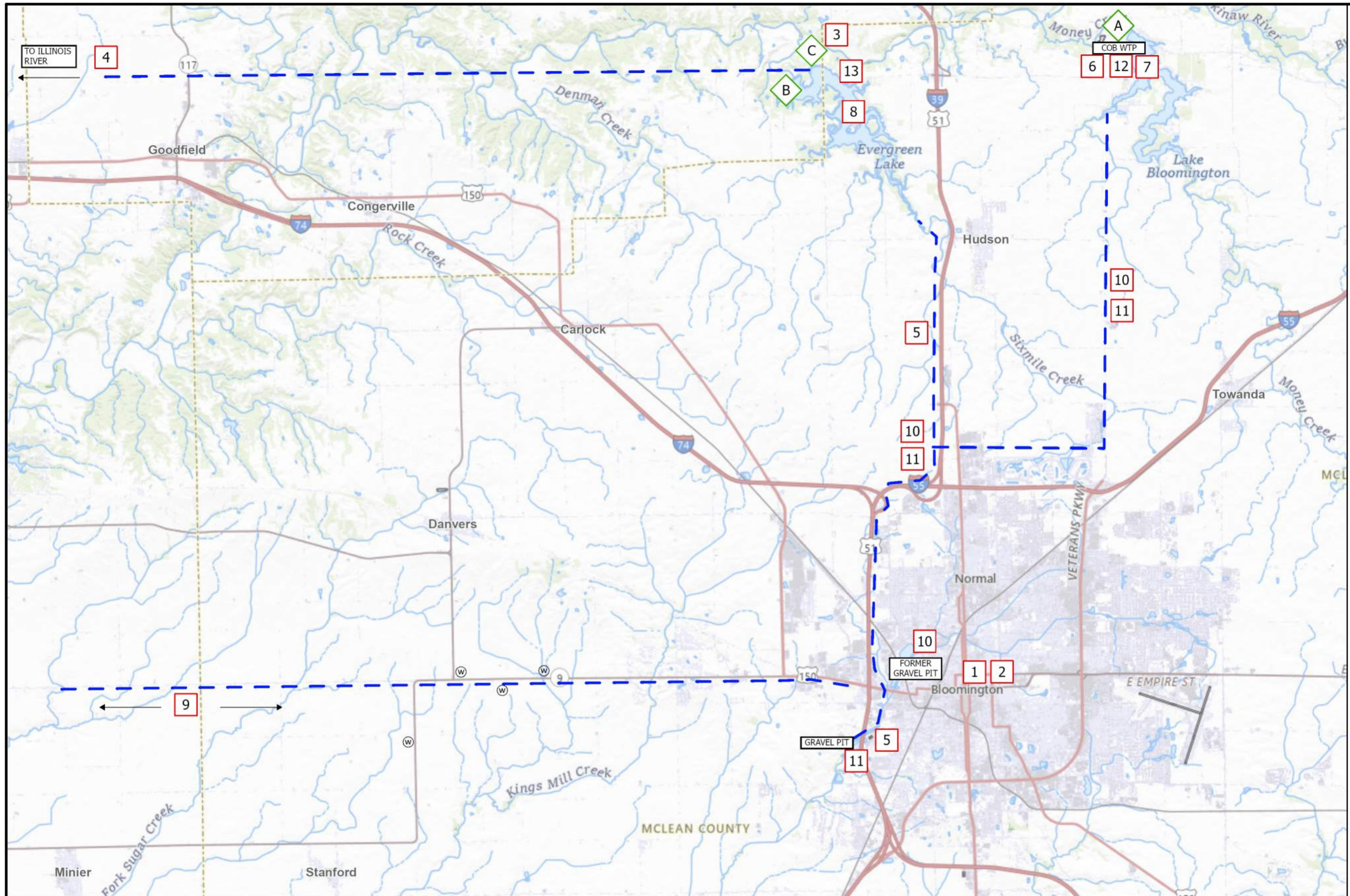
- Hanson. **(2024)**. *Reservoir Capacity Improvement Investigation for Lake Bloomington and Evergreen Lake*. Bloomington.

### 3.0 SUPPLEMENTAL WATER SOURCE IMPLEMENTATION CONSIDERATIONS

For each potential supplemental water source there will be multiple aspects of viability and implementation that must be considered to identify the feasibility of the water source as being both accessible and sustainable.

Key considerations in the implementation of supplemental water sources include:

- **Target Volumes** – Establishing the volume of supplemental water required. The water usage data through 2015 included in the 2018 CDM Smith Report should be updated to include usage through 2025. This updated water usage data will provide current forecasting for the project water usage and supplemental water supply capacity required.
- **Implementation Timeline** – All of the potential strategies will require a long-term commitment that includes a series of steps or phases that will require study, planning, budgeting, design, and even acquisition prior to full implementation. The timeline to proceed with these steps will be measured in years, requiring a long-term commitment bridging changes in leadership.
- **Financial Feasibility** – Accessing new water sources will require a financing model that can be supported by the user rates and bonding capacity of the City. This limitation may require a phased construction approach. The capital required for water supply projects will need to be balanced with other projected infrastructure projects.
- **Sustainability of Source** – Will the source be a renewable and reliable source during periods of drought? Also, will this water supply serve as a supplement to the existing reservoir supply only during drought periods or would this supply be a continual daily supplement to the water system?
- **Quantity Cost/Benefit** – Each source will have limitations to the volume or flow rate that may be available for different reasons. Does the source provide enough supplemental water to make the development cost worthwhile?
- **Regulatory Permitting Requirements** – Accessing and utilizing each potential source will trigger permitting requirements from various agencies. These requirements will add time, complexity, and effort. Some alternatives being considered may have strict permitting barriers or even eliminate its feasibility.
- **Impact Studies** – Some alternatives may require additional study or evaluation during the permitting process.
- **Land Purchases** – Most of the opportunities being considered will require acquisition of land for development of the project.
- **Utility Easements** – Conveying the water from source to treatment to distribution will necessitate acquisition of utility easements for water main and other infrastructure.
- **Scalability** – The ability of the potential supplemental supply to scale up to serve an ultimate long-term need must be considered. There may be cases where the initial water needs would be 1/3 of the visioned volume.



**SUPPLEMENTAL WATER SUPPLY OPPORTUNITIES**

- 1 NON-REVENUE WATER REDUCTION TARGETS 10% GOAL
- 2 WATER CONSERVATION PRACTICES
- 3 MACKINAW RIVER SIDE CHANNEL PUMPING POOL - OPERATION ENHANCEMENTS
- 4 PIPELINE TO ILLINOIS RIVER
- 5 INDIRECT WATER REUSE
- 6 THIRD RESERVOIR
- 7 DREDGING LAKE BLOOMINGTON
- 8 DREDGING EVERGREEN LAKE
- 9 MAOMET BURIED BEDROCK VALLEY AQUIFER WELL FIELD
- 10 GRAVEL PIT(S) PUMP STATION WITH WATER TRANSMISSION MAIN TO EVERGREEN LAKE OR LAKE BLOOMINGTON
- 11 SUGAR CREEK SHALLOW ALLUVIAL AQUIFER WELL FIELD PUMPED TO EVERGREEN LAKE OR LAKE BLOOMINGTON
- 12 EXISTING DEEP BEDROCK WELLS (2) AT WTP
- 13 SAND AND GRAVEL AQUIFER WELLS BETWEEN LAKES

— POTENTIAL WATER TRANSMISSION MAIN ROUTES

Ⓜ NORMAL WESTERN WELL FIELD

**PAST WATER SUPPLY EXPANSIONS**

- A 1957 DAM RAISED 5 FT.
- B 1995 DAM RAISED 5 FT.
- C MACKINAW RIVER PUMPING POOL

# City of Bloomington - Supplemental Water Supply Opportunities

Map Number	Target Year	Water Opportunity	Sustainable Yield	Development Duration	Feasibility Concerns	Implementation Requirements	Cost (\$ Millions)
<b>Administrative and Maintenance Activities</b>							
1	Ongoing	<b>Non-Revenue Water Reduction 10% Goal</b>	Lower Water Use Demand -1 MGD	2-3 years + continual	Cost/benefit interface.	Dedicated program staff leader. Ongoing meter upgrades. Permanent task for all communities. Water main and service maintenance programs.	\$2M/year Maintenance Budget (\$25M turnkey)
2	Ongoing	<b>Water Conservation Practices</b>	Lower Water Demand	Continual	Cost/benefit interface.	Ordinances. Continual awareness for new conservation practices.	Operations Budget \$0.25M/year
<b>Surface Water Sources</b>							
3	2026	<b>Mackinaw River Side Channel Pumping Pool - Operation Enhancements</b>	Intermittent Operation During Dry Conditions	Currently available, enhancements in 2 years.	Illinois Department of Natural Resources allowed permitted operation modifications.	Install SCADA capability. Permit operation criteria changes. Install variable frequency drives.	\$0.50M - \$1.5M
4	2035-2045	<b>Pump Station from Illinois River and Pipeline to Evergreen Lake</b>	Additional study, research required. Can meet all future increased water needs.	10-20 years	Permitting. Cost / need analyses. Easements. Oversize piping for potential future needs. Need for Partners. Distance compared to other options.	Begin initial agency contacts. Intake structure. Study pipeline route alternatives. Land purchase for pumping station. Multiple permitting requirements. 35 miles of 36" diameter water main. Water quality evaluations.	TBD - Expected \$175M Magnitude
5	2030-2035	<b>Indirect Water Reuse</b>	2-4 MGD	5-10 years	IEPA approval and research. BNWRD coordination. Easements. Cost/benefit for supplemental use. Public education.	Additional studies. Pump station and force main. Easements. Permitting. 36" diameter watermain / 11 miles.	\$25M - \$35M
6		<b>Create a Third Reservoir</b>		Not Feasible	Would not be permitted.	Considered in past, not feasible. See Springfield efforts.	N/A
<b>Lake Dredging</b>							
7	2030-2035	<b>Lake Bloomington</b>	606 Million Gallons of Increased Storage 40-60 Day Supply Equivalent	5-10 years	Purchase of land for dredged material placement and decanting.	Land purchase for dredged materials. Permitting. Budget planning.	\$39M - \$51M
8	2035-2040	<b>Evergreen Lake</b>	101 Million Gallons of Increased Storage 6-10 Day Supply Equivalent	10-20 years	Purchase of land for dredging materials placement and decanting. Cost/benefit timing.	Land purchase for dredging materials. Timing of need/priority. Permitting. Budget planning.	\$12M - \$18M

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# City of Bloomington - Supplemental Water Supply Opportunities

Map Number	Target Year	Water Opportunity	Sustainable Yield	Development Duration	Feasibility Concerns	Implementation Requirements	Cost (\$ Millions)
<b>Groundwater Sources</b>							
9	2035-2040	Groundwater from Mahomet Buried Bedrock Valley Aquifer Well Field	15 -30 MGD	10-15 years	Treatment plant - six (6) locations. Easements. Land purchase. Aquifer water level impacts. Legal water law negotiations.	IEPA permitting. Well development. Aquifer testing. Financing/budgets. Construction. 24" diameter watermain / 25 miles. Share pipeline with other sources.	\$75M - \$125M
10	2030-2040	Gravel Pit(s) and Pump Station with Water Transmission Main to Evergreen Lake / Lake Bloomington	Pumping Tests Needed 1-2 MGD	5-15 years	Easement for water transmission main. Land purchase. Reuse existing pipeline.	Bathymetric survey of gravel pit(s). Easements. Design and permitting of pump station. Discharge location. Implement in phases. Share pipeline with other sources. Re-use existing section of watermain from Division street up to Pipeline Road.	\$15M - \$20M
11	2030-2040	Sugar Creek Shallow Alluvial Aquifer Well Field Pumped to Evergreen Lake/Lake Bloomington	2-4 MGD	5-15 years	Land access. Blending of different water. Limited aquifer yield. Easements.	This pipeline would connect to initial pipeline. Additional aquifer testing. IEPA permitting. Land purchases. Easements. Share pipeline with other sources. Re-use existing section of watermain from Division street up to Pipeline Road.	\$30M - \$50M
12	2026	Existing Deep Bedrock Wells (2) at WTP	1.5 MGD	2 years	Water quality. Blending-use at 15% of total daily flow.	Corrosion control study approved by IEPA. Water quality issues. Well pump selection and installation. Piping installation to connect to water treatment plant.	\$2M - \$3M
13	2030	Sand and Gravel Aquifer Wells Between Lakes	1 MGD	1-2 years	Cost/benefit for yield. Limited yield. Impact to area wells.	IEPA permitting. Easements. Land Purchase.	\$3M - \$5M

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- **Intergovernmental Agreements** – Some opportunities for supplemental water may require cooperation between governmental entities.
- **Water Quality** – Water quality and the blending of different water sources is a primary focal point of review by the Illinois Environmental Protection Agency (IEPA) that permits and regulates public water supplies. How a new water source is combined, treated, and blended into the existing water system has become a primary point of permitting with the IEPA. The need to understand the sometimes-complex water chemistry changes that may occur when blending often requires adjustments in the treatment process prior to distribution system. Current regulations require increasingly robust evaluation of this process prior to the issuance of a permit.
- **Water Treatment Plant Considerations** – Evaluation of alternative locations for treatment of new supplemental water source(s) has been conducted since the post-1988 drought studies. Updated regulations for adding a new source to a water supply raise the importance of this consideration. Alternatives may include bringing water from the new source into the current lake supply for treatment using the existing treatment plant. Considerations for updating and expanding the current water treatment plant must also be factored. Constructing a new water treatment plant dedicated to treating the new supplemental source prior to entering the water distribution system is another alternative.

## 4.0 CURRENT FINDINGS SUMMARY

Thirteen (13) supplemental water supply opportunities were identified in this study. Not all thirteen water supply opportunities are feasible or viable; however, all are presented to communicate that they were reviewed for consideration.

The water source opportunities fall under three categories:

- Administrative and Maintenance opportunities to track and conserve water use.
- Surface Water Sources that may involve a lake or river. As Bloomington relies on the two reservoirs (Lake Bloomington and Evergreen Lake), there are many communities that rely on surface water supplies to meet drinking water needs. Over 70% of the State population relies on surface water sources.
- Groundwater Sources (wells).

We have summarized the opportunities in both a map-based format and a matrix. These figures follow.

Of the thirteen opportunities, seven of the opportunities would merit the next step investigations. A summary statement of the thirteen opportunities follows.

## 4.1 ADMINISTRATIVE AND MAINTENANCE ACTIONS

### *4.1.1 NON-REVENUE WATER REDUCTION*

Accounting for the difference between water produced at a water treatment plant and the water metered and sold to customers is a challenge for all communities. Reducing this differential is both a source of gaining income and reducing lost water. This is an ongoing operations process; additional resources should be allocated to lower this unaccounted water in the City's water system. Although water production may be seen, this will not eliminate the need for securing additional water sources for growth, but it promotes good stewardship to maximize billed treated water, understand water use patterns, and to help with decision making. Updating the 2018 water use forecasting will be important for planning.

### *4.1.2 WATER CONSERVATION PRACTICES*

The City has enacted ordinances that can be activated during drought periods to reduce water consumption, extending the water supply during periods of system stress until normal rainfall amounts return and replenish supply. These water conservation practices are critical for managing the water supply during periods of drought and stress to the system. A review for updating the ordinance as may be needed should be performed.

## 4.2 SURFACE WATER SOURCES

### *4.2.1 MACKINAW RIVER SIDE CHANNEL PUMPING POOL – OPERATIONAL ENHANCEMENTS*

The Pumping Pool was constructed as an emergency solution to supplement the City's water supply during the 1988 drought. Water from the Mackinaw River is pumped into Evergreen Lake to extend the water supply until normal rainfall returns. There are operational and regulatory restrictions in place regarding the use of the pumping pool. Opportunity exists to increase the amount of water pumped by updating the control automation and electrical drives in the pumps serving the Pumping Pool. Confirmation of operating changes will need to be made with the Illinois Department of Natural Resources (IDNR). This alternative would serve to extend the reservoir supply until normal rain returns but is not a long-term source to meet any growing average daily demand.

### *4.2.2 PUMP STATION FROM ILLINOIS RIVER AND PIPELINE TO EVERGREEN LAKE*

Previous evaluations have considered accessing and utilizing the Illinois River as a reliable supplemental water source, but further action to develop the feasibility of this option has not been pursued. The river is utilized as a drinking water source by Illinois American Water Company to serve portions of the Peoria service area. A preliminary evaluation of the topography along two potential routes has been developed, but a robust study of the specifics of the river intake, water chemistry, biological impacts, route analysis, hydraulics, permitting, property acquisition, or predicted cost has yet to be conducted. While this source may provide the greatest long-term potential for additional volume to supplement the existing water supply, accessing and utilizing the Illinois River will require a series of studies and implementation phases to bring this alternative into operation.

### *4.2.3 INDIRECT WATER REUSE*

Indirect water use is the reuse of wastewater by introducing treated effluent to an existing water supply. The practice of reuse is utilized across the country and the world. In 1992, Illinois State University conducted a study on the feasibility of water reuse and identified the limitations of introducing treated

wastewater effluent into Evergreen Lake as a supplemental supply. The limitations identified, additional study required, and logistics of the conveyance from the plant to the source make indirect water reuse a marginal option and pursuit of this alternative at this time is not warranted, given the viability of other options. Reuse would be more feasible for irrigation or industrial cooling if the cost/benefit was found positive or need driven.

#### 4.2.4 CREATE A THIRD RESERVOIR

Consideration of creating a third surface water reservoir has been evaluated on multiple occasions. The permitting requirements for creating a third reservoir in this area, the availability of a suitable location, and the complexities of both the environmental impact statement and required property acquisitions make a third reservoir serving as a primary source of supplemental water difficult.

#### 4.2.5 LAKE DREDGING

Reservoirs like Lake Bloomington and Evergreen Lake all have a common feature: the trapping and deposition of sediment that is naturally carried by streams and rivers. As the sedimentation accumulates in the reservoir, the volume of water storage is reduced. The lakes have been studied multiple times to estimate both the sedimentation rate and volume of sediment that has accumulated since their creation. The most recent evaluation was conducted in 2024.

- LAKE BLOOMINGTON

The 2024 study concluded that an additional volume of 606 million gallons (equivalent to a 40-60 - day supply) could be created through a dredging program. Dredging of impoundments of this size are labor intensive, lengthy processes complicated by transport, storage, de-watering and fate of the sediment removed. Between the two lakes, Lake Bloomington would be the better candidate for dredging. Dredging of accumulated sediment may also provide water quality benefits in addition to the volume improvements.

- EVERGREEN LAKE

The same 2024 study calculated a potential increase of 101 million gallons of storage through a dredging program on Evergreen Lake, equivalent to a 6–10-day supply. Given the increased volume in Evergreen Lake from the recent raising of dam height by 5 feet and gain on investment this dredging should not be considered a priority project at this time.

### 4.3 GROUNDWATER SOURCES

#### 4.3.1 GROUNDWATER FROM MAHOMET BURIED BEDROCK VALLEY AQUIFER WELL FIELD

One of the primary aquifers in Illinois is the Mahomet Buried Bedrock Valley. In Central Illinois travelling from east to west, some of the larger primary municipal users of this aquifer include Hoopston, Paxton, Rantoul, Mahomet, Champaign/Urbana (and satellite communities), Monticello, Clinton, and Normal. As part of the post-1988 drought regional water research, a very detailed and thorough study and modeling was conducted by the Illinois State Water and Geological Surveys. The findings of that research confirmed that a sustainable water supply could be secured from this aquifer further west of the existing Town of Normal well field. Also the initial establishment of a well field in this aquifer would be for drought resiliency and would provide a better understanding of yield potential for long-term water supply expansion.

#### *4.3.2 GRAVEL PIT(S) AND PUMP STATION WITH WATER TRANSMISSION MAIN TO EVERGREEN LAKE / LAKE BLOOMINGTON*

Former gravel pits in and outside the City could be considered as a supplemental water source during periods of drought. The gravel pits would provide both stored surface water in the pond and hydraulic connectivity to the shallow aquifer of the Sugar Creek Alluvial deposits, effectively serving as a very large diameter well to access local groundwater resources. A gravel pit currently owned by the City along Martin Luther King (MLK) Drive would be a suitable candidate for study and development. Additionally, there may be opportunities to negotiate the use of other pits south along the Sugar Creek corridor during certain periods of need. Effectively, a raw water main could be constructed to “daisy chain” along the pits in the corridor, eventually discharging supplemental surface water into one of the existing City reservoirs’ watersheds to supplement the existing water supply. Other surface water supplies in Central Illinois use former mining pits as supplemental water sources.

#### *4.3.3 SUGAR CREEK SHALLOW ALLUVIAL AQUIFER WELL FIELD PUMPED TO EVERGREEN LAKE / LAKE BLOOMINGTON*

The sand and gravel aquifers in alluvial deposits associated with the Sugar Creek corridor have previously been considered for a water source, with original evaluations being conducted during the 1950s and 1960s. A more recent evaluation in 2010 provided research and testing that suggested a 2-4 million gallon per day (MGD) supply may be feasible if the optimal sites could be located and secured. For both the gravel pit water sources described above and shallow wells in the Sugar Creek corridor, the current model is to pump raw water to the current reservoirs’ watersheds to supplement the existing lake. This eliminates the need for a second water treatment plant and the regulatory challenges of blending two distinct water sources in the distribution system. Also the initial establishment of a well field in this aquifer would be for drought resiliency and would provide a better understanding of yield potential for long-term water supply expansion.

#### *4.3.4 EXISTING DEEP BEDROCK WELLS (2) AT WTP*

In 2020, the City completed the installation and testing of two deep (2,100 feet) bedrock wells located on the Lake Bloomington treatment plant property. Pumps and discharge piping have not been constructed for the wells at this time, and the wells are not currently providing supplemental water for the City’s use. Testing has suggested that 700 gallons per minute (gpm) pumps could be installed. Similar deep bedrock aquifers are utilized by a few small downstate communities, but primarily in the Chicagoland area where shallower alluvial deposits are not prevalent or adequate. These wells should be considered an emergency supply source for possibly 1.5 million gallons a day on an intermittent basis. Water quality considerations would also limit the volume of water blended into the existing surface water treatment process utilized at Lake Bloomington. Some estimates calculated blending up to a maximum 15% of total water treatment from the deep wells.

#### *4.3.5 SAND AND GRAVEL AQUIFER WELLS BETWEEN LAKES*

Previous research has identified a buried valley sand and gravel aquifer of limited areal extent in the location between the City’s two water supply lakes. Testing and a conceptual model of this aquifer suggested that a 1-2 million gallon per day supply may be feasible utilizing multiple wells. The required infrastructure needed to develop and access these wells in the optimal locations eliminates this source as feasible or practical for the City’s supplemental water needs.

## 5.0 IMPLEMENTATION RECOMMENDATIONS

A comprehensive review of previous reports, updated water supply goals, and new regulations have been conducted. The depth and volume of previous study demonstrate that a single path or quick solutions to providing supplemental water to the City of Bloomington does not exist. There are many steps and phases that will take years to initiate, complete and implement. However, several actions that begin, and parallel paths taken, to prepare the most feasible and practical water sources for implementation. Relying on the strength of past research and applying this information to the current and foreseeable needs of the City, we recommend the following approach to strengthening the resilience of the City's water supply.

### 5.1 UNACCOUNTED WATER METER UPGRADE PROGRAM

The City should prioritize continuing to support and accelerate the ongoing process of identifying and quantifying unaccounted water in the water system. Continued water meter system upgrades and change-out, providing more accurate metering, repairing inoperable meters, and discovering and repairing water leaks are all best practices contributing to the solution. This effort is a continual asset management process; however, an accelerated effort and allocation of funds and staff will provide a tangible payback. Meters are considered to have a 20-year life cycle and replacement of meters in the system is a continual effort. Reduction in unaccounted water will not create a new water source but will aid in lowering water production and increase revenue. Increasing accuracy of accounting for water produced and water billed will also help with planning and choosing supplemental water needs. Budgeting for annual maintenance is estimated at \$2 million per budget year. A full turnkey for contracting the meter change-out has been estimated at totaling \$25 million.

### 5.2 MACKINAW RIVER SIDE CHANNEL PUMPING POOL OPERATIONAL IMPROVEMENTS

Recently, some discussion has focused on the increased water volume that may be achieved by making changes to the operations of the pumping pool. The pumping pool exists to supplement the existing water supply by transferring water from the Mackinaw River to Evergreen Lake in distinct pumping events during drought periods. This effectively reduces the rate of storage decline in the lake until rainfall events refill the lakes. There are two possible avenues to increasing the ability to capture more water from the Mackinaw River than currently allowed by regulatory review. First, pump station improvements, including automation upgrades, communication controls and variable pump drive systems can increase the rate and efficiency of capture when the system is operated. In addition, administrative work to obtain permission from the various agencies, especially the Illinois Department of Natural Resources, to allow the use of the pumping station earlier and more frequently based on the operations criteria of combined lake level deficits would be necessary. The estimated magnitude of costs for improving this existing supplemental water supply may be \$500,000 - \$1,500,000.

### 5.3 UPDATE OF 2018 WATER DEMAND FORECASTING TECHNICAL MEMORANDUM

As part of the thorough understanding of need and water planning, the 2018 Water Demand Forecasting Technical Memorandum should be updated with ten years of current data. The 2018 investigation used available data through 2015. There is an opportunity to add ten years of recent data to examine trends in water use and per capita usage trends. We have provided two use trend charts in this report for indicating recent patterns. However, updating the 2018 report with the most current data would be a valuable planning tool for the city.

## 5.4 UPDATED COMPILATION RESERVOIR YIELD ANALYSES

The key metric in water planning for the City is predicated on the estimated lake yields during various drought frequency scenarios. There have been multiple analyses performed over the years by the Illinois State Water Survey and consultants. Reservoir yield estimates are based upon a series of assumptions for multiple variables and statistical confidence levels. Assembling a summary of these analyses in one report would help reach an authoritative consensus on the yield in a 20-year and 50-year drought recurrence. The potential yield contributions of the side channel pumping pool is another summary validation of this report. The storage increase of raising (5 feet) the dam of Evergreen Lake also should be better communicated in this report. It is clear from past estimations that if the City needed an additional 5-10 million gallons per day on a 50-year drought scenario, the current lake yield estimations fall short of that need. We have provided a suggested scope of study for this report. Estimated budget report cost with assistance from the Illinois State Water Survey - \$300,000.

## 5.5 BATHYMETRIC SURVEY AND PUMPING TEST OF MLK BASIN

As part of the planning for the feasibility of utilizing former gravel pits as a supplement supply, an underwater (bathymetric) map/survey of the MLK Drive gravel pit owned by the City would be needed to estimate the volume of water in the pit. After the survey is completed a drawdown test would be done to estimate inflow contributions. Knowing the profile of the lake can also assist the city with recent consideration of utilizing this pit for floating solar arrays. If the solar arrays were to be installed, fluctuation in water levels would be acceptable in the event the pit were used for supplemental water during dry periods. If adequate volumes are found to be available in the existing gravel pit, preliminary raw water main and pump station design would be the next phase. This first pipeline phase could then serve additional raw water sources brought from further south along the Sugar Creek corridor. Bathymetric survey and engineering budgetary estimates of \$200,000 are provided for the first step to determine feasibility.

## 5.6 SUGAR CREEK ALLUVIAL DEPOSITS

The sand and gravel aquifers in alluvial deposits associated with the Sugar Creek corridor have previously been considered for a water source, with original evaluations being conducted during the 1950s and 1960s. A more recent evaluation in 2010 provided research and testing that suggested a 2-4 million gallon per day (MGD) supply may be feasible if the optimal sites could be located and secured. In 2014, these deposits were again considered for a supplemental water supply. For both the gravel pit water sources described above and shallow wells in the Sugar Creek corridor, the current model would be to pump raw water to the current reservoirs' watersheds to supplement the existing lake. This eliminates the need for a second water treatment plant and the regulatory challenges of blending two distinct water sources in the distribution system. Also, the initial establishment of a well field in this aquifer would be for drought resiliency and would provide a better understanding of yield potential for long-term water supply expansion. Testing for well potential on property owned by the city would be one approach to consider. If successful, a pipeline could then be considered to reach the MLK lake and this Sugar Creek aquifer could then use the MLK lake or pump station to move water to Evergreen Lake or Lake Bloomington. The City may be able to re-use segments of existing watermain from Division Street up to Pipeline Road for portions or the transmission main. This development would be the first phase of expanding water supply source during drought periods. These wells initial would be only for drought periods and not for regular daily needs. Using estimates from the 2014 evaluation budgetary estimates to implement this would be in the \$20-\$30 million range in today's dollars.

## 5.7 LAKE BLOOMINGTON DREDGING

Recent study has also identified that selective dredging in Lake Bloomington could return approximately 606 million gallons of volume to the lake's capacity. Implementation would first require work to identify land parcels that could serve as a location to pump the water/sediment slurry for dewatering of the dredged materials. A berm would be built to contain the dredging slurry where the dewatering could be managed to minimize impacts to receiving waters and create manageable dry sediment for various potential uses. It is estimated that 200 - 400 acres would be necessary. Suitable properties should be explored for purchase. Having the land available is the key component of the project, while the actual dredging timeline may be many years away. In the interim, the land could continue to be used for agricultural or reserve purposes. A land purchase budget estimate of \$4,000,000 - \$5,500,000 is provided and a budgetary cost for future dredging is estimated at \$50,000,000.

## 5.8 ILLINOIS RIVER WATER SUPPLY ANALYSIS

Utilization of the Illinois River as a long-term solution to supplemental water has been reviewed previously in the development of possible pipeline routes and topographic profiles. Under current water use projections and resiliency needs, continued study is warranted and additional work required to evaluate optimal routes, river intake and pump station locations and associated costs is recommended. An understanding of the biological, ecological, and chemistry impacts of diversion will also be requested by review agencies, if the alternative continues to be developed to permitting. We have included in the supporting documentation of this report a task outline of the scope of work that should be conducted to provide detail and directions to establish connections to the Illinois River. It is planned that the discharge of this raw water source would first be to the Evergreen Lake Watershed. Budget estimated for first phase of study is \$400,000. A preliminary budget for full build-out access to the Illinois River may approach \$175,000,000.

## 5.9 MAHOMET AQUIFER

The wide-spread sand and gravel of the deep Mahomet Aquifer was extensively studied, tested, and modelled in the 1990s. A solid understanding of the capacity of this resource exists. The next step to establish a well field in this aquifer does not require additional understanding of the *aquifer yield*, but rather the preliminary engineering design, pipeline route, land acquisition, easements and legal clarification required for implementation of this resource. As part of preliminary engineering consideration, the identification of the best technology for water treatment should also be revisited. This evaluation has been ongoing, but with more recent updates to IEPA regulations, an additional, revised analysis is warranted.

For use during drought periods:

- **OPTION A – WATER TO LAKES**

One option would be to pump this groundwater directly from the Mahomet Aquifer resource into the lakes for treatment at the existing Lake Bloomington water plant. An optimal pipeline route would need to be determined, and study conducted to identify if it can be combined to utilize the potential development of the gravel pit water source alternatives.

- **OPTION B – BUILD SECOND WATER TREATMENT PLANT**

If preliminary engineering determines that building a second treatment plant is warranted, likely

located on the west or southwest edge of the City, blending the two water sources or isolating zones in the distribution system dedicated to the new water source will require working with the Illinois Environmental Protection Agency for approvals. The initial budgeting for preliminary evaluations and design is estimated at \$300,000 and a preliminary budgetary estimate of \$75,000,000 - \$125,000,000 is provided for full build-out.

## 5.10 CONCLUSION

Because of multiple alternatives and implementation requirements, a consistent effort of parallel evaluations of the opportunities must be conducted to reach the best decisions for the community. The city will then be positioned to move to water supply resiliency during drought periods with planned phased improvements.