

**MINUTES OF THE COMMITTEE OF THE WHOLE MEETING  
OF THE GURNEE VILLAGE BOARD**

**GURNEE VILLAGE HALL  
OCTOBER 30, 2023**

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**Call to Order**

Mayor Hood called the meeting to order at 7:03 p.m.

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**Other Officials in Attendance**

Patrick Muetz, Village Administrator; Brian Gosnell, Finance Director; Heather Galan, Public Works Director; Brett Fritzler, Utility Supervisor.

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**Roll Call**

**PRESENT: 5- Woodside, Ross, O'Brien, Balmes, Thorstenson**  
**ABSENT: 1- Garner**

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**Pledge of Allegiance**

Mayor Hood led the Pledge of Allegiance.

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**A. DISCUSSION ITEMS**

1. Presentation by Bill Soucie, Executive Director Central Lake County Joint Action Water Agency: CLCJAWA update.

Director Soucie thanked the Village Board for the opportunity to share information about the Central Lake County Joint Action Water Agency. He started by sharing some information about himself and reviewing the agenda for the evening which included:

- History
- Organization
- Lake Michigan
- Facilities
- Treatment Process
- Membership Expansion
- Water Quality
- Awards

**History:** On December 3, 1981, Gurnee Mayor Dick Welton traveled to Libertyville Village Hall for a meeting regarding Lake Michigan water for central Lake County hosted by then Mayor of Libertyville Paul Neal. Fifty-five people from 14 communities attended. CLCJAWA came into existence on October 30, 1986 with nine members. After reviewing various options, the Agency decide to construct its own facilities. Following final design and a 29-month construction schedule, the Agency's Lake Michigan water supply system became operational in March of 1992.

**Organization:** CLCJAWA is a Joint Action Water Agency formed by our members. While it is a joint venture, it is also an independent body. The Agency has an Executive Committee composed of village administrators/engineers and a Board of Directors composed of mayors from each of the 12 villages it serves as well as one county board rep. Mayor Hood and Administrator Muetz serve on these bodies. Director Soucie stated the Village of Gurnee has the second largest water demand in CLCJAWA behind Lake County. He then shared information about the budget stating \$23 million in expenditures is nearly evenly divided among operations, capital and debt.

**Lake Michigan:** The Great Lakes contain 20% of the Earth's fresh surface water. Soucie then stated that nearly all of Illinois drains to the Gulf of Mexico, not Lake Michigan. Illinois is able to take water from Lake Michigan as the result of a Supreme Court decision. He shared information on the Great Lakes water levels over the past two years, as well as historical highs and lows. Director Soucie stated the amount of water that evaporates off of Lake Michigan on an average day is 26.5 billion gallons. CLCJAWA pumps an average of 18 million gallons a day. As a result, more water evaporates from the Lake in one minute than CLCJAWA pumps in one day.

**Facilities:** Director Soucie reviewed CLCJAWA's facilities including the raw water pump station, treatment facility, standpipes and booster pump station. He also reviewed the system design which is a branch-system made up of 55 miles of water main that covers 100 square miles.

Trustee Balmes asked if CLCJAWA has the longest intake pipe. Director Soucie stated no, the City of Chicago does at 5,000 feet.

**Treatment Process:** Soucie stated individuals from all over the world have visited the water treatment plant. The treatment process includes ozonation, rapid mixing basins where a coagulant is added to facilitate the removal of suspended particulate matter, a three-stage flocculation process, sedimentation basins, granular carbon filtration and finally ultraviolet disinfection. This is one of the most advanced treatment processes of any plant in the world. Soucie stated he is not aware of any other facility in the world that tests its water for more compounds or as frequently as CLCJAWA does. CLCJAWA monitors water continuously for important parameters at dozens of locations throughout the process and system. Data is stored in perpetuity and reported on a monthly basis to the various regulatory agencies CLCJAWA is required to operate within. Soucie stated the Agency's turbidity levels are three times lower than the federal standard and below the Partnership for Safe Water Standard. CLCJAWA is one of eighteen plants out of 50,000 in the United States who has received the award over its twenty-one year existence.

Trustee O'Brien asked about adding phosphorus to water. Director Soucie stated a corrosion inhibitor is added to the water to control lead and copper. Although CLCJAWA has no lead and copper in the system, some communities that it serves may have older homes that have lead or copper. A consistent dose of phosphoric acid forms a scale on the pipe that reduces the leaching of lead and copper into the water.

**Membership Expansion:** Director Soucie reviewed membership expansion over the past 10 years and the associated capital buy-in fee. He stated the Agency has additional capacity and is currently working with Lake Zurich to potentially provide water to the community. The capacity is partially due to energy efficient fixtures and appliances that impacted the Agency starting in 2005. Adding new members has helped fill the gap in water sales that resulted from these efficiency measures.

**Water Quality:** Director Soucie stated per and polyfluoroalkyl (PFAS and PFOA) substances have been in the news lately. The substances are found all over the world and within humans. Many PFAS such as PFOA and PFOS have been phased out of production but still persist in the environment. CLCJAWA has been testing for PFAS and PFOA since 2006. The Agency continues to meet all current US/IL EPA drinking water regulations and will meet all future regulations.

Trustee O'Brien asked if PFAS and PFOA levels in the Lake will increase. Soucie said they have not increased since the Agency started to test for them in 2006.

Trustee Thorstenson asked what the Agency can do to proactively address PFAS and PFOA. Soucie stated the carbon in three of the twelve filter trains will be replaced in the near future. The Agency will monitor how much of an impact this has on PFAS and PFOA levels and then seek direction from the Executive Committee and Board of Directors.

**Awards:** Soucie reviewed a few of the multiple awards CLCJAWA has received over the years including financial awards, treatment awards, water quality awards and taste-test awards.

Mayor Hood asked Director Soucie what would have the biggest impact of CLCJAWA's ability to provide water. Soucie said a large water main break or an earthquake.

Trustee Thorstenson asked about companies polluting the Lake and its impact on CLCJAWA. Director Soucie reviewed the natural flow of the Lake and stated the Agency is constantly monitoring for pollutants.

Trustee Thorstenson asked about the carbon filters and how it relates to decarbonization. Director Soucie stated the two are not related. Decarbonization refers to air emissions. The carbon CLCJAWA uses is granular.

Trustee Balmes asked about security measures in place. Director Soucie provide some examples.

Mayor Hood thanked Director Source for the presentation.

2. Presentation by Brett Fritzler, Utility Supervisor Gurnee Public Works: Gurnee water distribution system update.

Utility Supervisor Fritzler thanked the Village Board for the opportunity to share information about the Village's water system. He started by sharing some information about himself and reviewing the agenda for the evening which included:

- Distribution History
- Current System Operation
- Challenges & Responses

Distribution History:

- 1928
  - Gurnee incorporated as a Village
- 1950
  - Increasing population & decreasing shallow well quality
- 1954
  - Contracted with Baxter & Woodman to conduct a water system feasibility study
- 1959
  - Water Tower 1(0.2MG) & Well 1(300gpm) constructed.
  - Served approximately 400 residents
- 1960
  - Gurnee annexed the industrial park in the northeast and reached an agreement with Waukegan to supply water
- 1972
  - Well 1 pump size increased from 300gpm to 500gpm
  - Population nearly six times that of 1930 and double that of 1950
  - Water shortages experienced during peak day demand
- 1973
  - Village enters into another agreement with Waukegan to supplement well water
- 1974
  - Well 2 (900gpm) drilled to meet demand of the new Heather Ridge subdivision
- 1975
  - Identified the need for a reliable long-term water source
  - Considered Waukegan & Lake County Public Water District
- 1977
  - Westside pump station and water main extension constructed
  - Blend Waukegan water with hard well water to meet demand
  - Tower 2 (0.5MG) constructed in Heather Ridge to increase capacity during peak demand times
- 1980
  - Pembroke subdivision planned; study for suitable supply conducted:
    - Drill an additional well at the future site of the Pembroke water tower
    - Bring Waukegan water from the industrial park to Pembroke

- 1987
  - Tower 3 (0.5MG) constructed in Pembroke
  - Tower 4 (2.0MG) on Northwestern Ave
  - Northside Pump Station at Fuller Rd and Boulders Dr  
6,600ft of water main installed to bring Waukegan water to Pembroke
  
- 1992
  - CLCJAWA begins supplying Lake Michigan water
  - Constructed Cemetery Rd Pump Station (~7.2MGD) and a 3.0MG ground reservoir
  - Retained interconnect with Waukegan for emergencies
  
- 2021
  - Identified need for water resiliency
  - Almond Rd Pump Station – secondary CLCJAWA source
  - Tower 5 (2.0MG) on Knowles Rd
  - Created pressure Zone 5

#### Current System Operation:

Supervisor Fritzler reviewed Gurnee's current system noting daily average flow has been trending down since 2006, with a few key exceptions. In Fiscal Year (FY) 21, there was a significant drop due to COVID, followed by a significant increase after COVID. FY23 returned to normal average flow and FY24 is anticipated to follow suit.

He next reviewed the flow of water throughout the Gurnee system. He reviewed the various pressure zones, water towers, pump station and pressure reducing valves (PRV) and how they work together.

#### Challenges & Responses:

He stated HB3739 required a lead service line inventory as well as a full lead service line replacement program. To inventory the Village's service lines staff used GIS records as well as information from connection drawing, permits and work orders. The result was no initial finding of lead service lines. However, there are 38 service lines of unknown materials. Staff will excavate around b-boxes at these locations to uncover the service line and determine its material.

Supervisor Fritzler then discussed the complexity of the Village water system and the fact it was developed over a period of time. Staff is currently examining the system from a holistic view to determine where efficiencies may exist. He also noted the current Supervisory Control and Data Acquisition (SCADA) software is almost 20 years old and will soon be unsupported.

He concluded the presentation discussing infrastructure funding noting except for the new tower and pump station on the west side of the Village the newest pump station and PRV's are 30 years old. Replacing or rehabilitating this infrastructure will take a significant investment. Due to the boom in the Village's growth in the 1990s and pipe life expectancy, a large spike in water main replacement costs is anticipated between 2055 and 2074. It would be ideal to smooth out the replacement schedule of these mains and eliminate more brittle cast iron earlier and to avoid overloading Village resources. That could be accomplished by implementing consistent rate adjustments to fund the capital projects. The service life of pipe materials is an approximation and ongoing condition assessments will occur allowing for an adaptive capital improvement plan. As staff works through the budget process, more information on capital and rate plans will be presented.

Trustee Thorstenson asked if a second interconnect with Waukegan towards the south has been explored. Supervisor Fritzler stated no.

Trustee Balmes asked about identifying water main breaks when they occur. Supervisor Fritzler stated sometimes these breaks can be detected through the current SCADA systems, other times they are reported by the public.

Mayor Hood thanked Supervisor Fritzler for the presentation.

It was moved by Trustee Balmes, seconded by Trustee Ross to adjourn the meeting.

**Voice Vote: ALL AYE: Motion Carried.**

Mayor Hood adjourned the meeting at 8:39 p.m.

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**Andy Harris,  
Village Clerk**