

Village Board Water Fund Workshop

April 19, 2017

7:00 p.m.

**Lincolnwood Community Development Department
Police/Fire Training Room**

- I. Call to Order
- II. Roll Call
- III. Discussion Regarding Alternative Potable Water Supply
- IV. Open Item
- V. Adjournment

Date Posted: _____ By: Carrie Dick, Executive Secretary



MEMORANDUM

TO: President Turry and Members of the Village Board

FROM: Timothy C. Wiberg, Village Manager

DATE: April 19, 2017

SUBJECT: Water Fund Discussion

Background

The Village currently purchases water from the City of Chicago (“Chicago”). The current 10 year agreement is set to expire at the end of 2018. Between 2008 and 2015, the City of Chicago has raised wholesale water rates by \$2.28 per 1,000 gallons, which has constituted a 149% increase. The Village’s policy has been to pass rate increases on to water customers. In response to Chicago’s rate increases, the Village began searching for an alternative water supplier. Staff evaluated options which included purchasing water from the City of Evanston, the Village of Skokie, and/or the Village of Wilmette.

Since 2015, Chicago has capped their water rate increases at up to 5% a year. The Village recently received notice from Chicago that effective June 1, 2017 the wholesale water rate would increase by 1.83% to a rate of \$3.88 per 1,000 gallons (an increase of \$0.07).

Evanston Study and Initial Offer

In 2012, the Village participated in a water transmission main study with the Village of Niles, Cities of Evanston, Park Ridge and Des Plaines, the Northwest Water Commission (comprised of the Villages of Arlington Heights, Buffalo Grove and Wheeling and the Cities of Palatine and Des Plaines), and the Northwest Suburban Municipal Joint Action Water Agency (made up of the Villages of Mount Prospect, Schaumburg, Hoffman Estates, Elk Grove, Rolling Meadows, Hanover Park, and Streamwood). The purpose of the study was to determine potential routes from the City of Evanston (“Evanston”) water treatment plant to the various potential new wholesale customers. The study identified possible routes along Golf Road, Oakton Street, and Touhy Avenue. The study ultimately concluded that a water transmission main would not be feasible along Touhy Avenue since a portion would need to be installed within Chicago. Due to Lincolnwood’s proximity to Evanston, staff began working with Evanston to evaluate making a connection with their south standpipe located at the intersection of Hartrey Avenue and Cleveland Street (just north of Oakton Street). At the conclusion of the study, most of the communities determined that the capital costs were too high to continue moving forward.

The Village worked with the City of Evanston to verify that a connection at Hartrey Avenue and Cleveland Street (just north of Oakton Street) would be feasible. Upon verifying this, in 2013, the Village received a water purchase offer from the City of Evanston with a proposed rate of approximately \$2.21 per 1,000 gallons, which at the time was \$0.67 less than the rate being charged by Chicago. Evanston based their water rate calculation on the American Water Works Association's ("AWWA") *M1 Principles of Water Rates, Fees and Charges Manual* ("M1 Manual"), which provides guidance for appropriately determining costs to wholesale customers for the cost of water. The proposed rate was based on the cost of production, depreciation of assets, and a return on rate for those assets.

Throughout the process, Evanston stated that as part of any contract they must construct and own any transmission mains that are built within Evanston's corporate limits that would be required to bring water to a new customer. Therefore, the Village would only be responsible to construct a transmission main from the Evanston border to the Village's existing pump station located at the intersection of Schreiber and Crawford Avenues.

The connection point to the Evanston system was originally proposed to be at either the intersection of Oakton Street and McCormick Boulevard or at the intersection of Howard Avenue and McCormick Boulevard. The main difference between the two options is the length of transmission main that would be located within Evanston. The calculation of the rate includes capital depreciation costs on the length of main that is within Evanston's borders. Therefore, the longer the length of water main located in Evanston, the more the Village would pay through its rate perpetually for depreciation and the return on rate, the calculation of which is described in detail on page 3. The cost of any infrastructure built outside of Evanston would be borne by the Village and would be paid for using debt service. At the expiration of the debt service, the direct cost of that infrastructure would be eliminated. For these reasons, it is in the Village's best interest to identify a connection point that uses as little of the Evanston system as possible.

Additional Alternatives

Changing potable water suppliers requires significant capital expenditure on behalf of the Village and requires a long term contractual commitment. For this reason, staff explored all options before making a recommendation to the Village Board. Below is a summary of the activities that have occurred since the initial offer from the City of Evanston in 2013.

In 2014, Evanston revisited their 2012 transmission main study including the Villages of Lincolnwood, Niles, Morton Grove, and Glenview and the City of Park Ridge. Ultimately, the Village of Glenview removed themselves from the study and in early 2015, the Village met with the remaining three communities to discuss the possibility of taking part in negotiations with the City of Evanston for water service. The conclusion of the updated study found that Lincolnwood was best served with a direct connection to Evanston further south due to the Village's geographic proximity to Evanston. Park Ridge ultimately removed themselves from the discussion and in late 2016, Niles and Morton Grove entered into a water purchase agreement with Evanston.

In late 2014, the Villages of Skokie and Lincolnwood met with the Village of Wilmette to discuss the possibility of purchasing water from them. The Village partnered with the two municipalities to perform an engineering evaluation of the feasibility of Wilmette selling water to Lincolnwood through Skokie. The evaluation, completed in July 2015, determined that it would cost \$86 million to \$100 million to make the necessary water plant and system

improvements for Wilmette to sell water to the two communities. Due to the high capital cost, it was determined by all of the parties to abandon this plan; however, Skokie indicated that they were working to complete an update to their water model and that there may be a way for the Village to purchase Evanston water through connecting into the Skokie distribution system.

In August 2016, the Village received a report from the Village of Skokie which evaluated the possibility of Skokie selling Evanston water to Lincolnwood. The value of pursuing this option is that there would be a lower amount of capital outlay required by the Village since a transmission main could be connected at the Village’s border with Skokie. Skokie indicated that the option would only be feasible if Niles and Morton Grove elected to purchase Evanston water by connecting into the Skokie system and if Skokie completed a process of dividing their system into two pressure zones. Skokie was unwilling to undergo the cost of dividing their system if Niles and Morton Grove elected not to purchase water from them. Ultimately, in December of 2016 Niles and Morton Grove elected to purchase water directly from the City of Evanston, so this option became unavailable.

Current Offer from Evanston

In late 2016, staff reached out to the City of Evanston to restart negotiations. Evanston provided the Village with an updated rate model, based on current asset valuation, and the amount of water that Lincolnwood currently purchases from Chicago. Evanston provided an updated rate of approximately \$2.34 per 1,000 gallons, which is \$1.53 less than the Chicago rate. This rate may fluctuate on an annual basis because Evanston is using a rate calculation model based on the M1 Manual (industry standard) which is updated annually based on the value of Evanston’s assets, actual costs of operating and maintaining the system, and the actual amount of water used by each wholesale customer. The final rate may also change based on the actual cost of constructing the transmission main in Evanston from their southern standpipe to the Village’s connection point at the Evanston border. The proposed rate includes three major components, operations and maintenance (“O&M”), depreciation of assets, and the return on rate. Table 1 describes how each of the components of the rate are broken out.

Table 1. Breakdown of Proposed Rate		
Category	Description	Portion of Rate
O&M	Includes all costs associated with operating and maintaining the Evanston system. Costs are broken out proportionally based on actual usage.	\$0.51
Depreciation	Includes deprecation of assets such as the water transmission plant, Evanston transmission mains (greater than 12-inches in diameter), and the transmission main dedicated to Lincolnwood. Shared infrastructure is divided proportionally by IDNR allocation of Lake Michigan water.	\$0.15
Return on Rate	Includes the cost of each wholesale customer’s share of making improvements to the Evanston system based on the value of those assets (items included in the Depreciation line) and is multiplied by the “Fair Value Rate” (10%) to cover debt service and provide a profit to the wholesaler.	\$1.68
Total Rate		\$2.34

Staff is also working with the Village’s engineering firm, Christopher B. Burke Engineering, Ltd. (“CBBEL”) to evaluate the possibility of making a connection at the same point as Niles and Morton Grove at the intersection of McCormick Boulevard and Emerson Street. Making a connection at this point would result in significant rate savings due to the fact that the pipe the Village would connect into has a direct connection to the Evanston water treatment facility. This means that there would be a reduction in the amount of infrastructure affected and therefore reduce the depreciation of assets and return on rate costs. This option would require a significantly larger up front capital investment by the Village to construct a transmission main to Emerson Street. The City of Evanston has expressed concerns regarding water pressure and potential utility conflicts with a connection at this point. Staff is working with the City of Evanston to further evaluate this option.

Transmission Main Capital Costs

CBBEL estimates the cost for constructing a transmission main to Oakton Avenue to be approximately \$7,314,000, including engineering costs. This cost includes a 25% contingency for construction and a 15% estimated budget for engineering to account for potential unforeseen costs. Connecting to the Evanston system at Oakton Avenue would require approximately 9,560 feet of 20-inch water main. A map of the current proposed route, which would be evaluated in a forthcoming route study, is attached to this memorandum.

Table 2 demonstrates the estimated savings the Village would achieve by purchasing water from Evanston compared to Chicago. The savings are based on an average usage of 1.5 million gallons per day (MGD) and assume that both wholesalers would increase the cost of their water by 2% per year.

Table 2. Estimated Annual Savings*					
	2019	2020	2021	2022	2038 (Debt Free)
Rate Savings to Village	\$832,524	\$849,174	\$866,158	\$883,481	\$1,212,830
Annual Debt Service**	\$464,200	\$464,200	\$464,200	\$464,200	\$0
Remaining Savings	\$368,324	\$384,974	\$401,958	\$419,281	\$1,212,830

*The rate that the Village would pay to Evanston is an estimate and may change based on the cost of the infrastructure.

**Debt service for the Lincolnwood portion of the transmission main and assumes a 2.5% interest rate.

Staff anticipates financing the project through the use of an IEPA low interest loan that will be paid over 20 years using the savings obtained from purchasing water at a lower wholesale rate. These loans are intended to be used for improvements to municipal water systems and are provided at an interest rate that is lower than what can be obtained in the bond market. The Village successfully utilized an IEPA low interest loan for the water meter replacement project conducted in 2008.

If the Village Board were to approve a contract for water purchase with Evanston, staff would recommend freezing the water rate for the first three years to customers and also use the remaining savings associated with the lower wholesale water rate to fund future improvements to the Lincolnwood water system such as replacement of water mains. The Niles and Morton Grove agreement includes an initial term of 40 years. It is anticipated that over the same timeframe, the Village would have a savings of approximately \$37.5 million (assuming 2% annual increases) compared to continuing to purchase water from Chicago.

Proposed Timeline

Table 2. Proposed Timeline		
Date	Milestone	Estimated Cost
May, 2017	Route Study Commences	\$95,400
Aug., 2017	Water Purchase Agreement with Evanston Executed	n/a
Feb., 2018	Phase II Engineering Commences	\$413,400
Nov., 2018	Construction Commences	\$6,805,200
Dec., 2018	Water Purchase Agreement with Chicago Expires	n/a
Spring, 2019	Construction Commences	\$6,805,200
Fall, 2019	Begin Purchasing Water from Evanston	n/a

Staff Direction

Staff is seeking direction from the Village Board on whether the Village should begin negotiations with the City of Evanston on a water purchase contract and solicit a proposal from the Village Engineer for conducting a route study.

Attachments

- Map of current proposed route

