

THE UNION WATER SUPPLY SYSTEM
JOINT BOARD OF MANAGEMENT
MINUTES OF SPECIAL MEETING
HELD MARCH 9, 2017 AT 9:30 AM
IN KINGSVILLE COMMUNITY ROOM - UNICO BUILDING

Members Present: Deputy Mayor MacDonald (Chair); Councillors Dunn, Verbeke - Leamington
Mayor Nelson Santos (Vice-Chair); Councillors Gaffan, Neufeld, Patterson - Kingsville
Mayor McDermott - Essex
Councillor Diemer - Lakeshore

Members Absent: Mayor Paterson, Councillors Hammond, Jacobs - Leamington

Staff Present: Andy Graf - Essex
Andrew Plancke, Shaun Martinho, Kevin Girard - Kingsville
Shannon Belleau - Leamington

OCWA Staff
Present: Dale Dillen

Associated
Engineering Staff Vincent LaPlante, Elia Edwards

Call to Order: 9:36 am

Disclosures of Pecuniary Interest: none

Reports and Correspondence

Report UW/10/17 dated March 6, 2017 re: UWSS Water Quality Masterplan (WQMP) Study - Presentation of Results to the UWSS Board

The Manager reminds members of the board that the purpose of the meeting is to present the results of the Water Quality Masterplan (WQMP) Study that includes a complete review of the treatment process including coagulation, disinfection and all aspects of treated water. He indicates that project team members from the retained consultant, Associated Engineering (AE), will be presenting the report through a Powerpoint™ presentation. The Manager also indicates that he is not looking for any type of endorsement or approval at this time but rather the information is being presented to the Board for information purposes in regards to future capital treatment works planning. The Manager then introduces Vincent Laplante and Elia Edwards from AE.

Elia takes the lead on the presentation. He notes that the treatment plant master plan work that UWSS and OCWA operations staff are undertaking is great for the Board as a

whole as it provides a better understanding of the assets and how to plan for the future. He confirms that other drinking water facilities, mostly in larger municipalities, are doing the same across Ontario. He indicates that there are three (3) technical memos to get through, but indicates that this is an open format and questions are welcome.

Technical Memo #1

Elia presents members of the Board with a summary of current and historical water quality data and identifies existing and future concerns, such as microbiological and other toxins. He provides the current rating for the UWSS facilities and shows a chart indicating a gap in the treatment plant's Clarification process. He notes that this seems to be the weakest part of the treatment process and suggests that there should be a focus area for investment/ upgrade.

The other areas of concern are microbial activity and the ability to treat for multiple types of microorganisms in the water and also states that the UWSS is below the guidelines for Geosmin, which is an indicator for taste and odor issues. He believes that continued monitoring is required for all processes. He also notes that the Ontario requirements for microbial treatment are lower than the USA EPA guidelines and Health Canada Guidelines and suggests UWSS look to those to guide future improvements for microbial disinfection.

There is a brief discussion regarding the level of barrier required in the industry regarding cryptosporidium. He notes that Ontario is only 2-log, while Canada is 3-log and USA is in the range of 2-5.5 log in the barrier approach. Elia notes that this project and the discussions today demonstrate to the MOE that the UWSS is taking reasonable steps to ensure the safety of our drinking water.

Elia also notes that UWSS is not operating at its rated capacity and whether that will change in the future is to be determined; the lower existing demand for water provides a buffer for the treatment capacity, which is good. He also indicates that future changes in the source water could potentially affect the way UWSS approaches treatment.

Technical Memo #2

Elia indicates that climate change could potentially affect the source water in the future but the actual range of such impact is currently unknown. He asks the question: Is it better to pay for changes to the system up front before climate changes affects are too great or is it better to wait until it is closer to the need? He asks the Board to consider this dilemma.

He then reviews the threats to water quality, the potential threats and the impacts on UWSS. Should additional funding to help source water be received from Federal, Provincial or local Government? He notes that the USA has made substantial cuts to their Great Lakes funding and yet millions of people share the source water. Therefore, how do we go forward to manage these risks?

The Manager reminds the Board members that UWSS has been involved with many source water/ algae monitoring programs and studies over the last several years to evaluate any of these risks to UWSS source water. The Board asks the Manager if letters

should be drafted to our neighbouring communities, including those in the USA, regarding the protection of our source water.

The Board then asks the Manager if funding should be set aside for improved lake intakes, such a deeper and further out into Lake Erie. The Manager indicates that currently UWSS has redundancy as the entire treatment plant can be fed on one intake if the other one should fail.

AE then explains the preliminary evaluation of treatment alternatives that was conducted as part of Technical Memo#2 in regards to Clarification, disinfection, and Taste & Odor/ Emerging Contaminants. They review water quality and treatment, operational considerations, environmental, public impact, design consideration, health and safety and cost. They then rated each issue for the UWSS and ranked them accordingly to determine a risk factor and which areas were considered weaker vs. stronger. The engineers ensured the Board members that this procedure was all done in conjunction with members of UWSS and OCWA staff.

Technical Memo #3

Elia indicates that if UWSS is to move forward with any new initiatives at the treatment plant all aspects must be looked at such as the site considerations, cost and size of footprint. Taste and odour will be continually monitored and they recommend getting a plan in place for to increase disinfection capabilities for cryptosporidium sooner rather than later. The other options could potentially be pushed out over ten (10) years.

The municipal staff present ask questions regarding pharmaceuticals in the water, as currently there is no plan in place to address this trending issue. The Manager states that there is no program in place for this particular issue, but future monitoring will be used to assess the treatment requirements for pharmaceuticals.

AE recommends some pre-treatment upgrades and pilot scale testing to better understand the raw water. They would like to determine if sediment Lake Erie water likes to float or sink, this data will then determine if UWSS should move over to dissolved air filtration (DAF) vs the conventional method currently in place.

There is a brief discussion regarding Ultraviolet (UV) technology and if this particular disinfection process would ever be beneficial at the Ruthven WTP. UV is being proposed for additional treatment of drinking water after it is filtered. This UV treatment would increase the UWSS' disinfection capacity from 2-log to 3-log for cryptosporidium. UV treatment equipment would be best placed within the reservoir for cost effective reasons.

The presentation then moves over to the possible costs involved in implementing any possible changes to the WTP. It should be noted that they present the material with a ten (10) year horizon.

There are some general discussions following the presentation regarding the financial aspect of the WQMP. The Manager notes that some of the ideas presented have been captured in his six (6) year capital plan, while others are beyond that specific horizon.

There is a concern about possibly making a big switch regarding any one aspect of the water treatment process. The engineers explain that any changes would be completed in controlled states. There is a brief discussion regarding the current time line to complete some of the pilot and bench scale testing.

No. UW-18-17

Moved by: Councillor Patterson

Seconded by: Councillor Gaffan

That the UWSS Water Quality Masterplan UWSS Board Workshop presentation is received for information.

Carried

Adjournment:

No. UW-19-17

Moved by: Councillor Verbeke

Seconded by: Mayor Santos

That the meeting adjourn at 11:58 am

Carried

Date of Next Meeting: April 4, 2017, 9:00 am at the Kingsville Community Room of the Kingsville Arena

/kmj