



The Corporation of the
City of Sault Ste. Marie

COUNCIL REPORT

November 29, 2021

TO: Mayor Christian Provenzano and Members of City Council
AUTHOR: Susan Hamilton Beach, P. Eng.
DEPARTMENT: Public Works and Engineering Services
RE: Appendix C 2021 11 29 - Pointe des Chenes Park - Water Treatment Upgrade.docx

Purpose

The purpose of this report is to provide Council with an update regarding the actions and steps taken by Transport Canada to address the water contamination issue and provide potable water to the Pointe Des Chenes day park and campground.

Background

At the April 12, 2021 meeting of Council, the report of the CAO was accepted as information with the following resolution:

“Resolved that the report of the CAO dated April 12, 2021 concerning Pointe des Chenes Campground Update and Next Steps be received and that staff be directed to continue to work with Transport Canada, the Ministry of the Environment, Conservation and Parks and Algoma Public Health to ensure the timely and sustainable provision of potable water for the campground and day park and to report further to Council on recommendations for the future of the campground once the provision of potable water has been established.”

Several meetings were held with the Ministry of Environment, Conservation and Parks (‘MECP’) and Algoma Public Health (APH), Transport Canada (‘TC’) and City representatives. City representatives clearly expressed Council’s desire to have potable water to the site. It is our understanding that Transport Canada has been working with its consultant Arcadis to meet the objective of enhancing the operations of the operating well (known as PW1) and to restore a potable water supply to the day park and campground.

Analysis

Within the report “PW1 Water Well Treatment System: Benzene/PFAS Filtration Upgrade 66% Design Brief” Arcadis described the issue and the preferred solution was summarized and included here. The issues that were identified in the existing water treatment system were the insufficient removal of per- and

polyfluoroalkyl substances ('PFAS'). In order to address these issues, Arcadis completed a treatment optimization study (originally written in February 2020) which provided an overview of the options for improving treatment at PW1. The options were developed based on the optimization study and site investigations and were presented to Public Services and Procurement Canada ('PSPC'), TC and the City of Sault Ste. Marie. The selected option involves granular activated carbon ('GAC') filters and ion exchange ('IX') filters for reducing the target contaminants in the raw water as well as a similar small system for treating the backwash waste water treatment system ('BWWTS').

The proposed filtration upgrade includes the following components:

- Two (2) duty and two (2) standby GAC filters for benzene removal; and
- Two (2) duty lead-lag IX filters for PFAS removal.

The BWWTS will be used to treat the process liquid waste such that it can be disposed as non-hazardous waste and includes the following components:

- One (1) new buried concrete tank or above ground steel tank to store BWW.
- One (1) 5-micron bag filter for removing particulate in the BWW.
- One (1) duty GAC filter for benzene removal.
- One (1) duty ion exchange filter for PFAS removal; and
- One (1) new buried concrete tank or above ground steel tank (and one optional) to store treated BWW before disposal.

The new water treatment GAC and IX filters will replace the existing pilot GAC filters; however, due to space limitations and potential of vandalism, it was determined that additional equipment will be installed as a packaged system inside a shipping container (seacan) along with the BWWTS located adjacent to the existing building.

In association with this project, the City understands Transport Canada's work plan has included:

- Geotechnical work in the areas of the proposed above ground storage tanks and the seacan treatment plant;
- Additional groundwater and surface water sampling program;
- Completed the design and tendered for the treatment facility upgrade;
- Awarded the tender to Milestone Environmental Contracting Inc. (November 3, 2021)

The construction schedule has been provided by TC and is as follows:

- November-December 2021: Excavation, Installation of the Concrete Pad and Underground Storage Tank
- December – March 2022: Assembly of the System (ie. seacan – constructed offsite)
- March 2022: Delivery of the seacan treatment system to the site
- April/May 2022: commissioning of the system and training
- Completion date is *before* the May long weekend.

Based on the above noted schedule, it is intended that potable water will be provided to the site before the long weekend in May, 2022. Testing and proof that the water is potable will be ongoing once installed.

Separate to the design of the enhanced water treatment plant, City staff have discussed the design and installation of a pressure tank adequate for the servicing of the day park facility as the future of this area is determined. As the treatment plant is designed by Arcadis they have been asked to provide a cost estimate for the provision of a tank to serve the day park.

As Council is yet to determine the future operation of the campground, the inclusion of a pressure tank to serve the campground portion of the site is yet to be cost or specified. The necessity to provide a pressure tank to the campground development may be worked into future plans.

Financial Implications

The upgraded treatment plant facility is the responsibility of Transport Canada with no financial responsibility of the City. In order to provide a pressure tank for the day park, a supplementary item has been included in the 2022 budget deliberations at a value of \$75,000. This includes the installation of two (2) pressure tanks and SCADA upgrade as well as consultation, decommissioning, etc. The PUC operates the water treatment plant for the City.

Strategic Plan / Policy Impact

This report ties to the improvement of existing infrastructure as well as may positively impact quality of life advantages as the Pointe Des Chenes Park is the only beach facility located within the municipal boundary along the shore of Lake Superior.

Recommendation

It is therefore recommended that Council take the following action:

Resolved that the report of the Director of Public Works dated November 29, 2021 be received as information.

Respectfully submitted,

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Director, Public Works

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