



INFORMATION ONLY COUNCIL REPORT

To: Mayor and Council

Date: October 24, 2023

From: Paul Gipps, CAO

File No: 5600-19

Subject: **Rose Valley Water Treatment Plant Update**

Report Prepared by: Allen Fillion, Director of Engineering & Operations

STRATEGIC AREA(S) OF FOCUS

Invest in Infrastructure – We will invest in building, improving and maintaining infrastructure to meet the needs of, and to provide a high quality of life for, current and future generations.

Foster Safety and Well-Being – We will pursue through direct action, advocacy, and collaboration with local and regional service providers, investments in community health, needs-based housing, emergency preparedness, policing, and other services that foster safety and well-being in West Kelowna.

BACKGROUND

The Rose Valley Water Treatment Plant is the largest construction project ever undertaken by the City of West Kelowna with a budget of up to \$75M. Once complete, the water treatment plant will provide clean drinking water to approximately 19,650 residents living within the Lakeview, Sunnyside/Pritchard and West Kelowna Estates Water Systems. This multi-year project consists of four project phases: design, earthworks, treatment plant and reservoir construction, and transmission mains construction. The design and earthworks phases are complete, the treatment plant is being commissioned, and the transmission mains construction is on-going.

Water Treatment Plant and Treated Water Reservoir Commissioning Update

The tender for the construction of the treatment plant and treated reservoir closed on February 18, 2021 and was awarded to Maple Reinders Constructors Ltd. Construction has continued since spring 2021 and despite delays associated with the recent wildfire the majority of construction, including process delivery is now complete. Final disinfection

work of the various components of the new plant is currently underway. Once disinfection is complete and we have Interior Health Authority approval we will begin what is referred to as a commissioning 28-day test whereby the plant must operate free of any major errors for 28 days, the last 7 of which must be consecutive. This is the process for final confirmation that the plant is operating as intended to confirm the contractor has met their obligations.

During this process water will be fully treated through the new facility and will be delivered to residents in the Rose Valley – Lakeview system. This is expected to begin before the end of November. Residents will receive water exceeding Federal and Provincial Drinking Water Guidelines. The Rose Valley – Lakeview system serves an estimated 12,850 people.



Figure 1. Rose Valley Water Treatment Plant



Figure 2. Rose Valley Water Treatment Plant



Figure 3. Filter Tanks



Figure 4. Dissolved Air Flotation Tank & Skimmer



Figure 5. Dissolved Air Flotation Tanks



Figure 6. Filter Tanks

Transmission Mains Update

To provide the West Kelowna Estates and Sunnyside/Pritchard neighbourhoods with treated water from the future plant, two transmission mains, valving and pump alterations, and connections to existing reservoirs are required to be completed. These large diameter mains, 450mm and 500mm, total nearly four kilometers in length and will deliver water from the new treatment plant to existing water storage reservoirs in the distribution system. These mains will deliver safe drinking water to approximately 6,800 users.

The tender for the transmission mains closed on June 14, 2022 and was awarded to Bluepoint Construction Ltd. Construction started late summer 2022 concurrently on both the Westlake Road and Menu Road locations. Although delays have been experienced related to the recent wildfire, significant process has been achieved.

West Kelowna Estates Transmission Main

The West Kelowna Estates Transmission Main has been installed and the contractor is currently in the process of disinfecting the main to prepare it for potable water. A valve kiosk and control system will be installed, and the piping will be connected to the reservoir cell. This work is expected to be completed by the end of the year and residents on the West Kelowna Estates system will then be connected to the Rose Valley system and will receive fully treated water from the new plant exceeding Federal and Provincial Drinking Water Guidelines.

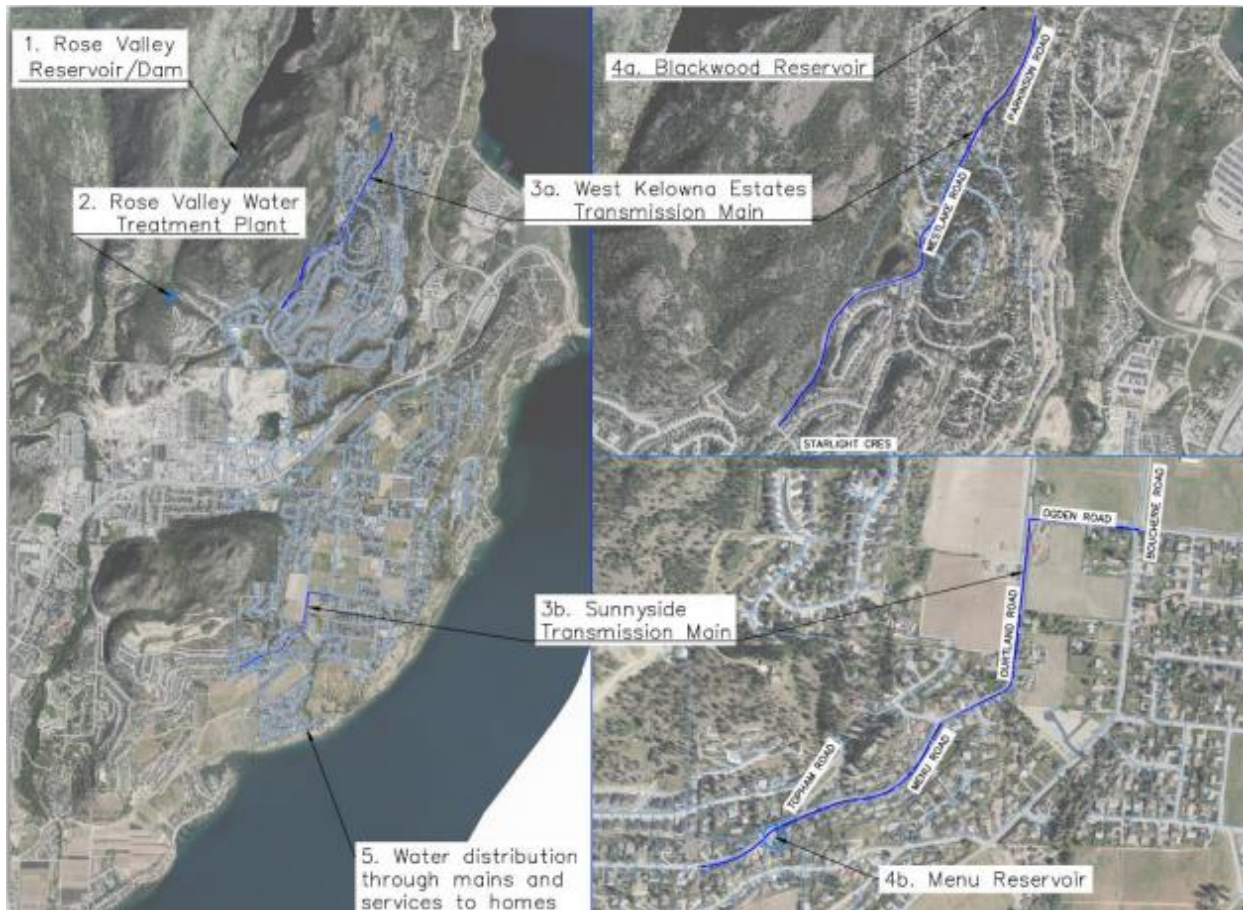


Figure 7. Transmission Mains Locations

Sunnyside/Pritchard Transmission Main

The Sunnyside/Pritchard Transmission Main has been installed. Work on the pumpstation and reservoir remain to be completed. The Menu Road pumpstation will require significant improvements to replace the source water from Okanagan Lake to the Rose Valley system. The Menu Road station currently receives water from Okanagan Lake and distributes it to three other water storage tanks in the system. This work is expected to be completed in spring 2024. While that work is being completed, the contractor will install a temporary connection to the reservoir from the new transmission main to supply water from the new treatment plant prior to the end of the year. Residents on the Sunnyside/Pritchard system will receive fully treated water from the new plant exceeding Federal and Provincial Drinking water Guidelines by the end of the year.



Figure 8. Menu Road Pump Station



Figure 9. Transmission Mains Construction on Westlake Road

Water Main Flushing

Significant efforts were made since spring 2023 to flush as much material as possible out of the existing pipe network to avoid future advisories once the new plant is operational. However, the firefighting efforts related to the McDougall Creek wildfire event re-introduced significant sediment load into the pipe network. Additional testing and flushing will be required at times, which will need to continue when the plant opens.

Communications

A project information sheet is attached to this report and will be sent to the City's e-subscribers, posted on social media and promoted on other City channels.

When Phase 1 water users are confirmed to be served by the new plant, widely broadcast communications will occur, which includes news releases, newspaper ads, notice to e-subscribers, social media posts and more. This is anticipated to occur prior to the end of November.

A household mailer will also be sent to Phase 1 property owners to confirm they are successfully served by the new Rose valley Water Treatment Plant.

The same communication approach will apply to Phase 2 water users. This is anticipated to occur prior to the end of December.

At any time, if a resident is unsure if their household is being served by the new plant, please call City Hall at 778-797-1234 or e-mail capitalprojects@westkelownacity.ca.

You can also view the service area map at westkelownacity.ca/waterservicesmap

FINANCIAL IMPLICATIONS

The total project budget for all associated works for the water treatment facility is up to \$75M. Despite challenges related to supply chain, labour shortages, and the McDougall Creek wildfire the budget projects to be within this value.

REVIEWED BY

Trevor Seibel, Deputy CAO

APPROVED FOR THE AGENDA BY

Paul Gipps, CAO

Powerpoint: Yes No

Attachments:

1. Rose Valley Water Treatment Plant Project Update Sheet