

# Report to Council



**Date:** April 1, 2019  
**File:** 1880-01  
**To:** City Manager  
**From:** Kevin Van Vliet, Utility Services Manager  
**Subject:** Water Utility 2019 update

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## **Recommendation:**

THAT Council receives for information, the report from the Utility Services Manager dated April 1, 2019, pertaining to an update on the City water utility.

## **Purpose:**

**To inform Council about recent and upcoming activities that affect the Kelowna water utility, its customers, and water rates.**

## **Background:**

The City of Kelowna water utility provides water for potable use and firefighting to more than half of the City's population. Three large Improvement Districts and about two dozen other small water providers service the rest of the City. In addition to continuing to provide quality, reliable water to over 70,000 residents, city staff have been extremely busy over the last couple of years with the integration of the South East Kelowna Irrigation District (SEKID), the Auditor General's report on the Kelowna water utility, implementation of a new asset management system and two challenging spring freshet seasons that resulted in the utility's first water quality advisories in 20 years.

### SEKID and SOMID Integration

Bringing potable water that consistently meets Canadian drinking water quality guidelines to residents in southeast Kelowna was a main driver of the SEKID integration. This is being accomplished by extending the City's water system by constructing a new potable distribution system into southeast Kelowna. Construction is progressing on schedule and we can expect to see a lot of construction activity in 2019 and 2020. This includes 82 km of new pipe, 3 new reservoirs, 16 new pressure regulating stations and 3 new or modified pump stations for a total investment of \$98 million. As construction

progresses, the new facilities will be commissioned and operated by City staff. The 2019 operating budget was increased to fund operations of the expanded system.

As an entity, SEKID officially dissolved on June 4, 2018. SEKID was a significant-sized operation and the integration has turned out to be a unique challenge for staff. Administrative transfer of the operation is ongoing and is expected to be complete at the end of 2019. Integration of SEKID operations is also ongoing and will also be complete at the end of this year.

In addition to merging operations, staff are assessing existing SEKID infrastructure to develop an asset management strategy and determine capital needs. The SEKID system, which will transition to a non-potable irrigation system, is old but well-maintained given SEKID's limited operating budgets. Fire flows in rurally serviced areas will remain off the old irrigation system. The City will likely incur further operating costs to comply with confined space entry and dam management issues. These will be addressed in 2020 once we fully inventory existing assets.

By 2021 it is expected that all aspects of the SEKID system and operation will be merged into the City water utility and both domestic and irrigation water supply will be a seamless part of City of Kelowna utility operations.

The Phase 1 Kelowna Integrated Water project also includes bringing adequate supply for irrigation to the South Okanagan Mission Irrigation District (SOMID) customers. SOMID is a non-potable irrigation system serving a dozen large properties on the south slopes of the City. It is scheduled for dissolution on January 1, 2020, and the system integrated with the City water utility at that time. Capital works are planned for 2019 that will assure continuous irrigation water service to the remaining agricultural customers of SOMID. Prior to dissolution, the City three wells and a dam operated by SOMID will be decommissioned. Most of the capital costs of this integration project are included in the Water Integration Project costs but some costs will be recovered from the benefiting agricultural land owners of SOMID.

### Area Based Water Management

As part of long term infrastructure planning, staff have initiated a Kelowna Area Based Water Management Planning process that coordinates water supply, flood protection, wastewater and ecosystem preservation. The City is approaching area based water management within the context of other City and Regional plans. Two key external partners are the Regional District of Central Okanagan and the Okanagan Basin Water Board, with some high-level participation from the Province.

### AGLG Audit

In March 2018, the Auditor General for Local Government published "Local Government's Role in Ensuring Clean Drinking Water – City of Kelowna", which provided the results of their audit of the Kelowna Water Utility. The document stated that "Overall this was a positive audit, where we identified a number of strong practices as well as some areas for improvement." Of the 15 recommendations included in the audit, seven have been completed and seven are in progress. Only one, "...improve its water conservation and demand-management efforts..." has had limited additional attention in 2018 due to staff workload.

The audit also highlighted that the City Water Utility is not yet fully recovering the cost of infrastructure renewal. Our infrastructure is deteriorating at a rate faster than it is being renewed. This adds pressure on water rates to ensure that the system is sustainable. The Capital Plan proposes significant increases in funding for capital renewal beginning in 2023. Water rate increases should be made gradually to reduce the risk of rate shock to our users.

### Agricultural Rate Structure

With the SEKID integration, the City needs to make significant bylaw and policy changes to accommodate the non-potable irrigation system by 2021. An initial consultation with the agricultural community occurred in the winter / spring of 2018 and was very informative for staff, however further work and engagement with this group is necessary. Council fixed the water rates for SEKID customers through 2020 to allow for further consultation to help provide direction on the following:

1. Irrigation rate structure. On what basis (e.g. area of land, volume used, etc.) will users of the irrigation system pay for their water and on what basis might be defined "agricultural use" for agricultural rates?
2. Irrigation revenues. How will Council target irrigation revenues to set irrigation rates?
3. Growth. How will the City regulate or address demand for new / additional users to the irrigation system?

Further consultation will occur in the fall of 2019. Staff will work on bringing forward recommendations for an updated Water Regulation Bylaw in 2020.

### Water Meter Replacement Program

The City has approximately 17,000 water meters, many of which were installed over 20 years ago and are nearing the end of their service life. In preparation for a large meter replacement effort, staff have sourced new automated meter reading technology which moves away from the current labour intensive manual reading system. The automated meter reading system will use an established local cellular network to report usage to the Utility on a daily basis. These meters are more reliable, efficient and resilient than the current system or other meter reading solutions and provide timely data that allow the utility to manage our system more effectively and provide customers with more timely consumption information. This system is expected to be particularly valuable for large water users in the industrial and agricultural sectors.

2019 will see the new water reading meter system implemented at a couple hundred locations to prove the technology in our local setting and develop the link with the City's utility billing software. Full implementation of the metering system will take place over six years beginning in 2020. This meter technology will be installed for all Southeast Kelowna customers prior to 2021 billing.

### Water Conservation

The City's main driver for water conservation is the increasing block rate structure, which is proving to be a very effective strategy. The Utility is piloting a more intensive water irrigation training program for irrigation contractors to improve the water consumption performance of landscaping within the city. We are leading an effort to make this higher level of training an industry standard in the Okanagan Valley. Implementation of the automated meter reading program, and the resulting customer access

to water information, is expected to have a significant impact on water consumption patterns, efficiency and leak reduction.

### Energy Management

In 2018 staff commissioned an energy audit for water and wastewater infrastructure. The audit suggested some relatively minor improvements to pumping infrastructure that we will pursue over the coming years. The report also highlighted technical changes that may allow for the generation of energy at some of our pressure reducing stations. Staff will begin to investigate these opportunities over the next couple of years as time permits.

#### **Internal Circulation:**

Divisional Director, Infrastructure  
Infrastructure Engineering Manager  
Utility Planning Manager  
Senior Engineer- Infrastructure  
Financial Planning Manager  
Revenue Supervisor  
Communications Consultant

#### **Considerations not applicable to this report:**

**Legal/Statutory Authority:**

**Legal/Statutory Procedural Requirements:**

**Existing Policy:**

**Financial/Budgetary Considerations:**

**Personnel Implications:**

**External Agency/Public Comments:**

**Communications Comments:**

**Alternate Recommendation:**

Submitted by:

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**Approved for inclusion:**



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cc:

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