

Report to Council



Date: February 13, 2023
To: Council
From: City Manager
Subject: Water Security Plan
Department: Utility Services

Recommendation:

THAT Council receives for information, the report from Utility Services dated February 13, 2023, with regard to the Water Security Plan (formerly Area Based Water Management Plan) update,

AND THAT Council adopt the nine (9) water related Principles described in this report to guide development of a Water Security Plan,

AND THAT Council instruct staff to develop a draft Water Security Plan for public engagement and input prior to final Council review and adoption.

Purpose:

To consider principles that will be used to guide the development of a Water Security Plan.

Introduction

In 2019, an Area Based Water Management Planning process was initiated with the goal of developing a strategic approach to water and watershed management to protect the City's water supply. The City recognized that water management is regional in nature with practices that extend well beyond its jurisdiction. The plan examines the City's organizational needs, improve our best management practices in our various operations and policies, and spend our funds effectively and efficiently. The plan was a key component of ongoing efforts to support the Kelowna Water Integration Plan (KWIP) at that time.

Improving watershed management was a key recommendation from the 2017 Value Plan towards an integrated water supply, the Kelowna Water Integration Plan, as a requirement of the Ministry of Municipal Affairs. In addition, a 2018 provincial audit of water supply recommended that the City undertake area-based water management planning even though many of the current water purveyors are independent of the City and fall under provincial control. Also, in 2018, the Medical Health Officer for Interior Health recommended area-based water management planning to protect water quality.

Work has proceeded on the plan for over two years and the preliminary work (Stage 1) is nearly complete. This work has produced some draft goals and principles for existing and new sectors in the City.

Background

The City's future water plans require that Okanagan Lake remains a high-quality source of water. Like many watersheds, the Okanagan is at risk of impact from events linked to climate change: fires, floods, droughts, heat domes, atmospheric rivers, and unseasonable freshets. Water quality degradation risks can also come from pollution, recreational activity, development pressure, removal of natural systems and poor wastewater practices.

Stage 1 of our plan involved a review of the City's administrative and operations responsibilities, and was developed by staff who were involved with the thorough review of the City's current approach to water management. Six 'sectors' that impact water quality, supply needs, and funding were identified: Water Supply, Wastewater, Stormwater, Environmental Flow Needs, Natural Asset Systems and Source Water Protection. Each sector's roles and responsibilities were reviewed and analyzed by considering strengths, weaknesses, opportunities, and threats (SWOT). The result was a thorough assessment of risks and liabilities that potentially impact levels of service and public safety.

External experts and stakeholders were asked to review the Stage 1 work and City's practice in context with BC-wide strategies under consideration involving water, including the "Watershed Security Strategy", a "BC Flood Strategy" and the "Climate Change and Adaptation Strategies". In turn, City staff have participated in providing feedback to the Provincial strategy development work and establishing the foundation for future partnerships with various Ministry representatives. Through this dialogue, the need for a dedicated City of Kelowna Water Security Plan emerged.

Discussion

Following a successful implementation of the new drinking water system to rural users in Southeast Kelowna, the City should now look to develop new plans to securing a sustainable water supply to meet the needs of our community into the future.

Securing water into the future starts with the understanding that:

- We rely on water for health, fire protection, agriculture, and our community needs.
- We rely on our surface waters throughout the valley for recreation.
- We share water with natural ecosystems and wildlife.
- Water is a common thread that weaves together our cultures and community values.

Ensuring a sustainable water supply to maintain a healthy community will continue to be a challenge. The City has several capital and infrastructure plans to manage and service our community with high quality drinking water and a non-potable supply for irrigation in southeast Kelowna. There are other elements that compete for, rely on, or impact our access to a safe water supply. The consequences of not paying attention to these external factors can lead to such things as higher treatment costs, more shut-downs, water shortages, damage to the environment, unnecessary permitting needs, water quality advisories, and reduced access to other water supplies. Known challenges to ensuring safe, resilient, affordable, and sustainable water supplies across the city include:

- Climate change and human activities that threaten the water quality of Okanagan Lake, potentially triggering filtration infrastructure with costs in the hundreds of millions of dollars.
- The acquisition of the non-potable supply has increased the City’s scope of service, quantity of assets, and substantially increased the City’s financial liability.
- Managing the risk of water system cross contamination.
- Ongoing changes to regulations, permitting and policies around water are changing from past practice, including the addition of consideration of indigenous knowledge.
- Adequately resourcing necessary water licensing, water permitting, regulatory shifts and adapting to a quickly changing climate.
- Having adequate resources and preparation to respond to Provincial strategies that are underway to address sustainable funding and response to droughts, floods and fires.

Our approach must start with protecting Okanagan Lake. By taking a more holistic approach to water security, we can better manage the factors that impact our lake water quality. With this, we reduce the probability of unnecessary impacts and costs to our community.

The Stage 1 process is the beginning of a Water Security Plan. Through the work to date some fundamental draft principles are evolving that are core to development of a final Water Security Plan. Before drafting a Water Security Plan for community engagement and ultimately Council adoption, adoption of some core principles will act as a compass to guide plan development.

The proposed Guiding Principles in Table 1 are recommended to steer the development of the Water Security Plan.

Table 1. Guiding Principles – Water Security Plan

Sector	Principle
Water Supply	1. All residents and water users in the City have a safe, affordable, resilient and sustainable supply of high-quality drinking water and a reliable supply of water for agriculture.
Wastewater	2. Protect Okanagan Lake, our human health, and our environment through efficient collection and effective treatment of wastewater.
Stormwater	3. Stormwater is effectively managed without negatively impacting riparian areas, infrastructure, property, or Okanagan Lake. 4. The community is resilient and resistant to lake and creek flooding.
Source Water Protection	5. Okanagan Lake and upland watersheds remain a source of high-quality water.
Natural Assets & Systems	6. Account, protect, restore, and enhance natural systems that make up our asset inventory and increase environmental resiliency.
Environmental Flow Needs	7. Assure that the quality and quantity of water is available to support a healthy aquatic ecosystem.

Governance and Partnerships	8. Indigenous knowledge, practice and permitting is effectively incorporated into water decision processes. 9. The City works in partnership with other water providers and government agencies to ensure water security.
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Next Steps

With a set of guiding principles adopted by Council staff will:

- Engage with the community and stakeholders to provide input on a draft Water Security Plan by September 2023.
- Return to Council with the draft Plan for final review and adoption by the end of 2023.

Internal Circulation:

Utility Services
Infrastructure Delivery
Partnership Office
Communications

Considerations not applicable to this report:

Legal/Statutory Authority:

Legal/Statutory Procedural Requirements:

Existing Policy:

Financial/Budgetary Considerations:

External Agency/Public Comments:

Communications Comments:

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