
MEETING TYPE: Regular Council Meeting
MEETING DATE: May 21, 2024
AUTHOR: Nick Van Dalen, Engineering Technician I
DEPARTMENT: Utilities
ITEM TITLE: 2024 Water Conservation Plan
DESCRIPTION: Review of the 2024 Water Conservation

PURPOSE

To consider adoption of the 2024 Water Conservation Plan.

RECOMMENDATION

THAT the 2024 Water Conservation Plan attached to the Report to Council dated May 21, 2024, be adopted;
AND THAT the task of developing Terms of Reference for an Agricultural Irrigation Usage Plan, as referenced in the 2024 Water Conservation Plan, be referred to the Water Services Advisory Committee.

EXECUTIVE SUMMARY

Using less water in communities has many benefits, including reduced operational, maintenance, and infrastructure sizing costs. As climate continues to change it will be important to continuously monitor our own water consumption and actively seek out ways to improve water efficiency. During times of prolonged drought, our agricultural sector will be the most vulnerable and it is prudent to consider initiatives now to protect ourselves in the future. Water conservation plans are effective means for establishing community baseline water consumption behaviours and identifying opportunities to both conserve water demand while ensuring adequate supply.

The 2024 Water Conservation Plan is intended to provide strategic direction for water conservation opportunities while securing long-term, resilient water supplies for our community; it is not intended to be used as a Water Scarcity Plan. The plan examines various supply and demand side management initiatives specific to the District and evaluates their relative effectiveness using multi-criteria analysis. All water savings realized by water conservation efforts should be reserved to help lessen the impacts of climate change and drought. The most effective demand side management strategies are recommended to begin implementation within the next 3-5 years, which include:

- Agricultural Irrigation Usage Plan to analyze:
 - o Efficient Watering Systems
 - o Variable Rate Structure
 - o Tensiometers
- Variable Rate Structure (Non-Agricultural customers)
- Water Meters Fixed Network Leak Detection Program
- Distribution System Leak Detection Programs; and

Together, these water conservation strategies project a 355ML reduction in annual water consumption. It is not recommended to explore water conservation initiatives that target the agricultural community until a deeper understanding of their requirements is developed through an Agricultural Irrigation Usage Plan. The Agricultural Irrigation Usage Plan will also be used to analyze alternate water conservation initiatives and water scarcity strategies. The terms of reference for the Agricultural Irrigation Usage Plan should be developed with the Water Service Advisory Committee to ensure it captures comments from members of our agricultural community.

Similar to above, the top supply side management strategies are recommended to begin implementation within the next 3-5 years, including:

- Removing Beaver Lake Obstruction
- Water Management Plan
- Automated Outlet Valve (Beaver Lake); and

It is estimated that these initiatives would provide an additional 1,766ML of annual water supply and 6,500ML of additional water storage. Alternative supply and demand side are initiatives are recommended to be explored over the next ten to twenty years.

DISCUSSION/ANALYSIS

The Water Conservation Plan aims to assess ways for the community to reduce water usage and potentially increase water supply. The plan explores various initiatives but only recommends those that are considered practical and may have a significant impact on water conservation. Additionally, a Council endorsed Water Conservation Plan is crucial for seeking grant funding for water system improvement projects.

Communities that are waterwise tend to pay less for operations, maintenance, and infrastructure. Being waterwise helps ensure water availability to all District water customers, especially during times of drought. The plan is also meant to prepare and enable the community to manage through the compounding effects, resulting from climate change.

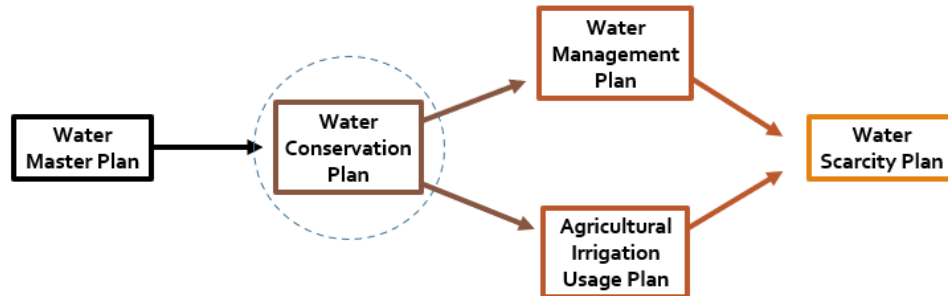
In March 2023, the draft WCP underwent its initial presentation to both Council and the Water Service Advisory Committee (WSAC). However, the agricultural community indicated further consultation was warranted. This led to subsequent revision of the Water Conservation Plan through various discussions with local agriculturalists. A series of workshops also ensued, including the District-led Water Availability Workshop, irrigation workshops facilitated by the Lake Country Farmer's Institute, and the Decoding Drought hosted by the Province. Attached is a detailed summary of the water availability workshop, comments/questions subsequently submitted, and answers the District was able to provide.

Collaborative efforts culminated in the current revision, the 2024 Water Conservation Plan. The WSAC recommended the adoption of the 2024 Water Conservation Plan by Council on March 22nd, 2024.

The WSAC also recommended that a term of reference be developed for an Agricultural Irrigation Usage Plan (AIUP). The AIUP is intended to establish best management practices that ensure water efficient farming strategies are in place to support a drought resilient community. The plan is intended to be a collaborative document undertaken by the District alongside local farmers, professional agrologists, and appropriate subject matter experts. Elements of the AIUP would include identifying water-efficient farming practices, examining water allocations and scheduling for farming purposes, developing education and outreach programs, and prioritizing crops that would be especially susceptible to drought. Although drought mitigation is a part of the AIUP, the plan is

not intended to be a Water Scarcity Plan. A Water Scarcity Plan would partially rely on findings of the AIUP to establish contingency plans for multi-year drought scenarios:

Sequence of planning documents



APPLICABLE LEGISLATION, BYLAWS AND POLICY

On May 16, 2023, Council formally approved the 2023 Water Master Plan. One of the primary objectives of the 2023 Water Master Plan is to complete a Water Conservation Plan and subsequently following through on the proposed recommendations. Council endorsed Water Conservation Plans are increasingly being requested to be included for grant funding opportunities. Many large capital projects outlined in the Water Master Plan require grants as part of their funding strategies.

IMPACT ON INFRASTRUCTURE, SERVICES AND STAFF CAPACITY (if applicable)

Adoption of the 2024 Water Conservation Plan should have minimal impact of staff capacity as many of the initiatives are currently underway or established under our best management practices.

FINANCIAL IMPLICATIONS

☐ None ☒ Budget Previously Approved ☐ Other (see below)

CONSULTATION (Internal referrals, External Agencies, Committees, Stakeholders)

The 2024 Water Conservation Plan has been reviewed and endorsed by the Water Service Advisory Committee (WSAC).

On March 22, 2024 the WSAC moved and seconded

“THAT the Water Services Advisory Committee recommends that Council adopts the revised 2024 Water Conservation Plan

AND THAT a terms of reference be developed for the Agricultural Irrigation Use Plan and reviewed with the committee”.

COMMUNICATIONS (if applicable)

N/A.

ALIGNMENT WITH COUNCIL STRATEGIC PRIORITIES

- ☐ Create and Support Opportunities for a Healthy, Active and Inclusive Community
- ☒ Create Infrastructure That Meets Community Needs
- ☐ Encourage Growth of the Downtown Core
- ☒ Ensure Sustainable Water Service Delivery for the Community
- ☐ Explore Opportunities to Engage With Regional Local Governments for the Betterment of the Community
- ☐ Honour Reconciliation by Strengthening Relationships and Inclusiveness With Our Indigenous Partners
- ☐ Identify and support improvements to the Development Process

- ☐ Implement the Agricultural Plan
- ☒ Preserve, Protect and Enhance Our Natural Environment
- ☐ Secure long term wastewater service delivery for our community
- ☐ Support Opportunities to Diversify Lake Country's Tax Base

ALIGNMENT WITH MASTER PLANS

- | | |
|--|--|
| <input type="checkbox"/> Agricultural Plan | <input type="checkbox"/> Official Community Plan |
| <input type="checkbox"/> Climate Action Charter | <input type="checkbox"/> Parks & Recreation Master Plan 2019 |
| <input type="checkbox"/> Housing Needs Report | <input type="checkbox"/> Sanitary Sewer System Map |
| <input type="checkbox"/> Liquid Waste Management Plan Stage 1/2 Report | <input type="checkbox"/> Transit Future Plan-Central Okanagan Region-DRAFT |
| <input type="checkbox"/> McCoubrey Plateau Area Structure Plan | <input type="checkbox"/> Transportation for Tomorrow |
| <input type="checkbox"/> Mobility Master Plan | <input checked="" type="checkbox"/> Water Master Plan |

OPTIONS

- A. THAT the 2024 Water Conservation Plan be adopted.
AND THAT a terms of reference for creation of the Agricultural Irrigation Usage Plan be deferred to the Water Service Advisory Committee.
- B. THAT the 2024 Water Conservation Plan be adopted with the following amendments.
AND THAT a terms of reference for creation of the Agricultural Irrigation Usage Plan be deferred to the Water Service Advisory Committee.
- C. THAT the 2024 Water Conservation Plan be referred back to staff for revisions as determined by Council.

Respectfully Submitted,
Nick Van Dalen, Engineering Technician I

Report Approval Details

| | |
|----------------------|---|
| Document Title: | 2024 Water Conservation Plan.docx |
| Attachments: | <ul style="list-style-type: none">- Attachment A-2024 Water Conservation Plan.pdf- Attachment B-2024 Water Conservation Plan-Report Comparison.pdf- Attachment C-Water Availability Workshop Summary.docx- Attachment D- Water Conservation Plan Survey Response.pdf |
| Final Approval Date: | May 16, 2024 |

This report and all of its attachments were approved and signed as outlined below:

Kiel Wilkie, Utilities Manager - May 6, 2024 - 3:49 PM

Reyna Seabrook, Director of Corporate Services - May 6, 2024 - 4:49 PM

Paul Gipps, Chief Administrative Officer - May 16, 2024 - 1:55 PM