

**RESORT MUNICIPALITY OF WHISTLER**

4325 Blackcomb Way
Whistler, BC Canada V8E 0X5
whistler.ca

TEL 604 932 5535
TF 1 866 932 5535
FAX 604 935 8109

STAFF REPORT TO COUNCIL

PRESENTED: March 19, 2024
FROM: Utilities
SUBJECT: OUTDOOR POTABLE WATER USAGE AMENDMENT BYLAW (IRRIGATION DEFINITIONS, STAGES AND SCHEDULES) NO. 2428, 2024

REPORT: 24-033
FILE: 3900-20-2428 & 3900-20-2433

RECOMMENDATION FROM THE CHIEF ADMINISTRATIVE OFFICER

That the recommendation of the General Manager of Infrastructure Services be endorsed.

RECOMMENDATION(S)

That Council consider giving first, second and third readings to “Outdoor Potable Water Usage Amendment Bylaw (Irrigation Definitions, Stages and Schedules) No. 2428, 2024”; and

That Council consider giving first, second and third readings to “Bylaw Notice Enforcement Amendment Bylaw (Outdoor Potable Water Usage Penalty Amounts) No. 2433, 2024”

PURPOSE OF REPORT

The purpose of this report is to update the current “Outdoor Potable Water Usage Bylaw No. 2179, 2018” (Bylaw No. 2179, 2018) and to highlight the need to reduce the volume of potable water used for irrigation purposes in order to preserve the current supply of high-quality potable water for domestic use and water storage for fire protection.

☐ Information Report ☒ Administrative Report (Decision or Direction)

DISCUSSION

Background

Drought conditions Whistler has experienced in recent years has resulted in reduced water supply from our existing sources in the summer and fall seasons, while developing new supplies is a challenging, slow, and expensive process, with no guarantee provincial regulators will grant regular use above existing flow volumes. As is the case with well W219, the second potable well in the 21-Mile Creek – Rainbow Park area aquifer. The second well is only to be used when W219, the primary well in the area, is off-line or when the Village zone reservoirs are below fire storage levels. At the same time, ongoing development and increased visitation in Whistler has continued to increase water demand. This reduced supply in the late summer period and increased consumption continues to stress the Whistler water system.

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While the Resort Municipality of Whistler (RMOW) continues to consolidate supplies and find system efficiencies, we need to take other steps to improve water conservation in the critical summer period. Water supply studies over the last 20 years have identified the reduction of potable water used for irrigation purposes as one of the lowest cost methods of reducing overall potable water demand.

Climate forecasts do not predict the drought situation improving in the foreseeable future. The Province completed a “Preliminary Strategic Climate Risk Assessment for B.C.” in 2019. Included at the top of the list of the key findings of this assessment is: “The greatest risks to B.C. are severe wildfire season, *seasonal water shortage*, heat wave, ocean acidification, glacier loss, and *long-term water shortage*.”

Recent data supports this assessment; Whistler is located in the in the Eastern Pacific Range Basin in British Columbia, Water Management Branch drought mapping system. The zone was rated at Drought Level 4 “Adverse Impacts Likely” in early August 2023 and Drought Level 5 “Adverse Impacts Almost Certain”, the highest drought level, from mid-August through late September of last year.

The local snowpack contributes to these drought level ratings. Whistler lies within the Lower Fraser Basin, adjacent to the South Coast Basin in the British Columbia Ministry of Environment and Climate Change Strategy’s Snow Survey Program. This year as of March 1, 2024, the snowpack was 61 per cent of normal in the Lower Fraser Basin as compared to 71 per cent for the same date in 2023. In the South Coast Basin the figures are 40 per cent on March 1, 2024, as compared to 73 per cent for the same date in 2023. Despite recent snowfalls it appears Whistler will again be in a severe summer drought situation.

These low snowpack and drought conditions manifest in lower pumping rates and slow recovery rates in the RMOW groundwater wells, and the potential for reduced flows at the Twenty-one Mile Creek water intake. Summer irrigation demand increases result in lowering reservoir levels very close to or below fire protection storage requirements on a more frequent basis. Bylaw No. 2179, 2018 attempted to regulate and reduce the use of potable water for irrigation purposes. This effort appears to have been marginally successful as evidenced by a reduction in overall water use between 2018 and 2020. The COVID-19 pandemic and the resulting drop in tourism in 2020 and 2021 complicates the analysis. However, demand again increased, with an eight per cent increase in 2022 over 2021 (2023 final results are still in progress). While recent increased tourism and hotel occupancy in the summer months also has an affect on demand, it is apparent by daily demands tracking with the existing permissible irrigation schedule that outdoor water use (irrigation) is the largest contributor to summer season water system volumes.

Bylaw No. 2179, 2018 regulates irrigation demand with a four-stage conservation program. However, feedback from irrigation service providers demonstrates that other than turning automated systems on and programmed to the “normal” (stage 2) compliant criteria in the spring, and off again in the fall, it is very difficult for these service providers to get permission from their clients to adjust these systems mid-season in order to move to Stage 3 or Stage 4 restrictions in a timely and responsive manner.

Analysis

The “Outdoor Potable Water Usage Amendment Bylaw (Irrigation Definitions, Stages and Schedules) No. 2428, 2024” (Amendment Bylaw) reduces the number of potable water conservation stages to three:

- Stage 1 runs from November 1 through April 30 and can be viewed as the late fall/winter/spring schedule with few restrictions;

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- Stage 2 is the normal summer season irrigation schedule that will provide ample irrigation opportunities to all users while providing the RMOW with the opportunity to conserve water supply with time of day and day of week-based irrigation restriction schedules; and
- Stage 3 places severe irrigation and other outdoor water use restrictions into place in the event of critical water supply shortages or an unforeseen infrastructure upset.

The proposed Amendment Bylaw reduces the standard Stage 2 summer period “lawn, trees, shrubs, and flower beds – automatic in-ground irrigation” schedule from nine hours per day, seven days per week; to six hours per day three days per week. Additionally, the Amendment Bylaw divides Whistler neighbourhoods into two groups, half are able to irrigate lawns on Mondays, Wednesdays, and Fridays, while the other half are able to irrigate lawns on Tuesdays, Thursdays, and Saturdays; further reducing the water demand at any particular time. These schedules also create recovery periods for the water system to refill reservoirs.

Adoption of the proposed Amendment Bylaw will allow Whistler to conserve the existing potable water supply in order to continue to provide a reliable domestic potable water, and the required fire fighting water storage while pursuing other water conservation measures such as:

- Continuing to find opportunities to move park irrigation off potable water sources:
 - Lost Lake Park completed in 2023; and
 - Meadow Park planned completion in 2025.
- Metered volumetric billing of commercial customers with mock billing planned to commence in late 2024.
- Review and updating the “Once Through Water Usage Bylaw No. 2198, 2018” to ensure the elimination of once through cooling systems.

In order to accurately enforce the Bylaw 2179, 2028 following adoption of the Amendment Bylaw, a concurrent amendment is required to the “[Bylaw Notice Enforcement Bylaw No. 2174, 2018](#)” (Enforcement Bylaw). The proposed “Bylaw Notice Enforcement Amendment Bylaw (Outdoor Potable Water Usage Penalty Amounts) No. 2433, 2024” amends Schedule A of the Enforcement Bylaw to correctly correspond to new sections numbers in Bylaw No. 2179, 2018 as a result of the Amendment Bylaw and reflects the three Stages that are now defined.

POLICY CONSIDERATIONS

Relevant Council Authority/Previous Decisions

[“Outdoor Potable Water Usage Bylaw No. 2179, 2018”](#)

[Administrative Report No. 18-036](#): Outdoor Potable Water Usage Bylaw No. 2179, 2018

2023-2026 Strategic Plan

The 2023-2026 Strategic Plan outlines the high-level direction of the RMOW to help shape community progress during this term of Council. The Strategic Plan contains four priority areas with various associated initiatives that support them. This section identifies how this report links to the Strategic Plan.

Strategic Priorities

☐ Housing

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Expedite the delivery of and longer-term planning for employee housing

☐ Climate Action

Mobilize municipal resources toward the implementation of the Big Moves Climate Action Plan

☐ Community Engagement

Strive to connect locals to each other and to the RMOW

☐ Smart Tourism

Preserve and protect Whistler's unique culture, natural assets and infrastructure

☒ Not Applicable

Aligns with core municipal work that falls outside the strategic priorities but improves, maintains, updates and/or protects existing and essential community infrastructure or programs.

Community Vision and Official Community Plan

The Official Community Plan (OCP) is the RMOW's most important guiding document that sets the community vision and long-term community direction. This section identifies how this report applies to the OCP.

Chapter 12 – Infrastructure includes goals and policies regarding the provision of safe and reliable drinking water and implementing water conservation measures. This proposed Amendment Bylaw will improve the reliability of our water system to deliver enough water to Whistler residents and businesses during the critical summer season and the implementation of water conservation measures, like this Amendment Bylaw, is supported by Policy 12.1.1.2 and Policy 12.1.1.10.

BUDGET CONSIDERATIONS

There are no immediate budget considerations associated with this bylaw amendment.

LÍŁWAT NATION & SQUAMISH NATION CONSIDERATIONS

The RMOW is committed to working with the Líl'wat People, known in their language as *L'il'wat7úl* and the Squamish People, known in their language as the *Skwxwú7mesh Úxwumixw* to: create an enduring relationship; establish collaborative processes for Crown land planning; achieve mutual objectives; and enable participation in Whistler's resort economy.

There are no specific considerations to include in this report.

COMMUNITY ENGAGEMENT

Level of community engagement commitment for this project:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

Comment(s):

Seven irrigation and landscape companies in Whistler and the RMOW Resort Operations team have been notified by email of the proposed bylaw changes encouraging them to comment on the updates.

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REFERENCES

“Outdoor Potable Usage Amendment Bylaw (Irrigation Definitions, Stages and Schedules) No. 2428, 2024” included in Council Package.

“Bylaw Notice Enforcement Amendment Bylaw (Outdoor Potable Water Usage Penalty Amounts) No. 2433, 2024” included in Council Package.

SUMMARY

The low snowpack and drought conditions combined with the steady pace of development and increased visitation in Whistler continues to stress the local water distribution system. While the RMOW continues to consolidate supplies and find system efficiencies there are no opportunities to develop new supplies in the immediate future. The updated irrigation restrictions are expected to improve water conservation in order to ensure reservoir levels are kept above minimum fire protection storage levels, while continuing to provide Whistler’s residents and businesses ample opportunity to maintain healthy landscapes.

This report proposes that Council consider the first three readings of the “Outdoor Potable Usage Amendment Bylaw (Irrigation Definitions, Stages and Schedules) No. 2428, 2024” and the “Outdoor Potable Usage Amendment Bylaw (Irrigation Definitions, Stages and Schedules) No. 2428, 2024.”

SIGN-OFFS

Written by:

Chris Wike,
Utilities Manager

Reviewed by:

James Hallisey,
General Manager of Infrastructure Services

Virginia Cullen,
Chief Administrative Officer