



**REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, APRIL 19, 2023**

SUBJECT **Potential Impacts of Climate Change on Regional Water Supply Operations**

ISSUE SUMMARY

To provide the Regional Water Supply Commission an update on the impact that climate change has on Capital Regional District (CRD) Regional Water Supply operations and the ability to provide water to Greater Victoria.

BACKGROUND

At its January 20, 2021 meeting, the Regional Water Supply Commission directed staff to bring forward a report outlining the current and potential future impacts of climate change on Regional Water Supply operations and the CRD's ability to provide water to the region. A report was presented March 17, 2021 with the Commission further directing staff to provide an update every two years.

Across the organization, the CRD is working to adapt to the changing climate across its service areas by identifying vulnerabilities and strategies to improve how we anticipate, respond to and recover from both extreme weather events and the gradual changes occurring over time. This commitment is embedded in the CRD's 2021 Climate Action Strategy, various plans and corporate procedures. As new science and global climate projections advance, the CRD will continue to undertake analysis to understand climate changes and their impacts and adjust responses accordingly. This will be supported through an update to the Pacific Climate Impact Consortium's 2017 Downscaled Climate Projections for the Capital Region, in late 2023.

At a departmental level, staff have been considering the impact of climate change on many aspects of the Regional Water Supply Service for some time. The CRD Regional Water Supply Master Plan approved by the Commission in 2022 considers the impacts of climate change, with regards to recommendations for new infrastructure to meet future water demands and potential water quality risks. This report summarizes the current knowledge, understanding and expected or potential impacts of climate change on Regional Water Supply now and into the future; and provides planning and actions that are being taken to mitigate anticipated climate change risks.

Details of current and potential climate change impacts are outlined in Appendix A.

CONCLUSION

Staff have been monitoring the Regional Water Supply System for the effects of climate change and impacts on operations. To date there has been no impact on the ability to provide bulk and retail drinking water related to climate change. Regional Water Supply plans consider climate change risks, and designs and operations implement adaptation initiatives and actions to prepare the Regional Water Supply System for anticipated future impacts from climate change.

Most importantly for water supply, current climate change models downscaled for the CRD project a net increase in total annual precipitation by 2050, though summer drought conditions are expected to occur more frequently and for longer periods.

Continued investment in the Regional Water Supply capital plan to fund the necessary studies, plans and infrastructure upgrades are key to adapting to the projected impacts of climate change and continuing to provide an adequate supply of high-quality drinking water to the region for the long term.

RECOMMENDATION

There is no recommendation, the report is for information only.

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| Submitted by: | Annette Constabel, M.Sc., RPF., Senior Manager, Watershed Protection |
| Submitted by: | Joseph Marr, P.Eng., Acting Senior Manager, Infrastructure Engineering |
| Submitted by: | Shayne Irg, P.Eng., Senior Manager, Water Infrastructure Operations |
| Submitted by: | Glenn Harris, Ph.D., RPBio., Senior Manager, Environmental Protection |
| Concurrence: | Ian Jesney, P. Eng., Acting General Manager, Integrated Water Services |
| Concurrence: | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer |

ATTACHMENT(S)

Appendix A: Current and Potential Climate Change Impacts