



REGIONAL DISTRICT NORTH OKANAGAN – GREATER VERNON WATER

Water Supply and Agriculture Policy Factsheet

GVW faces challenges in efficiently utilizing water storage in the Aberdeen Plateau Dams during summer peak water usage due to multiple factors including:

- Water Travel Time:**
 Stored water from the Aberdeen plateau takes 8-14 hours to reach the Headgates dam (Figure 1).
- Fluctuating customer demands:**
 With swings between 65-105 MLD (Mega Liters per Day), with high daytime peak use to low nighttime use.
- Peak Demands:**
 Operations must release enough water to meet peak demands, typically the high daytime peak flows. Excess water released and not used (typically at night) flows into Duteau Creek and reduces stored water.



Figure 1 – Flow Diagram of Duteau Water Treatment Plant

Predicting daily water demands is challenging. Varying usage patterns and warmer weather leads to increased flows. Staff closely monitor flows to ensure there is adequate supply for GVW users while also meeting the environmental flow needs of Duteau Creek. However, if enough water is not released, there is a risk of some properties losing pressure or water. Figure 2 illustrates the challenges of the Duteau Creek, with the green areas representing lost water over the headgates dam.

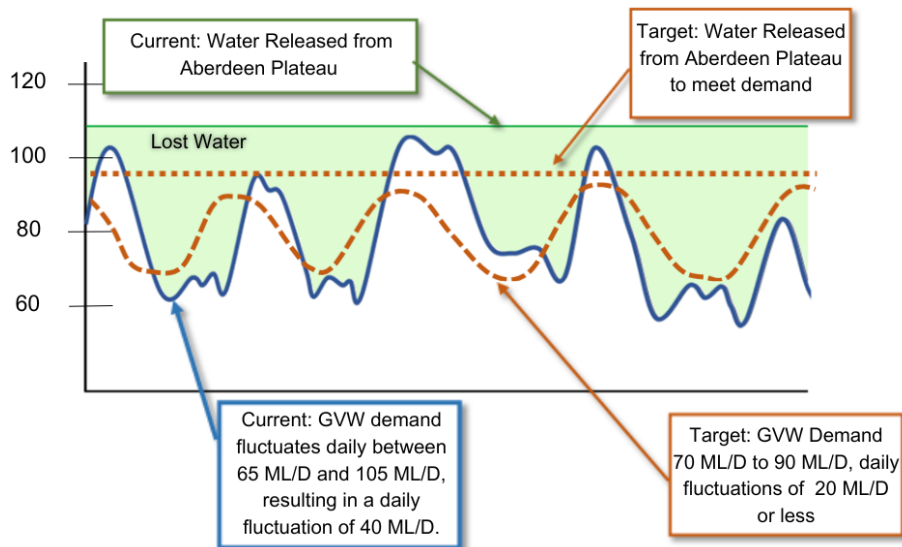


Figure 2 – Duteau Water Demand Fluctuation

What can be done to reduce wasted water and improve storage use efficiency?

1. Consistent watering throughout the day / night

- Spread watering evenly throughout the day and night to avoid large flow fluctuations.
- Aim to use 50% of daily allocation during the day and 50% during the night.

2. Staggering watering

- shift your watering schedule to avoid peak times. Aim to water between 11 PM to 9 AM

3. Staying within your hourly flow allocation

- Stay within your property's maximum hourly rate of flow (provided in an annual letter).
- Track and manage your hourly water use with irrigation timers.
- Increase the number of your zones to lower your flows and spread your watering over a longer period.

Historically, large properties grew feed crops and irrigated multiple zones at a steady, low flow for 24 hours a day in summer—an efficient use of stored water. However, changing agricultural and irrigation practices in the GVW supply area are affecting water availability. By understanding these challenges and adopting the practices in this factsheet, we can preserve summer water storage and meet the needs of both agriculture and the broader community.

Greater Vernon Water Use and Regulation Bylaw No. 2545, 2014:

GVW is governed by the *Greater Vernon Water Use and Regulation Bylaw No. 2545, 2014*¹ which outlines conditions of service for all properties. This bylaw gives GVW the authority to impose flow and water restrictions, limit irrigation hours, change the irrigation season dates, limit or discontinue water to any customers, or to do what's necessary in the event of a water shortage to protect the public interest.

GVW values its partnership with the agricultural community and its commitment to use water more efficiently. GVW will be providing customers with updates on how to assist us, however, due to the seriousness of this issue and the impact to all GVW customers, the RDNO will enforce conditions of the bylaw for continued non-compliance. Customers exceeding flow limits and failing to comply will have service shut off without notice and incur fees and fines for reconnection

Proposed Bylaw changes GVW is considering:

- **Irrigation Timing Restrictions:** Properties will be required to use 50% of their annual allocation during the day and 50% at night, with a +/- 10% variance. Non-compliance incurs a penalty.

¹ Available at https://www.rdno.ca/sites/default/files/2023-05/BL_2545_C.pdf