

Peak Demand FAQ

Water Conservation

Capital Regional District | July 2025

What are water peak demands?

Peak demand refers to periods of the day when water use is at its highest. During these times, water infrastructure must respond quickly or operate at full capacity. Sudden or high demand can strain the system, making it harder to maintain consistent flow, pressure, and water quality. They also increase the potential for infrastructure failure.

What is happening with peak demands in Greater Victoria?

On summer lawn watering days, water demand spikes sharply in the early morning hours, right on the hour. Around 4, 5 and 6 am, when many automated sprinklers start simultaneously, water demand can triple in just a few seconds. While the water distribution system is built to handle high demand, rapid changes create significant stress on our pipes and infrastructure. It is not the volume that is the problem, it is the rate of change in flow. This high rate of change causes stress to the valves and can cause problems like water hammer. Make the switch to the new overnight lawn watering period!

What could happen if everyone keeps watering during peak hours?

When the system experiences these rapid changes in demand for water, it triggers pressure waves that ripple through our pipes. Over time, these waves weaken the infrastructure, potentially causing leaks, bursts, or even major pipe failures.

A critical failure could lead to:

- Temporary loss of water service for thousands of homes.
- Boil water advisories, requiring extra precautions for daily use.
- Costly repairs and disruptions that affect the entire community

Why was the bylaw changed?

The bylaw was extended on lawn watering days to allow for more time for automatic irrigation systems to water overnight. The water distribution system was experiencing low flows overnight and sudden, drastic demand for water at 4, 5, and 6 am. This causes major stress to our infrastructure because of the high rate of change over a short period of time. By adding a new overnight watering period from 12:01 am to 10 am on lawn watering days, it is expected that water flow will be more consistent overnight and reduce dramatic surges in water demand.

When should I water?

Make the switch to water your lawn in the new overnight watering period and stagger your watering times. Instead of setting your irrigation system to start on the hour, choose an unconventional time—like 3:18 AM or 2:51 AM. This small adjustment gives our water system the time it needs to adapt gradually, reducing stress on the infrastructure.

Why is watering overnight helpful?

Watering overnight can be helpful because it spreads out water demand, which is usually concentrated between 4 and 6 a.m. It also helps smooth out the flow throughout the day. Typically, there's a peak in the evening when people are cooking and getting ready for bed, followed by a very low period while most people are asleep, and then another sharp peak early in the morning. This daily (or diurnal) pattern puts strain on the water distribution system because of the dramatic swings in demand. By shifting some water use to overnight hours, we can reduce these extremes and help the system operate more smoothly.

Won't my lawn mold if I water overnight?

When you water at night, make sure you do not over water. Overwatering, poor air circulation, and poor draining soil increase the risks of mould and disease. Lawns only need one inch of water per week to stay green, including rain. Remember to mow high to encourage stronger, deeper roots. Leave grass clippings to decompose and act as mini mulch to reduce evaporation and add nutrients. Check out our resources at crd.ca/water to learn more about healthy soils, natural gardening and efficient irrigation.

What will staggering irrigation start times do?

Staggering your irrigation start time to start at a random time will help so that not all systems throughout the region are turning on at the same time. When all irrigation systems in the region turn on at 4 am, a massive demand for water causes stress on our infrastructure. That spike in demand comes after a period of low flow overnight. By adjusting your sprinkler timer to avoid peak hours and instead starting at unique times, you are helping smooth out the demand curve and reduce strain on the system we all depend on.

What is a timed/automatic irrigation system?

A timed automatic irrigation system means an irrigation system that consists of controllers, wiring, and accessories such as climate and soil sensors, piping, and emission devices such as sprinklers, rotors or micro-irrigation components that automatically supplies water to a landscaped area, lawn or garden.

Does it matter if I am hand watering?

Not as much. Peak demands for water are happening because automatic timed irrigation systems are programmed to turn on the hour at 4, 5 or 6 am, which hand watering would not effect as much. However, on

lawn watering days, try not to water your garden at peak hours (between 4-6 am) to reduce total demand at that time.

I don't have a yard; how can I help?

Try not to use excess water in your home during peak hours. If you can, run your dishwasher and laundry machine in the early afternoon or overnight. Have a 5-minute shower in the morning and try to turn off the tap when you're brushing your teeth. Every bit helps to reduce peak water demand.