

Water Conservation and Development

The City of Parkville has completed Phase 1 of the Water Use Planning and Management Study; an important step in ensuring a sustainable and resilient water supply for current and future residents.

[Let's Talk Parkville – Water Use Planning](#)

The study highlights the importance of proactive planning. Factors such as climate change, changing river conditions, environmental flow requirements, and future population growth will influence how water is managed over the coming decades.

Council's acceptance of the study recommendations in principle recognizes the value of the analysis and technical work completed. The study is intended to inform future decision-making and does not commit the City to any specific projects, costs, or implementation timelines. Future decisions will continue to be brought forward to Council and the community as planning progresses.

The City remains committed to responsible water management, protecting local ecosystems, and ensuring a reliable water supply for generations to come.

Frequently Asked Questions

Where does the drinking water and supply in Parkville come from?

Parkville's drinking water comes from a combination of surface water and groundwater. Surface water is drawn from the Englishman River through the [Englishman River Water Service \(ERWS\)](#) river intake structure and pumped to the Water Treatment Plant. Groundwater is supplied from 16 active city water source wells in the Railway Station and Springwood well fields.

The [Arrowsmith Dam Reservoir](#) provides stored water that is released to enhance Englishman River flows during the operating season (June to October), supporting both environmental flow needs (EFN) and community water supply. Using both surface water and groundwater sources provides flexibility in how the City operates its drinking water system throughout the year.

How reliable is our current water supply?

A recent [study by KWL Engineering](#) confirms that Parkville's **water supply is sufficient** to meet the community's needs (water for health, hygiene, and fire protection), support planned growth through to 2030 (through the current Official Community Plan (OCP)), and help supplement the natural base water flows in the Englishman River during drier months.

However, during very dry years, baseline ecosystem conditions can become strained, with lower-than-normal natural flow in the river. The province has a target environmental flow need (EFN) for the river, which is comprised of natural base flow combined with the supplemental water released from the dam. This rate ranges from about 1 cubic metres per second to 1.6 cubic metres per second measured at a gauge by the Highway 19A Orange Bridge.

Key considerations include:

- A fixed volume of water can be stored behind Arrowsmith Dam, however this is dependent on precipitation in the area. The City cannot control whether the dam fills, although it usually does fill and overflows by early spring each year.
- The City has a licence to withdraw water from the river and is required by the province to release stored water from June through October, known as the operating period, to supplement the natural base flow and enhance river habitat. The City draws less than 10% of the combined flow from the river to provide drinking water to the community. The majority of water released is used to supplement EFN in the river, at the rate required by the province.
- Base river flows are trending lower in recent years, due to climate variation and longer/drier summer conditions. This means the amount of water needed to maintain ideal environmental flows in the Englishman River has changed, and the City must release stored water from the dam sooner and for longer than in past years. The City must seek approval from the province to reduce the amount of water released so it will last for a longer period.
- When the City seeks to adjust the flow release rate from the dam, the province mandates that conservation measures must be activated to reduce non-essential water use and leave as much water in the ecosystem as possible.
- The peak demand for community water use coincides with the operating period. People use more water in summer, both indoors and outdoors. KWL indicates 70% of summer water use by the community is for outdoor purposes. This is confirmed by looking at winter water use, which is assumed to be closer to the actual domestic needs of the community.
- During the peak operating period, Parksville welcomes over 120,000 visitors – this increase in population also results in higher water usage, at a time when the base river flows are lower and there is less rain to support the natural flow.
- The licence conditions for our system are different to those in our neighbouring communities, and this is why we sometimes see different conservation levels throughout the region. It is worth noting that Conservation Level 4 rules still allow residents to wash vehicles or boats one day per week and water landscape features, just not with automatic lawn sprinklers. The City's Outdoor Water Conservation Framework does not require residents limit indoor use, considered essential domestic use, at any time throughout the year.

Is the City of Parksville limited in how much water it can use?

Yes. The City cannot take unlimited water from the river or groundwater sources. Provincial licences, environmental regulations, and the capacity of our water system (e.g. pipes, transmission lines, and pumps) all place limits on how much water can be supplied to the community in a given period.

The good news is that current community water use is well within those limits. During the busiest summer months, the City typically produces about 10 million litres of water per day and up to 14 million litres per day on peak days, which is far below the maximum amount allowed under our licences.

The Arrowsmith Dam licence requires the City to ensure enough water remains in the Englishman River to support fish habitat and the riparian ecosystem. That's why water conservation measures may be introduced during dry periods, to reduce non-essential outdoor use, helping protect both the community's water supply and the health of the river.

Key takeaway: Parksville has licensed access to significantly more water than it currently uses, but that water must be managed responsibly to meet environmental requirements and prepare for dry conditions. Humans are expected to share precious water resources with fish, animals, and other ecosystem features.

What is being done to improve long-term water security?

The City is pursuing a multi-part strategy. Water infrastructure planning and investment is based on anticipated future needs established from population growth and development trends. This process is ongoing and forms part of the long-term strategic planning to ensure there is sufficient water for essential local use and for firefighting purposes.

The KWL Phase 1 study indicates the City is only withdrawing about 70% of the licenced volume from the wells. In the short term, the study recommends optimizing use of existing groundwater, implementing a water demand management program, improving conservation and outdoor water-use efficiency, and continuing work with the province to refine operation of Arrowsmith Reservoir Dam releases.

In addition, the City is further investigating a new surface water storage source for the longer term and possibly increasing the capacity of Arrowsmith Reservoir by raising the existing dam in the short term to provide added reliability for maintaining EFN rates. Together, these measures are intended to maintain water security for both the community and the environment while a major long-term supply project up to 2075 is evaluated and developed.