

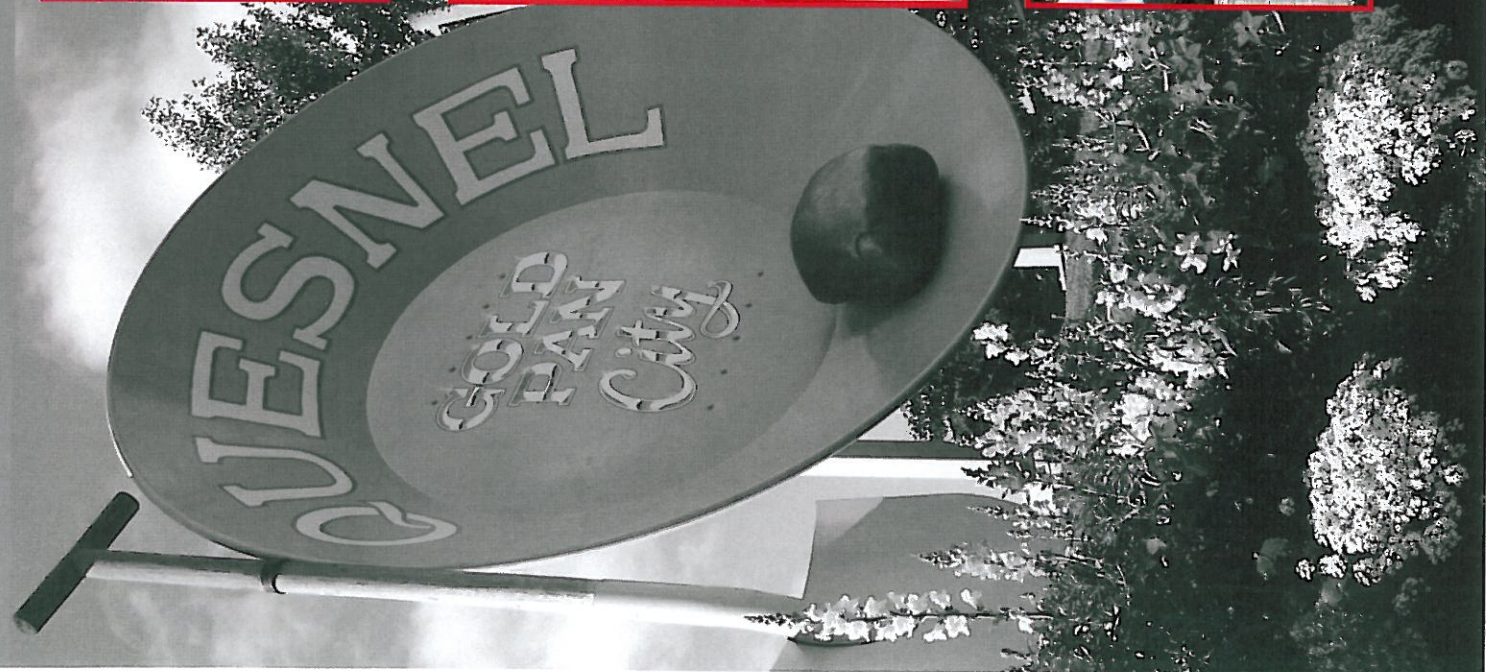
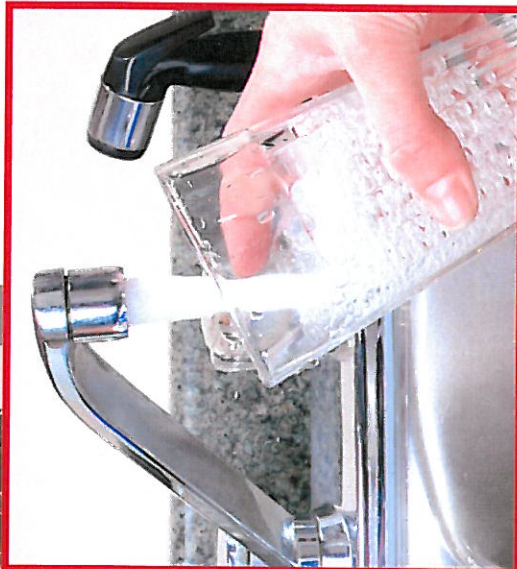
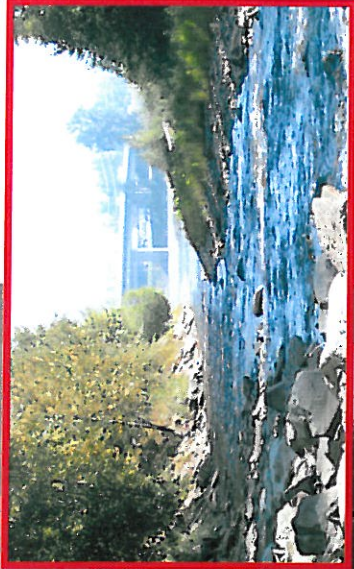


# City of Quesnel

## Water Conservation Strategy

**URBANSYSTEMS.**

December 2011  
1190.0138.01







## EXECUTIVE SUMMARY

In Canada, water is being consumed more quickly than our population is growing, meaning that per person we use more water than in the past. For many communities, less than 3% of municipally-treated water is actually used for drinking. The rest goes down the drain or toilet, or on our gardens. Although the value of water conservation is often defined primarily in terms of avoided supply-side costs, there are many additional benefits to consumers and society at large that span all three pillars of sustainability: social, environmental and economic.

In Quesnel, average daily water use is 850 litres per capita per day (2010). This is significantly higher than the British Columbia and Canadian averages. Water use is highest during the summer months, where a large portion of water is consumed for irrigation and other outdoor activities.

The future sustainability of Quesnel's existing well capacities were compared to the forecasted water demands. A new well could be required as early as 2014 if current water consumption trends continue, with another needed within a 20 year period. These would be significant investments, at approximately up to \$1 million each. An 8% reduction in water use could defer the need for a new well by approximately 15 years.

The City continues to invest in the water system to ensure sufficient water is available to meet the water demands of the community. Although the cost to produce and deliver water in Quesnel still remains low at approximately \$50/100 m<sup>3</sup>, this would increase dramatically should treatment be required.

The following guiding principles, which are aligned with the City's 2004 water conservation report, are recommended to move Quesnel's Water Conservation Program forward:

1. Reduce overall water consumption levels;
2. Engage community-wide participation;
3. Ensure equity and transparency;
4. Lead by example;
5. Quantify the effectiveness of the water conservation program on an on-going basis; and,
6. Ensure water conservation measure make efficient use of resources.

The City is currently practicing a few methods of water conservation, including outdoor water restrictions, leak detection, and public education. There are a variety of other cost-effective options for improving conservation in Quesnel, specifically around:

- Educational Measures
- Full Cost of Service Recovery
- Regulatory Measures
- System Improvements



Reducing water use now will support a variety of sustainability objectives and decrease the cost implications should treatment be needed.

There are 2 'parts' to the City's Water Conservation Strategy. The first is a detailed water conservation strategy tailored to staff and Council. The second is a presentation to Council that can be translated into a public document. This document is the former. The objectives of the City's Water Conservation Strategy are to:

- Understand the importance of water conservation;
- Understand the characteristics of the water system and current water usage.
- Predict what infrastructure upgrades will be required to meet future demands;
- Assess the viability of water conservation measures relevant to the City; and
- Identify steps the City can take in an effort to reduce waste of water.

Water conservation is aligned with the City's Our Quesnel initiative, Council's 2011 Strategic Plan, and the Official Community Plan. An ongoing water conservation program can be used to integrate conservation measures into the City's municipal and community practices, thus realizing triple bottom line sustainability.