Town of Okotoks Water Supply and Outdoor Use

Frequently Asked Questions (FAQ)

1. **Why is the Town continuing to grow and allow development when our current water resources are limited?**

The recent water ban has some residents believing that Okotoks doesn't have sufficient water. The Town's water licenses provide sufficient water for current building and population. New development can't begin until the developer brings water licences to the Town that will meet the demand of additional population.

Background

In 1998, the Town of Okotoks followed a finite growth model that capped the town's population at 25,000 to 30,000 residents. The Air Ranch, Drake Landing, Mountainview and Cimarron developments were all approved within the finite growth model.

Over the past decade, growth pressure from proposed developments in the MD of Foothills, in close proximity to Okotoks, prompted the Town to annex land around our border so we could manage this steady growth pressure and align future developments with our Sustainable Community Vision. The land annexed is estimated to meet demand for 60 years of growth.

In April 2016, the Town of Okotoks and the MD of Foothills formally agreed to the annexation of approximately 1,950 hectares (4,900 acres) of land and in July 2017, the Government of Alberta approved this annexation. Properties in the newly annexed lands are on well water and do not have access to the Town of Okotoks' water system (potable water and waste water treatment). Most undeveloped lands in the annexed areas will remain untouched for several years, as there is an extensive process before the Town of Okotoks approves new community development.

2. What is required before a new community is approved for development?

Land-use approvals are only authorized after the developer meets the requirements of the Town's Water Allocation Policy and provides the Town with an Alberta Environment approved water licence(s). This additional water licence capacity must support the increased population expected for the developed area (approximately 280 litres/person/day).

3. What is a water licence transfer?

The Province of Alberta does not permit any new licences from the South Saskatchewan River basin, therefore Alberta's water transfer system currently allows for the re-distribution of water licences between different water users, under certain conditions. The current Provincial system has several public policy protections: a public review of every water transfer; each transfer is considered for its hydrological and third-party impacts; and the Province has the opportunity to hold back 10 percent of the allocation for environmental instream purposes. (*http://albertawater.com/how-is-water-governed/water-licences-transfers-and-allocation*)

4. Who pays for this new water infrastructure?

The developer (NOT municipal taxes) pays for new water, sewer and road infrastructure, including additional water wells. It takes several years for the new water infrastructure to be built before construction can begin and residents and businesses can move into a new community. Since a new development is restricted until new water licences and wells are in place, their future water usage does not impact the Town of Okotoks' current water supply.

5. How does the water transfer system help Okotoks?

With water efficiencies, the water licence transfer system may support development for approximately four years of additional growth. As we transition to the continued growth model, the water licence transfer system has been an interim step.

The **long-term** solution for the development of the annexed lands over the next 60 years is to construct a supplementary water pipeline from Calgary. When a regional water pipeline is secured, the Town will continue to use our current water system as our primary water supply and will supplement with water from Calgary during peak demand periods. The regional pipeline will provide Okotoks with resiliency in our water system, enabling us to adapt and respond to future extreme climatic events such as the drought experienced in Southern Alberta in the summer of 2017.

6. How does a drought affect our municipal water supply and cause an outdoor watering restriction or ban?

Historically in the summertime, the Sheep River water volumes are at their lowest in mid to late August. However, due to a record breaking hot, dry summer, water levels were exceptionally low in early July 2017.

During the summer months, water consumption typically increases by 30% over winter usage due to outdoor watering. The Town of Okotoks is normally able to manage periods of unusually high outdoor consumption by increasing well production and utilizing water reserves from our reservoirs. Periods of high demand are usually short and infrequent, which allows time for the reservoir to replenish and water restrictions aren't normally required.

In late July and early August of 2017, outdoor water demand reached as high as 15 million litres of treated water per day on scheduled outdoor watering days, while the drought had reduced the Town's water production capacity to approximately 11

million litres per day, creating a 4 million litre per day deficit. This deficit was supplemented from reservoirs, decreasing their storage levels.

In order to continue to provide enough potable water for use and replenish reservoir supplies, water consumption had to be decreased by implementing a temporary outdoor watering ban. Watering restrictions were eased once conditions improved and we were confident reservoirs could be sustainably maintained.

7. Why are our water reservoirs and water system not meeting the demand?

Unusually high water demand is specific to outdoor use during the summer months. While the Town's licensed water supply is sufficient to meet typical community needs, sudden increases in demand experienced during unusually hot weather stress the Town water system's ability to meet this high level of demand.

This summer, the unusual weather required the entire Okotoks community to collaborate in managing outdoor water use. When the demand for water exceeded the capacity of the Town's water treatment plant and reservoirs, a reduction in outdoor water consumption was necessary.

8. How much water does the Water Treatment Plant produce?

On an average day, the Town's water treatment plant produces 12.5 ML/day of potable water. However, during this year's extremely hot, dry conditions, this dropped to approximately 11 ML/day.

Demand is usually 7-8 ML/day but this summer increased to more than 14 ML/day on watering days. This created a shortfall of 4 million litres between demand and supply, which had to be accessed from our reservoirs.

9. What happens when the water reservoir drops?

Typically, our reservoir levels operate between 75 to 95 percent. During outdoor watering days in July 2017 the reservoirs' levels were dropping to below 60 percent. Consecutive watering days, where demand was in excess of 14ML/day did not allow recovery to normal levels. If allowed to continue, there may have been an impact in the system's ability to provide full fire protection for major fire incidents in the community.

10. What can the Town do to ensure our outdoor water demands do not exceed the production capacity of the water infrastructure until the water pipeline is built?

The Town recognizes that community growth and climate change are a part of our future. Until the Town has secured a water pipeline to provide supplemental water, we are specifically looking at ways to improve the outdoor watering schedule to ensure there is enough time in-between peak demand periods to allow the water reservoirs to recover. This is because unusually high demand periods are only experienced during the summer months.

11. What does the Town do to voluntarily reduce water during peak demands?

The Town is reducing its water use by only irrigating one day per week in high-need areas such as sports fields that are booked for use; using non-potable water for recently planted trees; reusing water from the rain water catchment system at the Southridge Emergency Services building and the water from the Okotoks Recreation Centre pool when it was emptied for maintenance; not washing Town fleet vehicles unless it is critical.

12. What can I do to help out?

We are requesting that residents continue to practice wise water use. If there is rainfall in Okotoks, reduce or eliminate outdoor watering that week. If everyone in Okotoks does just a little bit, then the cumulative results are huge.

There are a number of ways the community can work together to regain the balance between water demand and available supply:

- Limit watering to no more than one hour once per week during scheduled watering days as this is adequate to maintain your lawn. Residents and businesses with automated irrigation systems are asked to program systems within the 2 – 5 a.m. period on scheduled watering days.
- Refrain from any unnecessary outdoor water use such as washing vehicles and refilling hot tubs or pools.
- Incorporating ecoscaping and rain barrels into landscape plan.

For more ways to achieve this balance please have a look at the Town's September utility bill insert at www.okotoks.ca/utilitynews

13. Can we hand water our flowerbeds and vegetable gardens?

Yes. At any time flowerbeds and vegetable gardens may be hand watered with a watering container or a hose with a manual trigger nozzle. Newly planted trees and shrubs may also be watered manually as they require more water until they are established.