

Integrated watershed management Strategic Meeting

Guest speaker biographies and overview of interactive exercises

Guest speaker biographies

Dr. David Sauchyn is Director of the Prairie Adaptation Research Collaborative and Professor of Geography and Environmental Studies at the University of Regina. His research is focused on climate variability and its impacts on the natural resources of the Western Prairies. It is documented in more than 100 peer-reviewed scientific papers. Dave is lead author of the prairies chapter of the National Assessment of Climate Change due for release in 2020.

Josh Ellis is the Vice President of the Chicago Metropolitan Planning Council (MPC). He directs many urban and regional planning initiatives, most notably through Great Rivers Chicago, Transform Illinois, and work in Stormwater Management and Water Supply Management. Through robust community planning for investments throughout Chicago's 150+ mile of riverfront, technical assistance to regional municipalities and facilitation of diverse stakeholder groups, Josh leads MPC's multiple strategies to balance community aspirations, ecosystem needs, economic growth, and sound public policy.

Water supply and security interactive exercise

Exercise purpose

Host an interactive exercise where Councillors will:

1. Work through water security options to balance long term water supply and demand for Calgary and regional customers.
2. Express what is important to them for ensuring water security and why.

Note: This is a conceptual conversation and not meant to be a decision-making exercise or to provide Administration with direction.

Scenario

This following scenario will be presented to focus the discussion on balancing long term water supply and security. The year is 2019, but you are looking ahead to 2034. Calgary and our region will have grown. From 1.3 million people now, the Water Utility will be serving 1.7 million in 2034. We will need about 850 million litres of water per day to serve this population – an amount that would fill the Saddeldome with water three times every day. However, river flows in the prior two years were unusually low, resulting in the Water Utility and Calgarians experiencing an unprecedented shortage of water.

Recognizing that this is a plausible scenario that Calgary could face in the future, the interactive exercise will work through water security options to balance long term water supply and demand to mitigate or manage through this water shortage. Through discussion, we hope to hear what is important to Council on this issue and why.

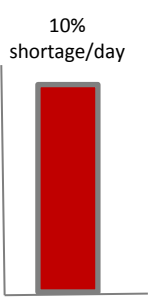
Several water supply and demand options will be considered including infrastructure upgrades, conservation and efficiency opportunities, regional collaboration, and policy changes. Each option is represented by relative water savings, cost of implementation, The City’s level of control in implementing, and associated risks.

Through facilitated discussion at several tables, Council will be asked to review the options to balance water supply and demand for Calgary and regional customers, consider which they would prioritize, and express what is important for ensuring water security and why.

This exercise is important to The City because water security is at the heart of the commitment we have made to provide high quality drinking water to customers now and for generations to come.

Preparing for the scenario in 2034:

- Calgary has a population of 1.5 million
- Calgary supplies drinking water to 1.7 million people
- We will need more water per day to service our customers
- River flows were very low in the last two years
- By 2034, we will have many late summer days with 10% less water supply than needed



It is anticipated that Calgary will face an unprecedented shortage of water for many days in 2034.

What options do you prioritize now to mitigate or manage that shortage?

Stormwater and city-building interactive exercise

Exercise purpose

Host an interactive exercise where Councillors will:

1. Experience the complexities of building communities with stormwater as a primary consideration.
2. Express what is important to them in city-building while managing stormwater.

Note: This is a conceptual conversation and not meant to be a decision-making exercise or to provide Administration with direction.

Scenario

Newer communities in Calgary require some stormwater quality treatment measures and generally have increased drainage capacity to manage the volume, flow and quality of stormwater. In contrast, in established communities in Calgary much of the stormwater flows through lower capacity storm drains, creating challenges in managing stormwater volume, flow and quality. Through an interactive exercise, Council will have the opportunity to grapple with stormwater and city-building challenges as we explore two scenarios: Old Town and New Town.

Old Town is an established community with high density and mixed land uses. Stormwater pipes are on the smaller side and there are no stormwater treatment ponds or wetlands. Most stormwater flows untreated to the creek and river. Old Town has an excess of stormwater and stormwater

quality challenges. Discussion will examine options to manage stormwater within the constraints of an established community.

New Town is a new community presenting an opportunity to proactively manage stormwater as part of designing a new community. Discussion will include how New Town could be designed and built to efficiently manage stormwater.

The discussion for both scenarios will highlight the key challenges and opportunities faced when managing and building communities with stormwater as a primary consideration.

Old Town

Old Town has high density, mixed land uses, less green space and no wetland or stormponds.

Most stormwater flows through lower capacity storm drains, untreated to the river.

Old Town has stormwater volume/flow and quality challenges.

New Town

New Town needs to achieve Municipal Development Plan goals of watershed protection and urban density.

New Town must meet The City's stormwater service commitment of collecting and managing rain, snow and ice melt, to protect citizens, property and the environment.