

Astotin Creek Resiliency Action Plan**Report Purpose**

To seek Council approval of the visions for Astotin Creek Resiliency Study as described in the Astotin Creek Resiliency Action Plan.

Recommendation

THAT the following visions for Astotin Creek resiliency, as described in the Astotin Creek Resiliency Action Plan, as set out in Enclosure 2 of the June 14, 2022 Planning and Development Services report, be approved:

- Healthy ecosystem
- Integrated watershed management
- Resilient infrastructure
- Proactive management
- Flood and drought preparedness
- Educated, engaged, and empowered public

Our Prioritized Strategic Goals

Goal 2 - Manage, invest and plan for sustainable municipal infrastructure

Goal 4 - Ensure effective stewardship of water, land, air and energy resources

Continuously improving the way we work, as one organization, in an agile and sustainable manner

Report

The Astotin Creek Resiliency Study was undertaken to help manage current and future water-quantity and quality issues. The key goals of the study were to:

- Create an action plan that will address flood, drought, and water-quality issues in priority areas within the Astotin Creek basin.
- Restore and enhance ecological connectivity and function in critical areas of the Astotin Creek basin.
- Increase capacity, knowledge, awareness and participation by industrial landowners, private landowners and agricultural producers in activities that can restore and maintain critical areas and functions of Astotin Creek.

An internal Technical Working Group of subject-matter experts was established to provide technical guidance and feedback for the study. This group was led by Planning and Development Services and included representatives from Communications, Transportation and Agriculture Services, Transportation Planning and Engineering, and Utilities. Given the complexity of the project and its potential to impact the County's day-to-day operations, future transportation and utilities projects, a multi-disciplinary working group from multiple departments was required to ensure the project's success.

A Steering Committee of senior leaders within Infrastructure and Planning Services Division was established to provide high-level oversight and define the direction for the study.

Environment, engagement, and engineering

The study was broken into the 3 E's, environment, engagement, and engineering. These three elements must be balanced when making decisions about Astotin Creek and have been captured in the following reports.

The State of the Watershed details the current state of the Astotin Creek watershed including wetlands and tributaries, soils, beaver activity, infrastructure, water quality, water quantity, management practices, climate, vegetation, wildlife, and identifies challenges and opportunities to ensure the creek is healthy.

The Drainage Master Plan defines the boundary of the watershed, maps the 20-year, 50-year, and 100-year floods, establishes the flood hazard, floodway, and flood-fringe areas for the 100-year flood and identifies issues and constraints to drainage. It also contains a high-level drainage concept for the watershed and outlines design parameters and criteria for future developments which includes a toolbox of best management practices, in addition to identifying maximum allowable discharge rates and stormwater conveyance into the creek.

The Community Engagement Summary provides our community stakeholders an explanation on how community feedback has been incorporated into the Astotin Creek Resiliency Study. Part of our communication objective was to increase knowledge, awareness and participation by industrial landowners, private landowners, agricultural producers, indigenous stakeholders, and our citizens in activities that restore and sustain the function of the Astotin Creek basin. Summer engagement focused on the current state of Astotin Creek and fall engagement focused on reporting the environmental and engineering details that inform the Resiliency Action Plan.

Resiliency Action Plan

The Resiliency Action Plan builds on the results from the State of the Watershed, Drainage Master Plan, and Community Engagement Summary and includes recommended actions to improve the creek's ability to withstand and recover from drought and flood without losing its ability to function or suffer damage that it cannot recover from naturally without intervention. There are six broad visions in the Action Plan that are as follows:

1. Healthy ecosystems
2. Integrated watershed management
3. Resilient infrastructure
4. Proactive management
5. Flood and drought preparedness
6. Educated, engaged, and empowered public

Actions under the six visions were prioritized based on the following criteria:

- Contribution to flood/drought risk reduction
- Environmental benefits
- Economic benefits and social benefits
- Capital costs
- Non-capital costs
- Funding availability/alignment and available resources
- Ease of implementation
- County autonomy for implementation
- Low-carbon resilience

Each criterion was weighted according to input from stakeholders as well as input from the Technical Working Group to align with the County's strategic priorities and interests of residents and other stakeholders, as communicated in the stakeholder engagement surveys.

Implementation planning is underway by the internal Technical Working Group which is examining which action items can be operationalized with minimal budget impacts, included as part of life-cycle replacement, or brought back to Council during budget considerations. Consideration is also being given to grant availability and landowner support for action items.

Council and Committee History

Feb. 8, 2022	The Priorities Committee received an update on the Q4 Astotin Creek Resiliency Study.
Sept. 7, 2021	The Priorities Committee received an update on the Q3 Astotin Creek Resiliency Study.
June 22, 2021	The Priorities Committee received an update on the Q2 Astotin Creek Resiliency Study.
March 30, 2021	The Priorities Committee received an update on the Q1 Astotin Creek Resiliency Study.
Oct. 6, 2020	The Priorities Committee received a presentation on the project plan for the proposed Astotin Creek Basin Water Management Study.
July 14, 2020	Council approved: THAT administration prepare, for Council's consideration by the end of Quarter 3 of 2020, an implementation plan, complete with agenda, study, work timeline and budget for holistic management of the Astotin Creek Basin within Strathcona County.

Other Impacts

Policy: n/a

Legislative/Legal: n/a

Financial/Budget: n/a

Interdepartmental: Transportation and Agriculture Services, Planning and Development Services, Transportation Planning and Engineering, Communications, and Utilities

Master Plan/Framework: Environmental Framework

Communication Plan

Various stakeholders were identified, including but not limited to Council, affected area residents and tenants, industry representatives, provincial and federal government partners and regulators, various County departments and Indigenous organizations.

A project website and email were established and can be found at <https://www.strathcona.ca/transportation-roads/planning-and-design/astotin-creek-resiliency-study/>. The website will be regularly updated with engagement opportunities and project progress.

Enclosures

- 1 Astotin Creek Resiliency Action Plan presentation
- 2 Astotin Creek Resiliency Action Plan report