

STRATEGIC INITIATIVE AND UPDATE**Astotin Creek Resiliency Study Q3 update****Report Purpose**

To provide Priorities Committee with an update on the Astotin Creek Resiliency Study.

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 is being undertaken to help manage current and future water quantity and quality issues. The key goals of the study are 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 has been established to provide technical guidance and feedback for the study. This group is led by Planning and Development Services and includes 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 projects, and utilities projects, a multi-disciplinary working group from multiple departments is required to ensure the project's success.

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

Environment, Engagement, and Engineering

The study is broken into the 3 E's, engineering, environment and engagement. These three elements must be balanced when making decisions about Astotin Creek. The actions in the resiliency plan will reflect community and stakeholder input, sound engineering practices, and the need for a healthy and resilient creek environment.

Engagement

The communication objective is 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. Engagement tactics to date included:

- Project introduction letter and email – early and mid-May
- Road signs – four locations along major rural routes in the north from May to November

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- Postcards (to approximately 700 residents and businesses in the Astotin Basin) – June 24 and August 17
- Social media – July 28, August 4, August 13
- Public engagement newsletter – May 18, August
- County Living Newsletter – July 15
- Scoop mixed-topic survey – June 22
- Stakeholder engagement invite letters and emails (78 mailed) – July 21
- Project e-newsletter – August 8
- Stakeholder engagement package (78 printed packages mailed and emailed) – August 5 – 6
- Public engagement calendar – July and August
- Online stakeholder engagement sessions – August 10 (afternoon and evening sessions)
- Online public engagement session – August 11
- Virtual open house and survey – August 11-31

Due to concerns around engagement timing, in addition to the live sessions held on August 10 and 11, the online engagement portal and survey remained open from August 11 to 31 to give flexible opportunities to participate. Paper copies of the engagement materials and survey were also provided to directly-impacted landowners to ensure that anyone who may not have access to the internet can provide feedback.

Engagement will continue this fall and focus on reporting the environmental and engineering details that inform the Resiliency Action Plan.

Environment

The environmental portion of the study describes the biodiversity, habitat and the form and function of Astotin Creek and addresses challenges to ecological function and the potential for ecological restoration. Field work, climate analysis and literature reviews were completed in July and additional information provided in the engagement is being incorporated.

Environmental fieldwork included surveys of the following:

- Amphibians
- Breeding birds
- Mammals
- Fish habitat
- Water quality
- Vegetation
- Wetland mapping
- Stream mapping
- Sub-watershed mapping

Engineering

Surveys of culverts, bridges, beaver dams and other structures, water levels and water flows were completed in July. Hydraulic modeling is underway and will include:

- Current flow
- Expected future flows
- Flood likelihood
- Flood frequency
- Flood hazard maps
- Flood inundation maps
- Identification of undersized bridges and culverts

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Further information, like residents' experience with historical flooding, gathered during the engagement, is also being incorporated.

Stormwater management planning will identify existing challenges and opportunities for future development and include a toolbox of best management practices in addition to identifying maximum allowable discharge rates and stormwater conveyance into the creek.

Budget and Timelines

The project is currently on budget but is approximately two weeks behind schedule due to access constraints during the fieldwork component of the study and technical review requirements for our online engagement. The first phase of engagement used a virtual open house, so the technical review was quite extensive to ensure that we met FOIP and technological requirements.

Council and Committee History

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| 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

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

Master Plan/Framework: Environmental Framework

Communication Plan

Various stakeholders have been 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 have been 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.

Enclosure

- 1 Astotin Creek Resiliency Study presentation