

Transportation Report to
SPC on Transportation and Transit
2021 July 21

ISC: UNRESTRICTED
TT2021-1095
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Transportation Environmental Performance and Reporting (2014-2020)

RECOMMENDATION(S):

That the Standing Policy Committee on Transportation and Transit receive this report for Corporate Record.

HIGHLIGHTS

- The Sustainability Strategy division of the Transportation department General Manager's office annually prepares reporting on its environmental programs, initiatives and performance results for the information of the Transportation Leadership Team, City administration, and Council. The 2020 environmental performance reporting marks the 7th and final consecutive year of reporting.
- *What does this mean to Calgarians?* The annual reporting presents details and insight to how transportation services are delivered in a way that contributes to quality of life and a healthy environment for Calgarians now and in the future.
- *Why does it matter?* The scope of this report includes 3 overlapping citizen priorities: A city that moves; A healthy and green city; and, a well-run city. The report presents "good news" on environmental stewardship and quality of life for current and future Calgarians.
- Environmental performance across the department continues to be very strong; regular audits of business units Transportation Infrastructure, Calgary Roads, and Calgary Transit verify the environmental management systems and processes in place are working well to ensure we meet our compliance obligations and realize our goals.
- Investments made in transit, cycling and pedestrian infrastructure in recent years enable Calgarians to be less dependent on personal automobiles (a key source of community greenhouse gas emissions), and energy efficiency and conservation initiatives helped to minimize emissions from fleet and facilities in an expanding transportation system.
- Management of road salts are an area of focus with continual improvements being made to minimize salt use and inadvertent release to the environment. Calgary Roads benchmarks well against other road authorities nationally in meeting its voluntary compliance targets.
- Biodiversity conservation measures addressed key habitats, invasive weeds, wild bees, migratory birds and wildlife with 2020 marking a pivotal shift for Calgary Roads in "naturalizing" boulevards and major roadways.
- In 2020 the transportation system in Calgary continued to expand, while service delivery was adapted to pandemic-related changes in travel patterns and mobility demand.
- Strategic Alignment to Council's Citizen Priorities: A healthy and green city
- Transportation Department Environmental Performance (2020) Report is included as Attachment 1.

DISCUSSION

A municipal transportation system has a large "footprint", with significant potential for both positive and negative effects on the natural environment, as it is highly influential to many aspects of environmental quality and community well-being that can be managed. These

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potential impacts present both risks and opportunities for The City of Calgary. A sustainable transportation system is one that meets the transportation and other needs of the present without compromising the ability of future generations to meet their needs (Transportation Research Board, 2004). The Calgary Transportation Plan (2009, updated in 2020) includes “Advance environmental sustainability” as one of its 7 primary goals, with its supporting objectives more specifically being to “protect air, land, water and biodiversity in the planning, design, operation and maintenance of all transportation infrastructure”. Additionally, there are policies, plans and strategies like the Climate Resilience Strategy, the Biodiversity Strategy, and the corporate Environmental Policy for which the Transportation department has a key role in implementation and collective accountability toward “A healthy and green city”.

Annual environmental performance reporting within the Transportation department describes the potential risks, opportunities, and results of effort and investment in these 6 areas:

- Energy management (and associated greenhouse gas emissions)
- Pollution prevention (air, land, water)
- Water management (water use efficiency)
- Waste management
- Biodiversity conservation
- Environmental management systems (ISO 14001:2015 standard).

Environmental management programs and activities are planned, executed, audited and continually improved within the Transportation department. Working within an organization where environmental management is decentralized, a small team of environmental specialist professionals leads the charge in these efforts that are widely embraced and supported across a department of approximately 4,000 staff and its contracted partners. This work is done in coordination with other specialist staff in Water Resources, Calgary Parks, Waste & Recycling Services, Corporate Analytics & Innovation, and Environmental & Safety Management and with additional consulting support as required. The environmental team and systems they use are key to on-the-ground implementation of policies and plans; they are influential to how staff and contractors plan and execute projects, manage risks, make decisions, and perform work. They serve to translate strategic goals and turn them into reality through well directed tactical efforts.

Likely of interest to City Council and the public are the social and economic aspects of the environmental sustainability efforts described in annual reporting; some examples of financial implications (cost savings) being explored are:

- Roadside Naturalization Pilot Project – current road right-of-way landscape maintenance costs approximately \$1,000,000 annually. The Council Innovation funded pilot is investigating how to reduce costs while creating additional value from rights-of-way by enhancing biodiversity and pollinator habitat.
- Gravel Lane Erosion Abatement Study – using a triple bottom line (TBL) assessment approach this collaboration of Water Resources and Transportation is focused on reducing sediment loss from gravel lanes to improve downstream water quality and reduce operational maintenance costs.
- Stoney CNG Transit Facility – selected as the 2020 winner of the Alberta Green Building Excellence for New Construction Award for its environmental sustainability and innovation in design, this facility and the growing fleet of compressed natural gas (CNG) buses enable us to optimize the use of a lower cost fuel for long-term operational costs

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savings while also reducing greenhouse gas emissions (compared to diesel fuel) and significantly reducing tailpipe emissions affecting local air quality for Calgarians.

Further details on the Transportation department's environmental performance for 2020, including some trend analysis for the period 2014-2020, are presented in Attachment 1.

STAKEHOLDER ENGAGEMENT AND COMMUNICATION (EXTERNAL)

- Public Engagement was undertaken
- Public Communication or Engagement was not required
- Public/Stakeholders were informed
- Stakeholder dialogue/relations were undertaken

Most of the effort and investment described above and in Attachment 1 was performed during routine design, development and operational work done across Transportation lines of business, in alignment with City policies, plans, and budgets that involved significant public communication and engagement.

Capital project delivery is communicated by way of media releases and online updates, while information on program delivery and environmental performance results more typically is shared with the public through corporate lines of communication such as corporate annual environmental performance reporting and budget accountability reporting.

Public communication and stakeholder engagement strategies are currently in development for the Roadside Naturalization Pilot Project and the Gravel Lane Erosion Abatement Study.

IMPLICATIONS

Social

Quality of life and quality of the natural environment are closely linked. Clean air, good river water quality, and low levels of pollution are important for the health and well-being of Calgarians. Measures taken to protect and enhance the environment in the development and operation of the transportation system equally benefit all Calgarians in the present, and in the future. Increased public transit and other transportation options expand citizens' ability to take part in a variety of economic, social and cultural activities within and between communities.

Environmental

This report focuses on the protection of air quality, water quality, soil and groundwater quality, and biodiversity in Calgary and region, in relation to transportation system development and operation. It is also concerned with energy management and associated aspects of climate change mitigation. Transportation department activities concerning climate change adaptation are addressed in corporate climate action reporting.

Economic

Environmental management programs, investments and activities undertaken by the Transportation department are routinely viewed through an economic resilience lens to identify opportunities for cost savings.

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Service and Financial Implications

Other:

\$1.1 Billion

The Transportation department, comprising 4 business units, collectively is responsible for planning, designing, building, operating (service delivery) and maintaining The City’s transportation system at a cost of \$1.1 billion in 2020. There is an environmental sustainability “lens” on all this transportation work and investment. With the over-arching goal of the department being to enable mobility of all types for Calgarians, there are myriad environmental considerations – significant risks, regulatory compliance obligations, and sustainability opportunities - for each of the different Transportation business units and lines of service.

The Sustainability Strategy division of Transportation (GM’s office) provides the direct support to each operational line of business, in addition to strategic advisory services to the General Manager and to Transportation Planning, for environmental management. The staffing and resources of this support services division are funded from a combination of operating funding (Roads, Transit, Transportation Planning) and capital funding (Transportation Infrastructure).

Working in close coordination and collaboration with other lines of business the Transportation department has achieved considerable costs savings and efficiencies through its environmental programs and investments, with the conversion of streetlights to LED luminaires (\$5M annual cost avoidance) being among the more financially significant initiatives and the reduction in natural gas use for LRT track switch heaters (\$120,000 annual cost avoidance) being among the most recent initiatives.

RISK

The environmental implications of the development and operation of The City’s transportation system present various regulatory, financial, and reputational risks (and opportunities) to the corporation. These risks and their management are detailed in Attachment 1.

ATTACHMENT(S)

1. Transportation Department Environmental Performance (2020) Report.

Department Circulation

| General Manager/Director | Department | Approve/Consult/Inform |
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