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## Transforming a Closed Landfill into a Sustainable Reuse Site: The Chinguacousy Beneficial Soil Reuse Site.

The Region of Peel's Chinguacousy Beneficial Soil Reuse Site (CBSRS) demonstrates a bold, sustainable approach to brownfield management by repurposing a former landfill into a strategic soil reuse hub. Historically, Peel's capital projects generated over 424,000 m<sup>3</sup> of excess soil annually, often hauled long distances at significant cost and environmental impact. In alignment with Ontario Regulation 406/19 and Peel's climate and efficiency goals, CBSRS was launched in August 2024 to accept clean excess soil with no tipping fees, reducing costs and greenhouse gas emissions while improving the landfill's environmental performance.

The project's objectives were:

Beneficial reuse of soil to improve the landfill cap and reduce leachate, safeguarding groundwater near provincially significant wetlands.

Cost and emissions reduction by shortening haul distances and eliminating tipping fees.

Digital innovation through SoilFlo, a real-time soil tracking platform ensuring compliance and operational efficiency.

Since beginning, CBSRS has beneficially reused over 255,000 m<sup>3</sup> of excess soil from Regional Capital Projects, saving 2.34 million km of transport, 935,000 litres of fuel, and reducing emissions by 2,522 tCO<sub>2</sub>e. Over the full duration, the project is projected to reuse 500,000 m<sup>3</sup> of soil, save 4.1 million km of hauling, and cut emissions by 4,395 tCO<sub>2</sub>e. These outcomes highlight CBSRS as a scalable model for municipalities seeking to transform closed landfills into sustainable reuse sites.

Working alongside MECP, TRCA, and the Town of Caledon, the Region of Peel's Environmental Team ensured adherence to regulations and advanced best practices for environmental protection. By integrating soil reuse with digital tracking and stakeholder engagement, CBSRS sets a new benchmark for brownfield regeneration; delivering economic, environmental, and operational benefits while advancing climate action goals.

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### Ryan Grzesiak Region of Peel

Ryan is an Environmental Advisor at the Regional Municipality of Peel with over 10 years experience in environmental consulting, project management and Environmental Site Assessment (ESA). Over his 15 years with the Region of Peel, Ryan has provided environmental expertise on development submissions, real estate acquisitions and has also been integral in the creation and implementation of water efficiency and energy / climate change strategies and initiatives. Since the implementation of O. Reg. 406/19 On-Site and Excess Soil Management, Ryan has worked with internal and external stakeholders to establish a soil management solution that addresses excess soil generated by capital works projects at the Region of Peel.

### Harinder Singh Region of Peel

Harinder Singh is an Environmental Advisor with the Region of Peel, bringing over 19 years of experience in environmental consulting across both the private and public sectors. Her background includes roles in environmental consulting firms and municipal government, with specialized expertise in Phase One and Two Environmental Site Assessments (ESAs), soil and groundwater remediation, Records of Site Condition (RSCs), and excess soil management.

As a Qualified Person (QP) under Ontario's Environmental Site Registry, she supports a wide range of municipal infrastructure programs. She plays a key role in updating procedures and protocols to comply with Ontario Regulation 406/19 including managing environmental documentation, regulatory registry submissions, procurement processes (RFPs and RFTs), and the oversight of Regionally owned beneficial reuse sites.