



City of
Peterborough

To: Members of the Airport Strategic Initiatives Committee

From: Kyle Bruce, Manager, Airport Administration

Meeting Date: June 13, 2024

Report: Airport Servicing and Alternative Wastewater Treatment Systems, Report ASIC 24-003

Subject

A report to provide information of servicing capacity at Peterborough Airport and overview of a presentation on behalf of Miranda regarding alternative wastewater treatment systems.

Recommendation

That the Airport Strategic Initiatives Committee approve the recommendation outlined in Report ASIC24-003, dated June 13, 2024, of the Manager, Airport Administration as follows:

That Report ASIC24-003 and the presentation be received for information.

Executive Summary

- The existing water and sanitary infrastructure installed in 2002 at Peterborough Airport presents several limitations in meeting the buildout projections within the Airport Master Plan.
- In summer 2024, the Airport is planning to initiate a budget transfer to fund a new project to create an Airport Servicing Master Plan that will include assessment of alternative servicing options.
- Alternative servicing options for Peterborough Airport, such as RBC technology will be assessed as part of the Airport Servicing Master Plan.

Background

Servicing at Peterborough Airport

Installed in 2002, the airport is serviced by a 75mm diameter potable watermain and a 75mm sanitary forcemain that connects the Airport's pumping station to the City's network. Since 2002, the number people on-site at the airport has increased from 150 to over 600 in 2022.

The airport fire suppression system is a pump pressurized system consisting of a water storage reservoir, system pumps, a 300mm diameter distribution main, and a network of hydrants. The reservoir capacity is approximately 500,000 litres of water.

The 2009 Airport Masterplan identified limitations in the airport's water and sanitary systems for accommodating the proposed development strategy, the recommendation to expand and improve the system remains unchanged in the 2022 Master Plan.

Since 2009, the following commercial facilities have been developed:

- 2013 – Seneca College Development 22,000 sq ft
- 2013 to 2014 – Hangar Expansion, 20,000+ sq ft
- 2014 – Hangar and Office Space 18,000 sq ft
- 2017 – Commercial Hangar Development 6500 sq ft
- 2019 – Two 45,000 sq ft hangars for aircraft finishing and storage, aircraft painting, and office space

In 2022, the City retained a consultant to prepare a functional servicing review to confirm that existing water and sanitary systems at the airport have adequate capacity to service a proposed development. Based on the study, the water system at peak hour demand represents 80% of capacity and the sanitary system is at capacity and occasionally supplemented by use of hydro vacuum trucks. It was noted that increasing capacity of the fire suppression system is considered a priority for the next phase of design.

Next Steps

In the summer of 2024, the Airport will initiate a budget transfer to fund a new project for an Airport Servicing Master Plan. This plan will assess water supply options, alternative wastewater management, and fire suppression systems to ensure they can support current and future operations and expansions.

Miranda Wastewater Treatment Systems

Viva Industries/Rainmaker Worldwide, a Peterborough based company has recently completed the acquisition of Miranda Water Treatment Systems, a modular wastewater treatment company. The Miranda system is based on proven Rotating Biological Contactor (RBC) technology.

Microorganisms thrive in the presence of oxygen and are responsible for breaking down organic matter in the wastewater. They play a key role in the decomposition of organic pollutants. In an RBC system, microorganisms form biofilms on the surface of the rotating discs or media. These biofilms provide a habitat for diverse microbial communities involved in the degradation of organic pollutants.

Miranda Water Treatment Systems are seeking projects in Canada and to establish Peterborough as their development center. They are in the process of working through regulatory requirements to establish a test bed in Ontario as the specific system is not certified for use in Ontario or Canada.

Strategic Plan

Strategic Pillar: Growth & Economic Development

Strategic Priority: Position the City as a destination of choice for claiming its fair share of innovative business and people in Ontario.

Aligns with the strategic pillar of growth and economic development.

Positioning the airport’s infrastructure for future development and opportunities will help establish the City as a premier destination for attracting innovative businesses and people in Ontario.

Engagement and Consultation

Through consultation, environmental services did not recommend an amendment to the Environmental Compliance Approval (ECA) for the sanitary systems in place at Peterborough Airport to accommodate a test bed site for Miranda's system.

Budget and Financial Implications

There are no budget and financial implications associated with this report.

Conclusion

The existing water and sanitary infrastructure installed in 2002 at Peterborough Airport presents several limitations in meeting the buildout projections within the Airport Master Plan. Since this time, the airport has experience significant growth and is now nearing capacity of the systems. In summer 2024, the Airport is intending to initiate a budget transfer to fund a new project to create an Airport Servicing Master Plan that will include assessment of alternative servicing options.

Attachments

Appendix A: Miranda Company and RBC Overview

Submitted by,

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Appendix A: Aerospace Marketing and Investment Attraction Strategy

Short Term Aerospace Marketing and Investment Attraction Strategy, 2024 to 2025					
Business Strategy	Objective	Strategy	Tactics	Audience	Timeline
Driving Business Development	Identify major players in emerging technology related to sustainable/clean/green aerospace and identify needs of businesses that would be good fit for development at Peterborough Airport	Undertake investment attraction research to generate leads for future investment at the Peterborough Airport in line with Clean, green, and innovative aerospace development strategy	<ul style="list-style-type: none">Targeted third party research and lead generation.Attend Farnborough International Airshow.	TBD	2024 Q2/Q3
	Attract business and commercial aviation development at Peterborough Airport	Establish a known presence and connection with industry representatives and employ strategies to draw attention to development opportunities at Peterborough Airport	<ul style="list-style-type: none">Develop an expression of interest for commercial hangar development.	Business and commercial Aviation Operators	2024 Q3/Q4
	Support workforce development at existing businesses located at the Peterborough Airport	Increase awareness of education, businesses, job opportunities at local aviation and aerospace businesses	<ul style="list-style-type: none">Development of landing page to promote job opportunities in aerospace sector.Develop careers in aerospace material for employment services school boards, etc.Advertising campaigns utilizing static and mobile assets.	Aspiring Professionals, Local and Regional Job Seekers	2024 Q2 to 2025 Q4

			<ul style="list-style-type: none">• Business profile series through local media• Creation of visual assets in partnership with stakeholders		
Improve Financial Resilience & Sustainability	Attract recreational aircraft (single prop, Cessna) tenants for T-Hangar	Develop a targeted Marketing & Communications plan to attract tenants. (dependent on hangar development timeline)	<ul style="list-style-type: none">• Targeted Marketing	Pilots / Aircraft Owners	2025 Q2
Improving awareness of Peterborough Airport as a Regional and Community Asset	Improve community awareness and engagement as it relates to the Peterborough Airport	Increase activity at Peterborough Airport	<ul style="list-style-type: none">• Organize a public event and business open house at Peterborough Airport.• Use media pitches to secure media/radio coverage opportunities.	Public, businesses, and regional stakeholders	2024 Q3
	Improve connectivity of regional aerospace businesses promoting synergies and opportunities.	Establish a connection between known aviation, aerospace, and supply chain businesses in the region.	<ul style="list-style-type: none">• Facilitate an aerospace supply chain business development meeting.	Public, businesses, and regional stakeholders	2024 Q4is