

The IAAE Canada

Spring 2013

AIRPORT MAGAZINE

An official publication of the International Association of Airport Executives Canada





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Contents



The IAAE Airport Magazine

Published for:
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Printed by:
Matrix Group Publishing Inc.
52 Donald Street, Suite 300
Winnipeg, MB R3C 1L6
Toll-free: (866) 999-1299
Toll-free fax: (866) 244-2544
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UP FRONT

- 5** A Message from IAAE Canada
- 7** Why Should You Be a Part of IAAE Canada?

FEATURES

- 9** On the Move: Pearson's People Moving Devices
- 14** Reay Creek Re-Do: A Remediation Project
- 16** Technology Take-On: Recycling & Reusing Reclaimed Aircraft De-icing Fluid
- 19** Corporate Corner: Tetra Tech Inc.

SPECIAL SECTION

- 12** Announcing the 8th Annual Facility, Operations & Airport Managers Conference
- 13** Announcing the 2nd Bi-Annual AAAE/IAAE Canada International Conference: The Evolution of the Airport & Air Carrier Industry
- 13** Announcing the Summer Winter Integrated Field Technologies (SWIFT) Conference & Trade Show

MEMBER PROFILE

- 20** Bernie Humphries – Calgary Airport Authority
- 22** Buyer's Guide



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Cuyler Green, A.A.E.
 Chair, IAAE Canada
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A Message from IAAE Canada

I have read a number of articles recently that talk about professions and professionals, and what makes a particular discipline a profession or what qualifies a person operating in a professional capacity has.

The definition of a profession—and, by extension, a professional—can be summed up as a specialized area of knowledge; the production of high quality work; recognition by your peers that you are qualified in that area of specialized knowledge and abiding by a codified standard of ethical behaviour.

Airport management can easily be described as a very specialized area of knowledge, in many ways more specialized than most. In my community, with a population of 80,000, there are several hundred medical doctors, engineers, lawyers, accountants and pharmacists. There are only five managers at the airport.

Airport managers in Canada produce high quality work and are proud of it. The safety record and the awards Canadian airports have won are a testament to that quality. Canada is regarded throughout the world as having a safe, efficient and effective air transportation system.

Becoming an Accredited Airport Executive (A.A.E.) is a process of peer review. At each of the three stages of the accreditation process, no less than

three senior Accredited Airport Executives have to come to a consensus agreement that the candidate has the requisite knowledge, experience and skills to proceed to the next stage and to then, ultimately, be awarded the A.A.E. designation. The number of accredited members, or members in the process of obtaining their accreditation, is very high in Canada compared to IAAE Canada's overall membership and of airport managers in the industry.

The fact that many of the senior executives in Canada have an A.A.E. designation demonstrates their commitment to being professional and the desire of the industry to be recognized as professionals.

Of the criteria for being a profession, having a code of ethics and standards of behaviour for members to follow is a critical aspect that sets a profession apart from being a group of people who share a common interest or activity, like a bridge club or a hockey team. All A.A.E.s in Canada have signed a code of ethics and it is available for review by all on our website. Publicly announcing our commitment to abide by a code of behaviour differentiates those who have a job at an airport, and those who see their role as protecting the public and its trust in our ability and capability to see them safely travel through the air transportation system.

The Accredited Airport Executive (A.A.E.) designation is recognized throughout North America and the world as the mark of an airport professional since it was inaugurated in 1954 by our parent

organization the American Association of Airport Executives (AAAE). The International Association of Airport Executives Canada (IAAE Canada) has been producing airport professionals in Canada for 19 years, and both organizations actively work toward advancing the state of our art and increasing the body of knowledge for all aspects of managing the very dynamic environment that is an airport.

There is no requirement by the Government of Canada to be an A.A.E. in order to hold a senior position at an airport in Canada. The fact that many of the senior executives in Canada have an A.A.E. designation demonstrates their commitment to being professional and the desire of the industry to be recognized as professionals.

Since the introduction of the A.A.E. designation in 1954, it has always been restricted to those persons who are actively involved in the day-to-day management of an airport. IAAE Canada has recognized that there are a large number of outside experts who contribute their knowledge and skills to operating and managing airports, but who do not work at an airport. To recognize those experts, IAAE Canada has created the Accredited Airport Professional (A.A.P.) designation.

The A.A.P., like the A.A.E., is based on a process whereby the candidate demonstrates they have attained the requisite level of knowledge in all aspects of airport management, have an article or paper published that adds to the industry's body of knowledge and have completed a prescribed number of training courses.

IAAE Canada is excited to be able to recognize the knowledge and skills of those who contribute to the operation of our airports and to give them a means to show to others their dedication to the industry and its progression. ★

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Pearson's People Moving Devices

By Iouri Moutine, B.Eng., C.E.T., A.A.E.

Modern air travellers expect a wide variety of services available at Toronto Pearson, making their travel experience enjoyable. Frequent business travellers, occasional travellers and family vacationers have different expectations about airport services; however, all will rely on the airport's people moving devices.

Pearson's people moving devices, such as elevators, escalators and moving walks, are one of the essential airport components facilitating vertical and horizontal passenger movements. Horizontal elevating devices feed gates and lounges; and connect main concourses with Terminal 1 and Terminal 3 piers and Terminal 3 Satellite, parking garages and APM train stations. Vertical devices provide fast and reliable movement of customers and materials.

The Greater Toronto Airports Authority's (GTAA) focus on providing a relaxing and welcoming atmosphere for airport customers implies that 368 elevating devices will be reliably available for public service 24 hours per day. Forming Pearson's elevating devices inventory—which is proportional to the size of a city just “condensed” in a few facilities—are 154 passenger and 13 freight elevators; 126 escalators; 65 conventional moving walks and two express walks; five baggage lifts and three dumb waiters and lifts for the disabled.

Beside the variety of elevating device types, Toronto Pearson has a “flavour” of various manufacturers, models and

technologies—Otis, Schindler, ThyssenKrupp, Northern, CNIM, Dover and BAE, just to name few of the manufacturers that have installations at Pearson. Toronto Pearson has got it all!

The two ThyssenKrupp 276-metre-long (two-and-a-half football fields!) express walks are some of the latest additions to the Pearson's elevating devices inventory. The express walks use innovative technology that speeds up during the journey, increasing to a speed of 2 metre/second, which is three times faster than conventional moving walks. Units serve, on average, 6,000 international passengers per day arriving and departing from Toronto Pearson, Terminal 1, Pier F.

Elevating devices being out of service negatively impacts terminal operation and the level of airport customer service. There is no such time at the airport when elevating devices can be taken out of public service with no affect to airport operation at all. Although Toronto Pearson airport passenger traffic slows down between 12:00 a.m. and 3:00 a.m., the airline and terminals' staff activity increases due to work on early flight departures, terminal and gate cleaning, material movements, terminal projects and alteration work. Toronto Pearson never sleeps!

GTAA's facility maintenance is proactively focused on reliability of the equipment and sustainable service by scrutinizing quality and completion of preventative maintenance tasks and building a comprehensive on-site spare parts inventory,



Iouri Moutine, B.Eng., C.E.T., A.A.E.

which becomes essential to minimizing devices' downtime and maximizing uninterrupted service time. Frequent reviews of call-back statistics identifying “bad actors” lead to further evaluation of the technical and operational issues to establish long-term corrective measures. A new elevating devices' performance-based “all inclusive” maintenance contract took effect in April, 2011, and was crafted to include all requirements to comply with ASME17/B44 and manufacturers' maintenance recommendations.



The CNIM moving walk at the south pedestrian bridge to Terminal 1.



The CNIM escalators at Terminal 1 in Toronto Pearson.



The ThyssenKrupp escalators at the Terminal 1 APM train station.



The ThyssenKrupp escalators at the Terminal 1 parking garage.

The three categories of elevating devices at Toronto Pearson—critical, impacting customer experience and regular—are based on criticality to airport operations; availability of contingencies and degraded modes; seasonal airline schedules considerations; high traffic holiday seasons and employee and material movements inside facilities. With this considerable number of variables in play, a great deal

of planning, coordination and consistent validation with terminal and airline operating schedules is required!

With customer-centric commitments, the GTAA posts “out-of-service” signage informing airport customers about the reasons for downtime and expected time to be back in service. At the same time, information about unplanned work is also logged with the Integrated Control

Centre (ICC) through a web-based White Board™ application accessible by airport stakeholders.

Reacting to the changes in airport operations, facility maintenance at Toronto Pearson continually seeks efficiencies and adopts maintenance programs based on equipment usage. Continuing with reduced maintenance frequencies for the out-of-service units (i.e. Terminal 3 Satellite

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units, Terminal 1 bus-bay units, etc.) allows the restoration of public service on short notice and avoids exorbitant re-commissioning costs. For the past two years, 26 elevating devices have been included into the reduced maintenance category, with savings in maintenance costs of over \$30,000 per year.

On the other hand, GTAA carefully reviews current airport conditions to increase maintenance on the escalators and moving walk units, which are heavily used by the public and employees at APM train stations, Terminal 1 South and West pedestrian bridges, and a pedestrian bridge to the Sheraton Hotel at Terminal 3. These are critical units servicing connecting passenger traffic between the terminals and employee shift changes around the clock.

All of Toronto Pearson's maintenance programs for elevating devices follow the CSA B44 code and TSSA provincial regulations. GTAA has engaged a third-party inspection company to monitor code compliance for all elevating devices. Day-to-day operational monitoring by licensed elevator inspectors helps identify potential concerns beforehand. Also, GTAA has

developed a computerized web-based Elevator Inspection Board™ (EIB) to log and track deficiencies for all people moving devices. The interactive system is based on input from stakeholders, including regulatory inspection authorities, maintenance contractors and equipment owners.

...providing a relaxing and welcoming atmosphere for airport customers implies that 368 elevating devices will be reliably available for public service 24 hours per day.

GTAA also counts on computerized system technology to monitor elevating devices via the LiftNet™ system connecting Terminal 1 elevating devices and providing real-time equipment status. Alarms, faults and events, like "e-stops", "out of service" devices, etc., are displayed in text and graphical format, or paged to users. Such events are monitored by the ICC, which dispatches authorized elevator

personnel to restart the units. GTAA plans on expanding this system to Terminal 3 under the capital enhancement project.

To help facility maintenance personnel know that all maintenance plans and schedules are successful, GTAA continually measures the operational and maintenance performance of elevating devices. System and service availability, mean time between failures, and mean time to restore are several of the operational benchmarks measured monthly. Performance reports take into account contractual obligations, regulatory requirements and downtimes. Attainment of the regulatory and non-regulatory maintenance tasks is also tracked and measured monthly using GTAA's Airport Maintenance Management System.

This brief overview of elevating devices maintenance at Toronto Pearson demonstrates GTAA's strategy to be more competitive in airport operations by focusing on delighting airport customers through excellence in service. ✈

Jouri Moutine, B.Eng., C.E.T., A.A.E., is Manager of Mechanical Systems Facilities for the Greater Toronto Airports Authority.

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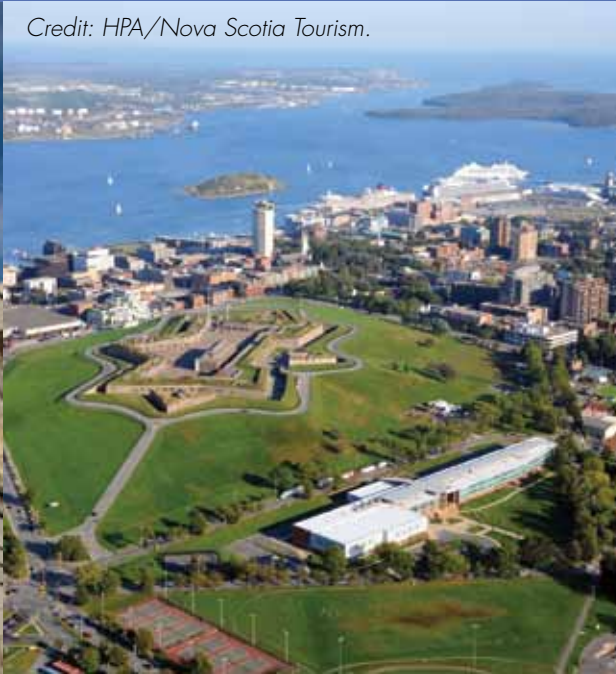
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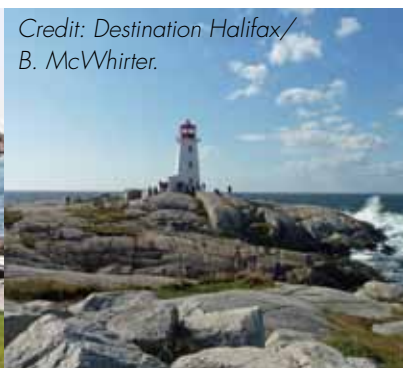
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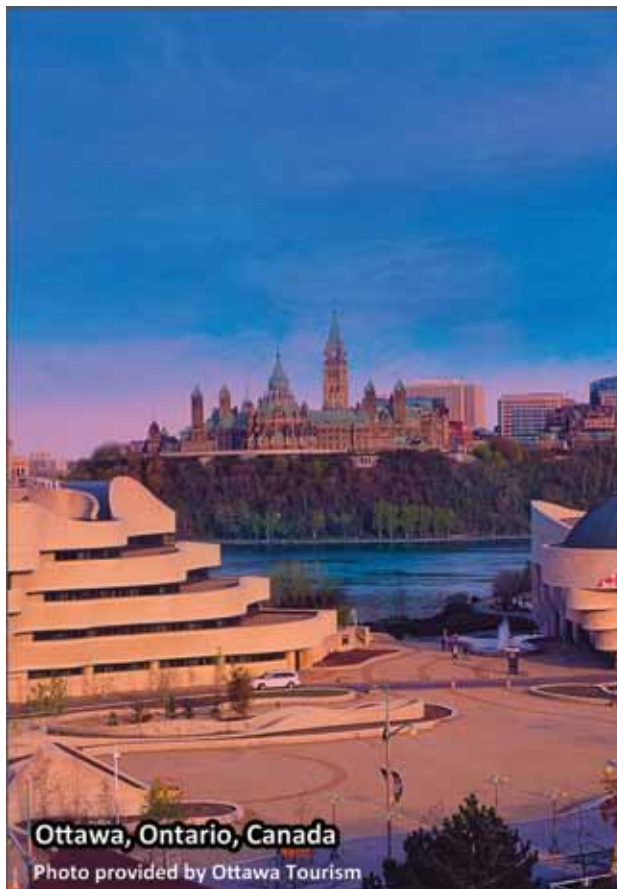
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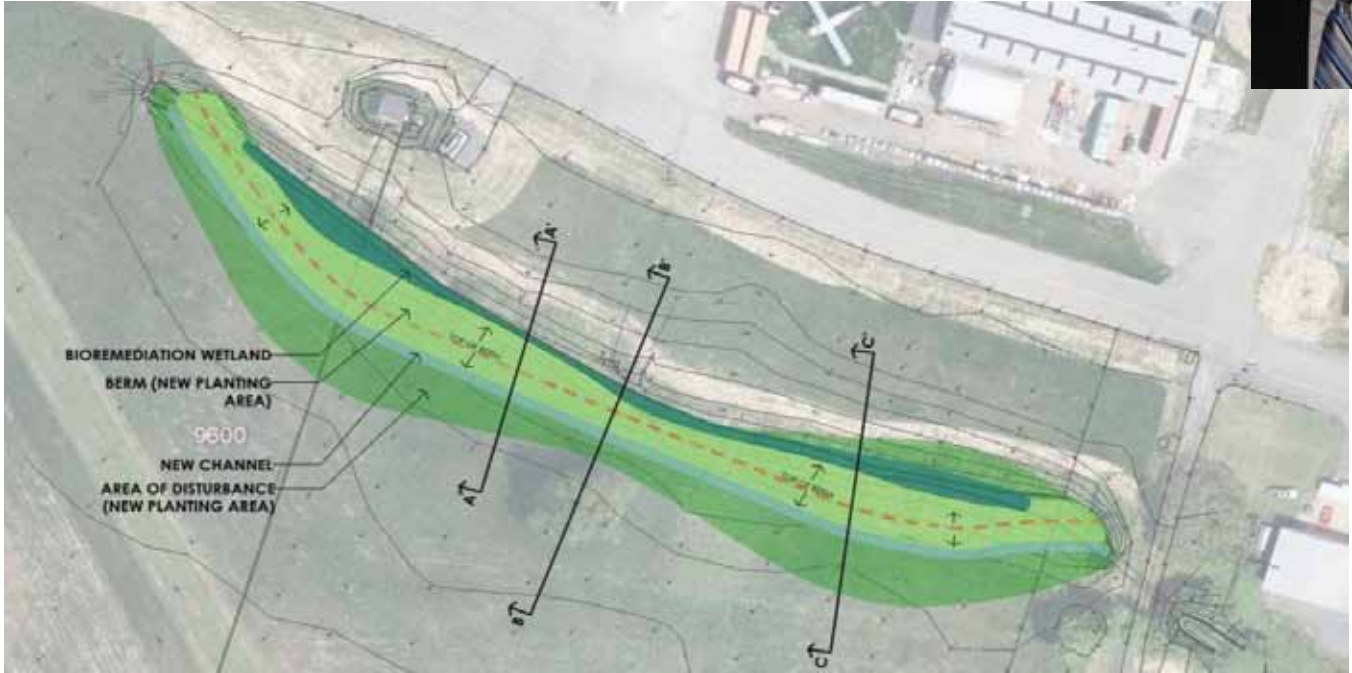
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Reay Creek Re-Do: A Remediation Project



By James Bogusz, Director, Airside Operations, Technology & Environment, Victoria Airport Authority



The concept plan for the Reay Creek Remediation Project.

The Victoria Airport Authority has substantially completed a major restoration project for Reay Creek. Reay Creek is a fish-bearing stream that runs through the airport's east industrial area, through Sidney, BC and then drains into Bazan Bay. This remediation project has been initiated to improve

stormwater quality from historically contaminated areas of the creek.

The primary goals of the project are to:

- Reduce heavy metal and other pollutant concentrations in stormwater runoff from the East Industrial Area and the eastern half of the airport property;
- Incorporate fish and riparian habitat features for potential fish habitat restoration in Upper Reay Creek in the future;
- Improve water quality while limiting bird and wildlife conflicts with airport operations; and
- Provide for emergency storage to limit the impact of contaminant spills or other emergent events.

The project consists of a new 200-metre-long diversion channel that will



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The Reay Creek Remediation Project as of September 1, 2012.



The Reay Creek Remediation Project as of September 2, 2012.



The Reay Creek Remediation Project as of October 2, 2012.



The Reay Creek Remediation Project as of October 3, 2012.

incorporate aquatic habitat features such as riffles, rocks and riparian planting to provide favourable habitat for aquatic species, such as invertebrates, amphibians and even fish. The new channel will be used to divert stormwater drainage around the existing creek channel, which will be converted to a bio-remediation wetland for drainage from the East Industrial Area.

The wetland will help filter out stormwater pollutants, thus improving water quality. In addition, water control gates

will be installed at the wetland's outlet as a protective measure to capture any unforeseen contaminant spills should they occur. During construction, contaminated materials from the existing creek channel will be removed.

Construction has been completed, with planting to commence later in the fall of 2013. An ongoing monitoring program will measure the effectiveness of the remediation project, and adaptive management strategies will be implemented to

improve the effectiveness of the remediation project as required.

The project design team was led by Kerr Wood Leidal Associates Ltd., with SLR Consulting Ltd. and Murdoch de Greef Inc. providing environmental and landscape consulting, respectively. Draycor Construction Ltd. was the lead construction contractor. ✈

James Bogusz is Director of Airside Operations, Technology & Environment for the Victoria Airport Authority.

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Technology Take-On: Recycling & Reusing Reclaimed Aircraft De-icing Fluid



Airports and airlines are beginning to take serious steps toward the recycling and reuse of reclaimed Aircraft De-icing Fluid. By Walter Moran

Several equipment manufacturing companies have developed spent aircraft de-icing fluid (SADF) collection and process systems, which have been tested and proven effective over the past decade.

Airports and airlines have worked with the manufacturers to purchase or at least trial equipment for collecting SADF, but for the most part, and until recently, very few have actually moved toward the recycling and/or reuse of SADF. Generally, the collected fluid has been cleaned, dewatered and sold into secondary markets and,

in some circumstances, sometimes has been transported off-site for destruction or pumped to local sanitary facilities. A few airports have installed wetlands as a means of destroying SADF.

As with anything, time brings improvements, and recycling equipment for SADF has seen its share of improvements during the past years, to the point where cost-effective SADF recycling and reuse is becoming more and more feasible as time passes. In addition to improved equipment lowering operating cost, the improvement to our

environment by recycling and reuse saves transportation cost of ADF deliveries as well as transportation of SADF to off-site locations for secondary markets or destruction.

There are several types of equipment in use for SADF recycling and the following items are what should be considered as an overall equipment plan when considering a recycling and reuse program. ✈️

Walter Moran is Operating Vice-President for NavStar Aviation Environmental Inc.

THE BASICS

Pre-treatment using multimedia filtration is a common practice that will help you avoid major issues during your recycling/reuse program. Several companies manufacture multimedia systems that can be fully-automated to link with other processes required to meet your goals. It is important to automate as much as possible to help reduce cost over the long-run.



Multi-media pre-filtration.



A pre-concentrator filtration system.



A pre-concentrator evaporation system.

PRE-CONCENTRATION

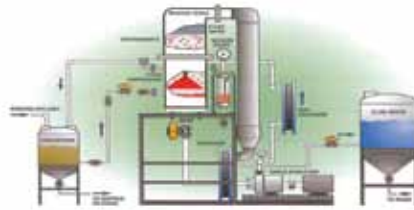
In several circumstances, the SADF collected can have a very low concentration of glycol. This low concentration requires a method to raise the concentration to a minimum of 20 per cent prior to the next step.

Filtration equipment, such as High Pressure Reverse Osmosis, or pre-concentrators are a good choice of equipment to raise the concentration in preparation for the final step of processing the SADF so it can be reused to manufacture ADF.

If the objective is to concentrate the fluid to a little over 50 per cent, a pre-concentrator may be all that is required, as some pre-concentrators will actually concentrate to that percentage.

FLASH DISTILLATION

After use of the pre-treatment and pre-concentration, distillation is an effective method to raise the SADF to 100 per cent concentration. Higher concentrations fed to a distillation tower will help manage cost and reduce production time accordingly.



A diagram for flash vacuum distillation equipment.

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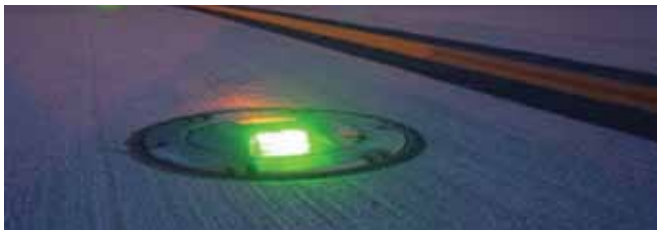
Corporate Corner: Tetra Tech

By Richard Kohler, P.Eng., Vice-President, Airports/Ports & Harbours, Tetra Tech



We live in a complex world. Just as the aviation industry strives to keep up with technological changes, we, too, are expanding and evolving. Tetra Tech is a leading provider of innovative solutions for the aviation industry, and provides global resources at a local level with more than 14,000 employees worldwide. Tetra Tech's Canadian roots are traced from the well-respected firms of EBA, BPR, Fransen and Wardrop. We have grown to become one of the largest full-service engineering and consulting firms in Canada with more than 4,000 employees working from over 50 offices across the country.

We have been a committed member of IAAE Canada since 2001, and actively support the aviation industry as a member of Airport Consultants Council, AAAE, and Airports Council International.



Operating in the field of airport planning and engineering since 1982, Tetra Tech's Aviation Practice has completed hundreds of projects throughout Canada, from remote Arctic facilities to major international airports. Our expertise in this sector has led us to be recognized as a leading consultant for airport authorities across the country. Our team actively works with Transport Canada, NAV CANADA, CATSA, Territorial and Provincial Transportation Departments, major resource industries, and the Department of National Defence.



Our transformation to Tetra Tech has brought us exciting opportunities to provide additional services to our clients. Tetra Tech's Aviation Practice can now offer a full range of consulting services relating to NextGen approach designs, planning, engineering (air-side/groundside infrastructure, including buildings), electrical and

navaid services, transportation systems, environmental management, regulatory oversight, safety management systems and airport operations. Our specialized aerospace team is a leader in satellite NextGen technology, including Performance Based Navigation (PBN) systems.

We look forward to continuing our relationship with the aviation industry. ✈️



FOR MORE INFORMATION:

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Bernie Humphries, Vice-President of Operations, Calgary Airport Authority.



Bernie Humphries – Calgary Airport Authority

Prior to his graduation from the University of Manitoba in 1982, IAAE Canada member Bernie Humphries did not foresee a future for himself in aviation.

“At the time, I was in Business Administration and I had expected to become a

sales representative for a major distribution company,” says Humphries, now Vice-President of Operations at Calgary Airport Authority. “I actually had no intention to work in the airport business while attending university.”

However, after the completion of his degree, Humphries found himself entering the industry as a Supervisor of Budget and Administration for Transport Canada, based out of Winnipeg, MB. It was not long, though, before he moved west into Saskatchewan, becoming the Manager of Finance and Administration at the Saskatoon Airport.

“Working at Saskatoon Airport was huge in my career growth,” says Humphries. “The rounding and experience that I received at a mid-size airport allowed me to apply for—and be successful on—the various focus of jobs at Calgary.”

Humphries also credits IAAE Canada for being a part of his career success, noting the important role the association plays in bringing together the national airport industry.

“We are a relatively small group of people within Canada,” says Humphries. “Through my involvement in IAAE Canada, I have been able to connect to people from across the country. I have shared information and learned a lot from them, and this has helped me in performing well in the various jobs I have held throughout my career.”

Humphries is looking forward to a number of new projects coming up at the Calgary Airport, including the new runway and International Terminal presently under construction. The runway is expected to open in 2014, with the International Terminal opening the following year.

“The opening of a new runway or terminal building is an infrequent event for an airport,” says Humphries. “These are huge projects and, at Calgary, we are doing both. My role will be to ensure the



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operational readiness and activation of the new facilities goes seamlessly. It is a big order, is extremely important, and is very exciting.”

After three decades on the job, Humphries has seen a lot of things evolve in the aviation industry. Airlines have come and gone, technologies are forever altering the way that airports operate, regulations have changed, and—for the most part—Transport Canada has been removing itself from the business of running airports.

“Through my involvement in IAAE Canada, I have been able to connect to people from across the country. I have shared information and learned a lot from them, and this has helped me in performing well in the various jobs I have held throughout my career.”

“I have been part of the transition of operation of the airport business from the Federal Government to not-for-profit corporations and it has been a very successful model,” says Humphries. “I would like to see a further reduction—if not elimination—of the airport rent structure that many airports are tied to. It’s an unnecessary burden that only puts more costs on the users and places Canadian Airports at a competitive disadvantage to airports south of the border.”


Throughout his career, Humphries found generating stakeholder satisfaction to be the most rewarding part of his job, receiving positive feedback on the efficiency of the Calgary Airport operation.

“I believe that I have helped develop operational procedures and programs that provide a better experience for those that travel through our airport on a daily basis,” says Humphries. “I hope that the things we have done at Calgary to improve operational efficiency—and have


shared throughout the industry—has been valuable to my peers.”

As Humphries looks to the future of the airport business, he is encouraged by the dedication and the passion of the people entering and currently working in the industry.


“It is very rewarding to see my employees very engaged and excited about their jobs,” says Humphries. “It is especially gratifying to see the enthusiasm and excitement of the younger generation working within this business as they are the future leaders of our industry.” ✈



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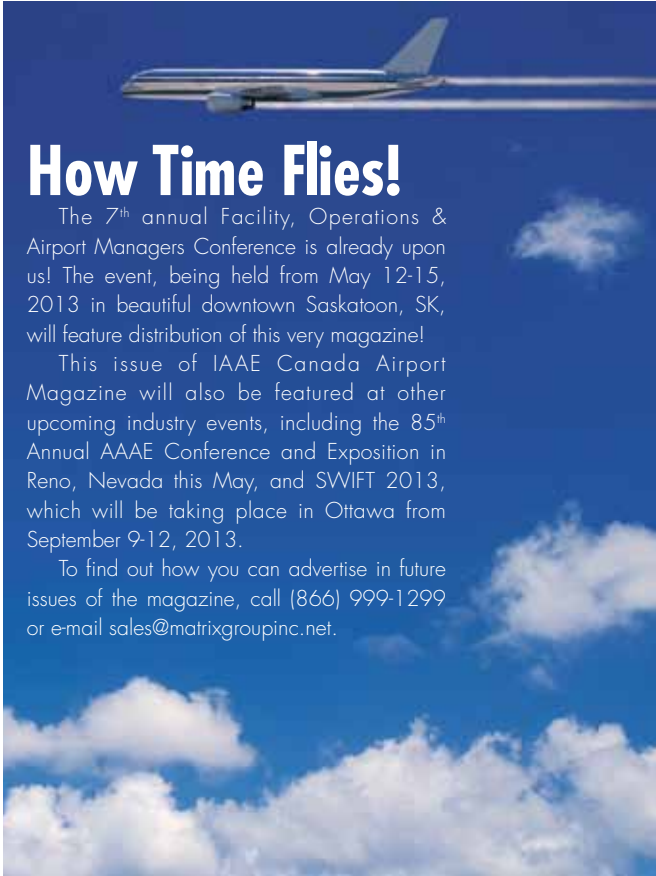


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The 7th annual Facility, Operations & Airport Managers Conference is already upon us! The event, being held from May 12-15, 2013 in beautiful downtown Saskatoon, SK, will feature distribution of this very magazine!

This issue of IAAE Canada Airport Magazine will also be featured at other upcoming industry events, including the 85th Annual AAAE Conference and Exposition in Reno, Nevada this May, and SWIFT 2013, which will be taking place in Ottawa from September 9-12, 2013.

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