



2016 Environmental Performance Report

Since 1997, the Authority has been updating the work that was initiated by Transport Canada prior to the lease transfer in 1997. The first comprehensive Environmental Performance Report was published in 2007. It was followed by other published reports in 2008, 2010, 2011, 2012, 2013, 2014 and 2015. The reports outline performance with objectives and accomplishments or improvements required to meet the ultimate objective of minimizing situations that may impact the environment, keeping in mind that safety is the first priority.

STORMWATER QUALITY		
Aircraft de-icing (use of ethylene glycol)		
2016 Goal <ul style="list-style-type: none"> • Zero exceedances 	Performance <p>In 2015, a new biotreatment system was constructed. As reported, in 2015, ten exceedances to the Glycol Guideline (100 mg/l) occurred. Operations and additional maintenance were completed and no off-property exceedances were recorded in 2016 at the same outlet. One exceedance to the criteria was recorded in 2016; it was at a different outlet where a control valve failed. As soon as noticed, the valve was repaired and no other exceedances to the Guideline occurred.</p>	2017 Goal <ul style="list-style-type: none"> • Zero exceedances Method <ul style="list-style-type: none"> • Train staff and continue to monitor and rectify any identified issue(s)
Fuelling, equipment maintenance, aircraft preparation		
2016 Goal <ul style="list-style-type: none"> • Try to ensure no off-site impact and immediately remediate any spill that occurs 	Performance <p>In 2016, there were 0.95 reported spills per 1000 aircraft movements (compared to 0.91 in 2015, 0.74 in 2014, and 0.72 in 2013). No off-site impact occurred. All reported spills were on a hard surface and were cleaned prior to entry into soil, surface water or ground water. The increase in reported spills is deemed to be related to the increase of knowledge and monitoring as part of the Safety Management System.</p>	2017 Goal <ul style="list-style-type: none"> • Ensure no off-site impact • Remediate any spill that occurs on-site Method <ul style="list-style-type: none"> • Equipment maintenance and employee awareness
Construction and demolition of buildings		
2016 Goal <ul style="list-style-type: none"> • No significant environmental impacts 	Performance <p>In 2016, major exterior projects included the rehabilitation of part of the main apron (apron 1) and taxiway Bravo, the demolition of a barn and construction of Non-Passenger Screening Facilities (on-going in 2017). All wastes were recycled to the extent possible during the above-noted work.</p>	2017 Goal <ul style="list-style-type: none"> • No significant environmental impacts Method <ul style="list-style-type: none"> • Complete environmental assessments as early as possible, apply identified mitigation measures and follow industry standards related to the environment

GROUND WATER QUALITY

Former fuel storage tanks, use of de-icing products

<p>2016 Goal</p> <ul style="list-style-type: none"> • Follow the Airport Authority's ground water monitoring program and adapt as required 	<p>Performance</p> <p>The ground water monitoring program was generally followed. This year, the focus was on de-icing products as no major hydrocarbon spills occurred. No significant issues were found.</p>	<p>2017 Goal</p> <ul style="list-style-type: none"> • Continue with the ground water monitoring program <p>Method</p> <ul style="list-style-type: none"> • Update and continue to follow the ground water monitoring program accordingly <p>Note: the ground water monitoring program is dynamic and varies as issues arise</p>
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AIRCRAFT NOISE MANAGEMENT

Landing, take-off and over-flight of aircraft

<p>2016 Goals</p> <ul style="list-style-type: none"> • Continue to monitor noise complaints and identify reoccurring issues¹ • Work with NAV CANADA to minimize the impact on our neighbours 	<p>Performance</p> <p>In 2016, there was 2.25 complaints per 1000 aircraft movements (compared to 1.0 in 2015, 0.62 in 2014, and 0.61 in 2013). In 2016, we received 262 complaints; 136 complaints were related to small aircraft from 32 persons. One person called 31 times related to departures on Runway 32. The number of calls has been increasing for the past years mostly due to a change in traffic patterns related to the runway, taxiway and maintenance work.</p> <p>There have been no noise abatement procedure violations since 2005.</p> <p>Note: circuits are flown visually and minor deviations can be expected. The flights can also be deviated due to control tower requirements.</p>	<p>2017 Goals</p> <ul style="list-style-type: none"> • Continue to monitor and respond to noise complaints, discuss with the local residents, and identify reoccurring issues • Work with NAV CANADA to ensure flights follow published procedures <p>Method</p> <ul style="list-style-type: none"> • Respond to inquiries in a timely manner, work with the City of Ottawa to ensure that Ottawa Airport Operational Influence Zone (OAOIZ) principles are followed and work with NAV CANADA to minimize noise impact in populated areas, where possible
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HAZARDOUS WASTE		
Waste materials from building and equipment maintenance		
<p>2016 Goal</p> <ul style="list-style-type: none"> • Continue to recycle 100% of hazardous waste 	<p>Performance</p> <p>In 2016, all hazardous waste was recycled including 1008 kg of batteries, 770 kg of fluorescent lights, 35 kg of other lamp bulbs, 78 kg spent ballasts, 90 kg of aerosol cans, 240 kg of flammable liquid and 20 kg of corrosive material. In 2016, we recycled 6414 kg of electronic waste. Tires and used oil were also recycled.</p>	<p>2017 Goal</p> <ul style="list-style-type: none"> • Continue to recycle 100% of hazardous waste <p>Method</p> <ul style="list-style-type: none"> • Ensure that recyclable hazardous waste is recycled and monitor recycling efforts
ENVIRONMENTAL ASSESSMENTS		
Projects that would trigger the Canadian Environmental Assessment Act (CEAA 2012)		
<p>2016 Goal</p> <ul style="list-style-type: none"> • Continue to assess projects as per the 2012 Canadian Environmental Assessment Act 	<p>Performance</p> <p>All projects that may impact the environment have been screened. Interior projects such as building renovations or refurbishment were assessed internally during weekly Airport Technical Committee and project meetings.</p>	<p>2017 Goal</p> <ul style="list-style-type: none"> • Continue to assess all projects following CEAA 2012 <p>Method</p> <ul style="list-style-type: none"> • Monitor projects through the Airport Technical Committee Facility Alteration Permit (FAP) process and Airport Authority project meetings • Complete the required environmental assessments
WASTE REDUCTION/RECYLING		
Waste generated from aircraft, restaurants, maintenance facilities and public and office areas		
<p>2016 Goal</p> <ul style="list-style-type: none"> • Increase the overall diversion rate to 35%, excluding hazardous waste 	<p>Performance</p> <p>In 2013, a waste diversion rate of 30% was achieved (compared to 18% in 2006). Based on hauling records, the diversion rate was approximately 33% in 2016. Verification waste audits were completed between 2014 and 2016. The Authority is anticipating a change in recycling requirements when new concession agreements are reached. This will likely positively impact the diversion rate.</p>	<p>2017 Goal</p> <ul style="list-style-type: none"> • Increase overall diversion <p>Method</p> <ul style="list-style-type: none"> • Work with airlines, concessions and the public <ul style="list-style-type: none"> ○ Increase awareness and create waste reduction programs ○ Work with airlines and regulators to be able to recycle waste from flights that originate from across the Canadian border ○ Integrate waste management in all new terminal leases • Complete a waste audit in 2017

AIR QUALITY

Vehicles, aircraft and buildings

2016 Goal

- No increase in greenhouse gas from Airport Authority activities

Performance

In 2015, greenhouse gas emissions controlled by the Airport Authority were re-estimated following the Airport Council International (ACI) Airport Carbon Accreditation Program, which was adopted in 2014. From 2015, GHG emissions are now calculated on emissions related to actual airport activities. Previously, some calculated emissions included other emission sources (other than Scope 1 and 2 emissions). Scope 1 and 2 emissions are related with emissions that can be controlled by the airport. The new calculation process follows the Airport Carbon and Emission Reporting Tool (ACERT) that is endorsed by the International Civil Aviation Organisation (ICAO). Following the ICAO approved calculation tool, the 2016 carbon emission from Airport Authority managed operations were an estimated 5,305 tonnes (compared to 5,728 tonnes in 2015 (ACERT), 10,603 tonnes in 2014, and 10,520 tonnes in 2013). There are two reasons for the drastic reduction. The first is not counting the glycol use, as it is not a direct emission source from the airport operation (emissions are generated by the airlines) and the second is the reduction in emission factors due to the change in electricity generation from coal and gas to nuclear and other renewable resources. In 2016, we focused on reducing GHG emissions and achieved Level 1 Airport Carbon Accreditation.

Several projects have been completed or are underway to reduce GHG emissions. These include changing the lighting in the Parkade, changing the chiller system, changing to LED taxiway lighting, reduction on sweeper engine running time due to the installation of electrical plug-ins, motion sensors for offices and boardrooms, variable speed fans for ventilation, etc.

Please note that airport-related greenhouse gas emissions are weather dependent and also dependent on the manner in which electricity is generated in Ontario (i.e. nuclear, coal, wind, etc.).

2017 Goal

- Obtain Level 2 Airport Carbon Accreditation
- Keep reducing greenhouse gas emissions

Method

- Continue to monitor and implement feasible greenhouse gas reduction initiatives



GREEN INITIATIVES		
Procurement		
2016 Goal <ul style="list-style-type: none"> • Encourage green alternatives products 	Performance In 2006, the Airport Authority changed its cleaning and maintenance products to green products where possible. Since then, the practice has continued. Our effort to seek greener alternatives also continues.	 2017 Goal <ul style="list-style-type: none"> • Continue looking for green alternatives to products Method <ul style="list-style-type: none"> • Continue to promote green procurement
AWARENESS		
Training		
2016 Goal <ul style="list-style-type: none"> • Complete awareness training 	Performance Training has been completed on required aspects based on specific needs. An awareness and training matrix was developed and is followed.	 2017 Goal <ul style="list-style-type: none"> • Continue training on relevant SOPs Method <ul style="list-style-type: none"> • Follow training matrix
BUILDING EFFICIENCY		
Water use		
2016 Goal <ul style="list-style-type: none"> • Reduce consumption whenever possible 	Performance Water use varies from year to year based on factors such as the number of passengers and the weather. In 2016, water use for the entire campus was 0.7 m ³ per 1000 passengers compared to 0.8 m ³ in 2015. The airport strives to reduce its water use where possible.	 2017 Goal <ul style="list-style-type: none"> • Reduce consumption whenever possible Method <ul style="list-style-type: none"> • Continue to monitor for new technologies that improve efficiency and maintain a proactive maintenance schedule, which enhances the overall efficiency of the building's mechanical systems

Electricity use			
<p>2016 Goal</p> <ul style="list-style-type: none"> • Reduce consumption whenever possible 	<p>Performance</p> <p>Electricity use varies from year to year based on factors such as the number of passengers and the weather. In 2016, electricity use was 5.83 kWh per passenger (compared to 5.73 kWh in 2015, and 5.73 kWh in 2014, and 5.76 kWh in 2013).</p>	▶	<p>2017 Goal</p> <ul style="list-style-type: none"> • Reduce consumption whenever possible <p>Method</p> <ul style="list-style-type: none"> • Continue to monitor for new technologies that improve efficiency and maintain a proactive maintenance schedule, which enhances the overall efficiency of the building's mechanical systems
Natural Gas use			
<p>2016 Goal</p> <ul style="list-style-type: none"> • Reduce consumption whenever possible 	<p>Performance</p> <p>Natural gas use varies from year to year based on factors such as the number of passengers and the weather. In 2016, natural gas use was 13.5 m³ per square metre of PTB floor area (compared to 12.51 m³ in 2015, 13.9 m³ in 2014 and 11.7 m³ in 2013).</p>	▶	<p>2017 Goal</p> <ul style="list-style-type: none"> • Reduce consumption whenever possible <p>Method</p> <ul style="list-style-type: none"> • Continue to monitor for new technology that improves efficiency and maintain a proactive maintenance schedule, which enhances the overall efficiency of the building's mechanical systems

The Authority will continue to strive to achieve these goals and objectives. Some of the goals and objectives are difficult to realize as there are unforeseeable factors and variables. Special attention is given to waste reduction and greenhouse gas emissions.

- 1 OMCIAA has limited control over the number of complaints.
- 2 For results prior to 2013, please contact the OMCI.