

ANNUAL REPORT

20
23

Prepare. Prevent. Stay Safe

Environmental Health and Safety

Office of Risk Management



Carleton
University



Message from the EHS Team



Environmental Health and Safety (EHS) reduces risk to the Carleton University community through our focus on proactive hazard management and regulatory compliance while engaging our stakeholders at every opportunity. We strive everyday to keep our people safe.

Pursuing Excellence - By the Numbers

67

Respiratory fit tests completed

88

Ergonomic assessments performed

510

CU Worksafe reports received

0.05

Lowest LTI Injury rate in the last 10 years

792

Hazards identified by the JHSC

11

Additional defibrillators installed

In 2023, there were three critical injuries on campus. All were related to slip and falls, but none were attributed to environmental conditions. Our WSIB statistics demonstrate a 5 year downward trend as it relates to lost time injuries and days lost due to injury. In fact, Carleton University continues to have the **lowest frequency rates of all the Ontario universities**. The number of Good Catches reported in 2023 has decreased prompting an upcoming campaign to remind the community of the importance of hazard reporting.

	2022	2023	5 -YR AVG	5 -YR TREND
Critical Injuries	3	3	2.2	
Lost Time Injuries	8	5	5.8	
WSIB Claims	20	16	23.8	
Days Lost to Injury Claims	108	11	50	
Average # of Lost Days per Claim	13.5	2.2	9.38	
Good Catches Reported	92	77	100.8	

Governance and Legal Compliance

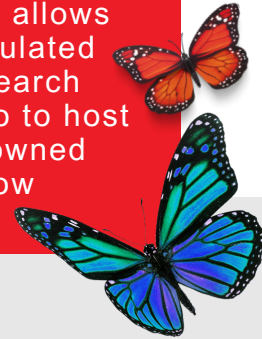
To ensure Carleton's research community can successfully accomplish its objectives, it is imperative that we remain in good standing with the regulatory bodies that oversee the conditions of the various research licenses we hold. The Office of Risk Management plays an important role in obtaining and ensuring compliance with these licenses.

Licensing

Carleton University was audited in 2023 by the Canadian Nuclear Safety Committee (CNSC), where one very minor non compliance item was noted. This was rectified within a single day. An additional audit was completed on the Controlled Goods Program. All aspects of the program were in full compliance, which allowed for a seamless renewal of Carleton's registration with the Controlled Goods Directorate for an additional five years. Annual reports were submitted to Health Canada in compliance with our Institutional Cannabis Research License and to Global Affairs Canada for activities covered under the Chemical Weapons Convention.

**ALL LICENCED SPACES
WITHIN THE DEPARTMENT
OF BIOLOGY WERE
INSPECTED AND
SUCCESSFULLY RE-
CERTIFIED BY THE
CANADIAN FOOD
INSPECTION AGENCY**

This certification allows us to house regulated insects for research purposes, but also to host Carleton's renowned butterfly show



Process Improvement

Planning has begun for the anticipated implementation of ISO Standard 45001 Occupational Health and Safety Management Systems. Within the scope of the project, these standardized best practices will improve safety and efficiency across campus.

Significant enhancements to risk management were developed leveraging the CGR risk management software solution. In addition to assisting in post-incident review, CGR is being configured to become an effective tool for the members of the JHSC committee to conduct mandated workplace inspections.

Policy and Program Renewal

The Workplace Harassment Prevention Program underwent a major content review to ensure the information remains relevant in today's political/societal climate, aligns with related programs and policies, and incorporates emerging best practices. The Environmental Health and Safety, Workplace Violence and Harassment, and Cannabis and Smoking on Campus policies were all renewed further to significant stakeholder consultation.

44,776 kg

of hazardous waste was disposed of in compliance with Ontario Regulation 347. This is a 380% increase over last year. Contributing factors include disposal of 9780 kg of glycol and 18000 kg of oil/water due to severe flooding. The remaining 16500 kg was related to teaching and research activities.

Partnering with Stakeholders/Collaboration

Partnering with campus stakeholders strengthens our efforts to embed Health and Safety into all Carleton operations and enhance safety culture.



Internal

- EHS collaborated with Campus Safety Services (CSS) in developing internal spill response procedures and Facilities Management and Planning (FMP) in assessing the risks related to the maintenance of chemical neutralizing tanks.
- We also worked closely with the Faculty of Science to support their contracts with external biotech companies.
- The Undergraduate Recruitment Office once again enlisted the EHS team to provide hazard-specific training to high schoolers during their annual Mini-Course Program. This year, a record five mini-courses were included.
- To protect Carleton's ability to ship and receive essential materials regulated under the Transportation of Dangerous Goods Regulations, EHS invited key personnel from across the faculties and services to participate in training necessary to meet legislative requirements, ensuring enhanced awareness and continuity of operations across the campus.
- To ensure that the Carleton story is reflective of our values and adhering to health and safety best practices, communications officers from the Department of University Communications and Faculties were provided with messaging and examples of "Do's and Don'ts" in video and photography practices. As a result, our laboratories are seen as safe havens for our Ravens and we maintain a public image as an institution that meets or exceeds established requirements.



External

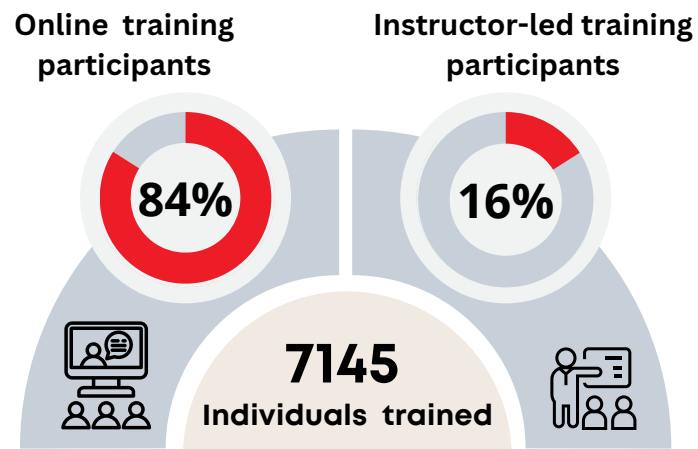
- A focus this year was expanding relationships within the Ottawa area. To this end, we initiated the Ottawa Area Post Secondary Health and Safety Working Group. This initiative links Carleton University, the University of Ottawa, Algonquin College and Collège La Cité, to leverage our individual strengths, share best practices and introduce innovation across our organizations.
- The National Research Council likewise reached out to Carleton to assist in identifying emerging initiatives that could be introduced at the NRC sites within the Ottawa area.
- As an active member of CEHSO (Council of Environmental Health and Safety Directors), we participated in consultations related to Naloxone in the Workplace, the CSA Standard on Workplace First Aid, outdoor air quality and heat stress and heat related illnesses, to ensure that Carleton is positioned for success to address anticipated legislated change.

Through strong collaboration, we are protecting the university's interests.

Keeping Our People Safe - Training

The objective of health and safety training is to provide information to the learner so that they have the knowledge and skill to conduct a risk assessment of their particular activity.

While some training applies to all employees within Ontario, others are job-specific requirements. The Health and Safety Training Matrix enables supervisors to confirm the EHS training required by their workers/students based on their role and /or hazards in their work areas. Together with Information Technology Services and Human Resources we are pursuing integration into Carleton Central's Learning and Professional Development system.



Excellence in Risk Reduction

This summer, we experienced a significant incident of carbon monoxide (CO) poisoning to a contractor's employee. Through the multi stakeholder response and investigation, several contributing factors emerged which led to process improvement. An immediate result was an upgrade to our CO monitoring system by installing visual and auditory alarms at all entrances to the parking garage. A broader reaching result was identifying opportunities to enhance Carleton's Contractor Management program.

With full support from FMP, managers, and supervisors from across the campus who play a role in hiring external contractors received focused training from a 3rd party partner. This has resulted in an engaged team of leaders who now have a deeper understanding of their responsibilities as project owners, reducing liability risk.

Over the next year, the contractor safety management framework will deliver robust project quality procedures integrating safety checkpoints, risk assessments, and continuous improvement measures which align with ISO 45001 standards, deliver comprehensive reference documents for our contractor partners, and provide onboarding training to raise awareness and compliance .



Emerging Environmental Hazards

This past year, Ottawa grappled with unprecedented conditions due to Canadian wildfires and their impact on air quality. Carleton University took steps to safeguard its workers by closely monitoring air quality using the Air Quality Index (AQI) which allowed us to respond promptly to deteriorating conditions. Having already invested into buildings to ensure adherence to COVID-19 ASHRAE guidelines, Carleton was well positioned to ensure a safe environment for all occupants. Employees working outdoors were provided with N95 masks to protect against airborne particles and tasks were restructured to strategically minimize outdoor exposure. Recognizing that wildfires and air quality challenges are likely to persist, training, awareness campaigns, and emergency protocols ensure our readiness.

With the aim of ensuring Carleton's faculty, staff, and students are supported in their research endeavors, EHS is focused on mitigating the risks associated with the varied hazards across our campus laboratories. We strive to effectively address these with efficiency and professionalism. Here are some 2023 highlights.

- Evaluation of campus wide chemical inventory and subsequent disposal of aged and highly unstable reactives.
- Retrofit of 5 combination emergency shower and eyewash units to ensure ANSI water pressure standards are met.
- Inspections conducted and procedures developed to advance the Compressed Gas Safety program.
- Chemical risk banding completed within the Departments of Electronics and Civil and Environmental Engineering.
- Successful chemical spill response, investigation, and follow-up into two hazardous material situations within the Animal Care Facility.
- Comprehensive assessment and guidance provided to lab personnel in the safe handling, storage, and disposal of toxins including cyanide, hydrofluoric acid, and several environmentally hazardous chemicals.

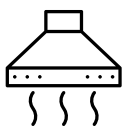
Keeping Our People Safe - Annual Inspections

Approximately \$150,000 is invested annually to inspect Carleton's life safety and engineering controls and ensure all devices meet high safety standards. Proactive identification and prompt resolution of hazards emphasize the commitment to employee safety, fostering a secure workplace environment.



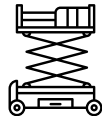
Fume hoods and BSCs

212 fume hoods and 60 biological safety cabinets



Local exhaust ventilation

91 various LEVs (e.g snorkels, canopies, and downdraft tables)



Fall arrest and lifting equipment

1625 pieces of fall arrest equipment and roof anchors



Life safety alarms

91 sensors calibrated

Asbestos and Mould Remediation

As part of our ongoing process of removing Asbestos Containing Material (ACM) across campus, 270 Type 2 glove bag operations were conducted in 2023 to remove ACM pipe covering and insulation on campus. In addition, 350 linear meters of mould contaminated insulation was removed and replaced as part of a Type 3 operation.