

RECYCLING SECTOR INJURIES AND WORKER SAFETY BULLETIN

Introduction

As North America moves towards increased recycling, employment in municipal and private waste collection, treatment, disposal and materials recovery sectors is increasing. Unfortunately, so are injuries.

In Ontario, the number of workers employed in the waste recycling rate group increased 24 % from 2010 to 2011 alone. Alarming, the injury rates for workers in this sector are also much higher than many other types of employment and they are increasing. From 2010 to 2011, the Ontario Workplace Safety and Insurance Board (“WSIB”) recorded a 12% increase in accepted lost-time injury claims related to recycling and waste management. By comparison, a 2013 U.S. survey showed that more than two-thirds of all surveyed workers had an injury or illness due to recycling workplace conditions. This is more than double the average for all occupations.

Recycling Employment Job Facts

Recycling employment typically involves collecting, sorting, separating, packaging and transporting of materials such as plastics, glass, metals, organics etc. The occupations typically fall under refuse and salvage categories. In the U.S., recycling industry employs nearly one million people. There are approximately 21,000 workers who process recyclable materials after they have been collected by city or private waste collection crews and taken to the local Materials Recovery Facility (MRF). There are few statistics for employment in this occupation in Canada or British Columbia. Anecdotal information shows this sector is growing rapidly.

Injury Statistics

The injury rate for waste workers in BC is more than three times the provincial average for all other industries. Waste workers had an injury rate of 7.5 per 100 workers for 2013, while the provincial average injury rate for all other occupations was just 2.3 per 100 workers. In a recent study by Solid Waste & Recycling Magazine, 91% of the waste haulers pointed to a failure to comply with safety procedures. Nearly 90% of workers in a BC study by Solid Waste & Recycling Magazine reported bruises while 98% reported sprains and strains and 78% reported respiratory diseases. In comparison, European workers in this sector experienced dislocations, sprains and strains as the most common injury type (34%).

In the U.S., seventeen recycling workers died on the job from 2011 to 2013. At least eight recycling workers died on the job between 2011-2013 from being struck by vehicles or crushed by falling bales or other objects. The rate for nonfatal injuries across all U.S. industries was 3.5

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per 100 workers, however, in recycling the rate of incidents was 8.5 per 100 workers (2012) and 5.1 per 100 workers for all waste management and remediation services in 2014.

Back and knee injuries were reported by 57% of workers. Abrasions were reported by 43% of workers. Crushed and/or amputated fingers or limbs were also common. Nearly 70% of recycling workers in 2013 experienced an injury or illness due to occupational exposures and injuries. More than 57% of workers reported musculoskeletal injuries to the back and knees and 43% of workers reported abrasions (scrapes and cuts).

In the United Kingdom (“UK”), waste and recycling is a high injury sector as well. While this sector only accounts for about 0.5% of the workers in the UK, it has 2.6% of reported injuries and an overall illness rate of over 4%. Of these, 38% of major injuries were due to slips and trips as per Figure 1. For injuries greater than seven days duration, 36% were due to handling and 28% were due to slips and trips. For injuries greater than three days but less than seven days, 42% were handling injuries and 26% were slips and trips. In comparison, 4.4% of European workers in this sector had permanent, greater than seven days injuries (incapacity).

In the European Union, over 59% of workers in this sector engage in repetitive hand or arm movements while 55% work to tight deadlines leading to high RSI injury rates. This corroborates the anecdotal evidence of high numbers of RSI claims in BC in this sector.

Risk Factors

Young, male workers between 35 and 44 years of age are most at risk of injury. Over 80% of workers in this sector are male.

The type of facility also affects the injury rate. There are two different kinds of recycling facilities. Facilities that handle recyclables already separated by the public into recycling bins (so-called “clean MRFs”) and “Dirty MRFs,” where workers sort through mixed waste—including garbage, food waste, and mixed recyclables. Work in a Dirty MRF is particularly dangerous due to a greater proportion of hazardous materials on the sort line (“Texas Campaign for the Environment Fund 2014”).

The most frequent health and safety violations include insufficient lockout/tagout procedures, cleaning heavy machinery, falling objects injuring workers, vehicle operation hazards, and a lack of protective gear.

Specific hazards that contribute to overall injury rates¹ include:

- fingers caught in machinery
- unsafe operation of mobile material handling equipment

¹ As per Figure 2, most workers are exposed to these hazards for a majority of the time.

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- equipment that is not locked out
- needle sticks (often these arrive in glass jars which are crushed during material transfer)
- being struck by flying objects
- cuts from sharp materials
- ergonomic risks
- dust
- noise (recorded noise levels exceeded levels determined safe by federal standards (Lavoie & Guerin, 2001))
- smells / odours
- exposure to hazardous materials such as household solvents, mercury-containing thermometers, industrial solvent containers, motor oil, open or leaking containers of hazardous household cleaners, batteries with hazardous components such as lead or cadmium, fluorescent bulbs, and printer toners
- biohazards such as dead animals (discarded animals or more commonly, animals such as cats or dogs that crawl into containers seeking food or shelter), food waste, feces, needles, sanitary items
- biological toxins that become airborne through dust are called “bioaerosols”
- facility hygiene
- uneven surfaces
- wet surfaces
- repetitive motion (back, shoulders, knees, hands)
- awkward postures, twisting, jumping
- extreme temperatures
- vibration
- stress

Specific hazards that contribute to musculoskeletal injuries (“MSIs”) and RSIs include:

- lifting, pushing and pulling: waste bins, sacs
- working in awkward postures: working with a bent back or neck, working in a sustained standing, upright position, e.g. standing at a conveyor belt in recycling center
- movements: twisting and turning of the trunk, reaching above shoulder height, reaching beyond arm length, reaching below waist height
- repetitive movements, e.g. sorting waste at a high work rhythm
- applying high force, heavy lifting

Specific hazards that contribute to fatalities include:

- being caught or crushed in balers and other heavy machinery during maintenance or while trying to clear jams in the machinery
- being struck by vehicles such as forklifts, bulldozers and trucks
- being crushed by falling bales, and being buried by debris

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General hazards from the report “Safe & Sustainable Recycling: Protecting Workers Who Protect the Planet,” include:

- The industry’s high injury and fatality rates are a result of unsafe working conditions around:
 - heavy machinery
 - exposure to hazardous items on the sort line, like hypodermic needles, toxic chemicals and animal carcasses
- Many waste and recycling companies heavily rely on temporary workers who have fewer workplace protections, are less likely to be informed of their legal right to a safe and healthy workplace, often earn less, are more likely to be injured on the job, and often are hesitant to voice their health and safety concerns. In the U.S., temporary workers earn 22% less and have higher injury rates (Smith & McKenna, 2014). Temporary workers are at a significantly greater risk of being injured on the job than permanent employees (Grabell, Pierce & Larson, 2013).

Prevention

There are a number of recommendations for workers, employers and governments. These include:

- Municipal governments need to evaluate the health and safety records of recycling companies and require these companies to have comprehensive worker safety programs
- The recycling industry needs to end the use of temporary workers
- Municipalities can use their contracts, franchises, land and facility leases as points of intervention to address health and safety issues
- Require contractors, lessees and franchisees to submit a written Illness and Injury Prevention Program
- Parties should provide Seamless Service provisions to allow experienced, well-trained workers to stay on the job in the event that a contract changes hands or transfers
- Municipal governments need to enact strong community education programs for greater household separation of waste to minimize dangerous contaminants entering the recycling stream

Specific recommendations for workplaces include:

- Ensure workload does not exceed safe levels
- Ensure all workers are vaccinated against the biohazards for that workplace, subject to the Collective Agreement, etc

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- Ensure there is a functional Joint Occupational Health and Safety Committee in the workplace
- Ensure the facilities are frequently checked for safety issues by the Joint Occupational Health & and Safety Committee
- Ensure cleanliness and hygiene
- Provide dust control measures
- Provide proper lighting installation
- Install handrails
- Provide proper clothing and footwear
- Provide noise protection
- Provide training on all equipment
- Provide Lockout/Tagout (LO/TO) training or procedures
- Perform inspections and maintenance programs for all equipment
- Have reporting procedures for all injuries and prompt, documented follow-up
- Ensure claims avoidance and suppression does not occur

Conclusion

Unionized workers enjoy more effective enforcement of legislated labor protections such as safety, health, and overtime regulations (Mishel and Walters, 2003; Zullo, 2012; Frazis, Gittleman, et al. 1995). This is important in sectors with high injury and fatality rates.

Please see the CUPE BC OH&S website at <http://www.cupe.bc.ca/committees/occupational-health-and-safety> for many of the Guides and templates for WCB claims regarding the injuries and conditions described above. These are updated frequently, to ensure they are current.

Resources

See the CUPE BC OH&S website for numerous Guides and Templates on filing WCB claims or appeals for claims that involve the injuries and conditions mentioned in this Bulletin.

Accidents and Injuries in the Waste Management Sector

[http://oshwiki.eu/wiki/Accidents and injuries in the waste management sector](http://oshwiki.eu/wiki/Accidents_and_injuries_in_the_waste_management_sector)

Blitz Targets Recycling and Waste Hazards. Ontario Ministry of Labour

http://www.labour.gov.on.ca/english/news/2013/bul_recyclingwasteblitz20131024.php

Health and safety in waste and recycling in Great Britain, 2014

<http://www.hse.gov.uk/statistics/industry/waste-recycling/waste-recycling.pdf>

Health and Safety Statistics

www.hse.gov.uk/statistics/industry/waste-recycling/

How Loud IS It? WorkSafeBC

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<http://www2.worksafebc.com/pdfs/hearing/How Loud Series/waste.pdf? ga=1.123527810.804348486.1439581924>

Hurt at Work – The Dark Side of Recycling and Waste Mgt (2015)

<http://www.solidwastemag.com/waste-management/hurt-at-work-the-dark-side-of-recycling-and-waste-mgt/1003279563/>

Issues in the Waste and Recycling Field

<http://www.overholtlawyers.com/blog/2015/07/survey-reveals-safety-issues-in-waste-and-recycling-field.shtml>

New Report: U.S. Recycling Workers Exposed to Safety Hazards and High Injury Rates

<http://ehstoday.com/safety/new-report-us-recycling-workers-exposed-safety-hazards-and-high-injury-rates>

Recycling Council of British Columbia

<http://www.rcbc.ca/resources/faqs>

Sustainable and Safe Recycling: Protecting Workers Who Protect the Planet (2015)

<http://www.no-burn.org/downloads/Safe-Recycling-Report.pdf>

Technology Can Play a Vital Role in Improving Waste & Recycling Safety (March 2015)

<http://waste360.com/features/technology-can-play-vital-role-improving-waste-recycling-safety>

Technology key in increasing safety for waste industry workers (March 2015)

<http://www.wastedive.com/news/technology-key-in-increasing-safety-for-waste-industry-workers/379636/>

U.S. Bureau of Labor Statistics 2014

U.S. Occupational Safety & Health Administration

https://www.osha.gov/SLTC/recycling/recycling_ergonomics.html

https://www.osha.gov/SLTC/recycling/recycling_scrap_metal.html

Waste Management and Recycling. Ontario Ministry of Labour

http://www.labour.gov.on.ca/english/hs/sawo/pubs/fs_wastemanagement.php

Figure 1: Sources of major injuries in waste management and recycling in the United Kingdom

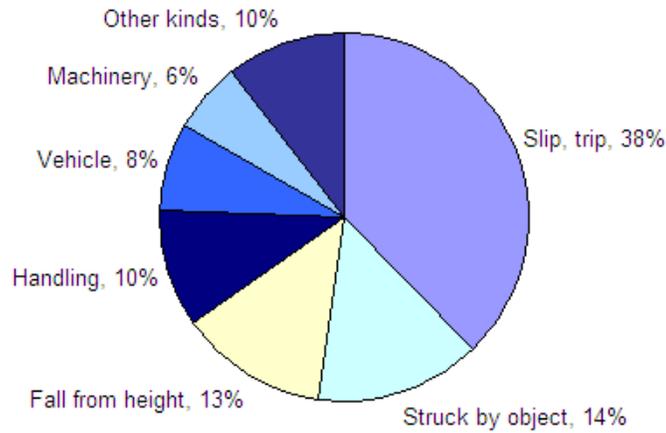


Figure 2: Exposure to physical factors in the waste management sector – EWCS 2010

