Waste & Recycling Operations: Biological, Chemical and Equipment Hazards Stats and Facts

FACTS

- **Biological Exposure:** Waste often contains bacteria, viruses, and sharps; direct contact or punctures can lead to infections such as hepatitis or other bloodborne diseases.
- **Chemical Residues:** Containers and mixed waste can release toxic vapors or corrosive substances; exposure can cause burns, respiratory irritation, or long-term health effects.
- **Sharps and Hidden Objects:** Needles, broken glass, and metal fragments are commonly found in waste streams; these can cause puncture wounds and serious injury during manual sorting.
- **Conveyor and Machinery Hazards:** Fast-moving belts, rollers, and compactors create entanglement and crushing risks, especially when clearing jams without proper lockout.
- **Airborne Contaminants:** Dust, mold spores, and aerosolized particles in recycling facilities can be inhaled, leading to respiratory issues and occupational illness.
- **Slips, Trips, and Falls:** Wet, uneven, and debris-covered floors increase the likelihood of falls, particularly in high-traffic sorting and processing areas.
- **Unidentified Hazardous Materials:** Improperly labeled or mixed waste can include chemicals, batteries, or pressurized containers that may leak, ignite, or explode unexpectedly.

STATS

- In the United States, the waste collection and recycling industry had a fatal injury rate of over 35 deaths per

100,000 workers in 2022, one of the highest across all industries (U.S. Bureau of Labor Statistics).

- Waste and recycling workers in the U.S. experienced more than 5,000 nonfatal injuries requiring days away from work in 2023, many involving contact with equipment and hazardous materials (U.S. Bureau of Labor Statistics).
- Exposure to harmful substances or environments accounted for a significant portion of reported injuries in waste management, including chemical and biological exposure incidents in recent BLS data (2021–2023).
- In Canada, the waste management sector reported hundreds of lost-time injuries annually between 2020 and 2023, with common causes including contact with objects and hazardous substances (Association of Workers' Compensation Boards of Canada).
- U.S. data shows that contact with objects and equipment is a leading cause of injuries in waste and recycling operations, contributing to thousands of cases each year (BLS, 2022–2023).