NIOSH FACT SHEET

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Solid Waste Industry

Background

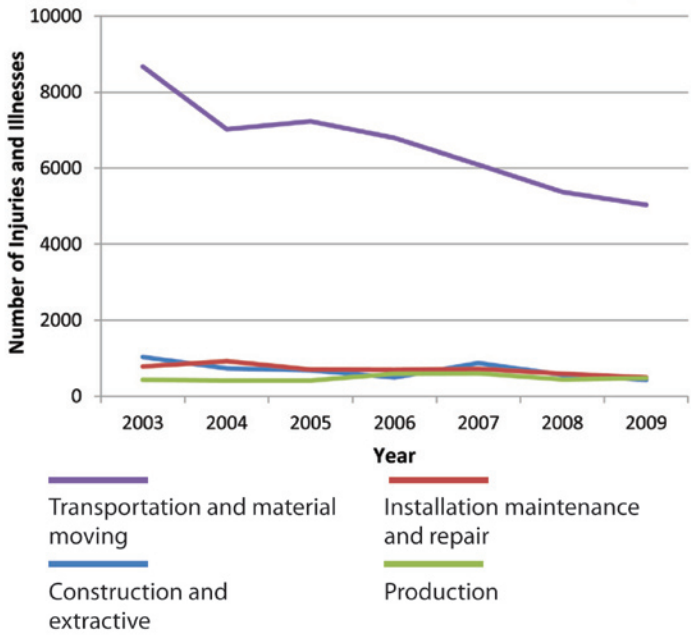
The solid waste industry (Waste Management and Remediation, NAICS 562) consists of 3 groups: Collection; Treatment and Disposal; and Other Waste Remediation Services.[1] In 2010, approximately 478,000 workers were employed in the solid waste industry with about 355,000 in private industry.[2] About 72,500 of the private waste industry employees are classified as Refuse and Recyclable Materials Collectors (SOC 53-708) and 49,000 collection workers are employed by local government agencies.[3] Occupational traumatic injury fatality data for 2003 – 2009 have been published for public and private sector workers but occupational injury and illness data for this period are available only for private sector workers.[4-5]

Injuries and Illnesses

Days-away-from-work (DAFW) injuries and illnesses are those that cause workers to be absent from work at least one day beyond the day of the event.[5] The overall DAFW rate for the private solid waste industry declined by 48% between 2003 and 2009, from 347 per 10,000 workers to 184 per 10,000 workers. The comparable rate for all U.S. industries in 2009 was 106 per 10,000 workers. The median DAFW for the private waste industry varied between 6 and 11 days over the 2003 – 2009 period.

The largest number of occupational injuries in the private sector occurred among workers in the transportation and material moving job class which includes truck drivers and collection laborers. This job class consists of 162,000 (46%) workers[2] yet they recorded about 75% of the DAFW occupational injuries and illnesses in the waste industry sub sector since 2003 (Figure 1).

Figure 1. DAFW Injury and Illness by Job Class
Private Solid Waste Industry



Source: U.S. Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

The most common events associated with the injuries were contact with objects and equipment and overexertion (Figure 2). Being struck by objects and equipment and lifting, respectively, accounted for most of these injuries.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
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Fatal Traumatic Injuries

The private and public solid waste industry recorded 599 fatal traumatic occupational injuries between 2003 and 2009 – an average of 85 fatalities each year (Figure 3). Over 85% of these fatalities were attributed to the private sector which experienced a substantial drop in the number of fatalities in 2009. The number of fatalities in the public sector has remained relatively unchanged during this period.

Transportation incidents, such as collisions and rollovers were the leading events for occupational fatalities in all 3 industry groups. Collection workers have been struck and killed by other motorists. Contact with objects and equipment was the second leading cause of fatalities in each of the industry groups. This category includes being struck by, struck against or caught in objects and equipment.

Also, about 25% of all workers in the solid waste industry are Refuse and Recyclable Materials Collection workers (SOC 53-708) and they experienced 36% of the total fatalities (Figure 4). Traumatic injury fatalities were much lower in 2009 among all workers other than collection workers in the waste industry, yet these workers continued to account for well over half of the deaths.

In each year between 2003 and 2009, the waste collection industry group experienced the greatest number of fatalities among the 3 private sector groups (Figure 5). All 3 groups had fewer fatalities in 2009 than in the previous years when similar data are available. Industry-group specific data for public sector workers are not available.

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Examples of Fatality Incidents

In 2009, a 49-year-old municipal laborer was fatally injured when he fell from the back of the garbage truck on which he was riding and landed on the asphalt roadway. The back of his head struck the ground. He died two days later. Workers should not ride on the outside of vehicles moving faster than 10 mph or travelling greater than 0.2 miles between stops.

In 2008, a 69-year-old private sector sanitation worker died after he was run over by a refuse truck. Soon after starting a compaction cycle, the vehicle began rolling. The worker ran after the vehicle, fell under the truck, and was crushed to death. Workers should engage parking brakes before exiting stopped vehicles.

Focus on Prevention

Effective health and safety programs which include hazard recognition and controls can reduce occupational injuries and illnesses and improve work conditions in the waste industry.

- **Implement comprehensive health and safety programs**
- **Develop a positive safety culture that emanates from the top management**
- **Establish joint management/employee health and safety committees**
- **Conform with consensus industry standards such as ANSI Z245.1 through Z245.7A**
- **Use automated collection vehicles when feasible**
- **Utilize lifting equipment where possible to limit overexertion exposures**
- **Evaluate safety practices during waste collection and control all recognized hazards**
- **Complete health and safety training for all new employees**
- **Conduct task specific worker training that is repeated at regular intervals**

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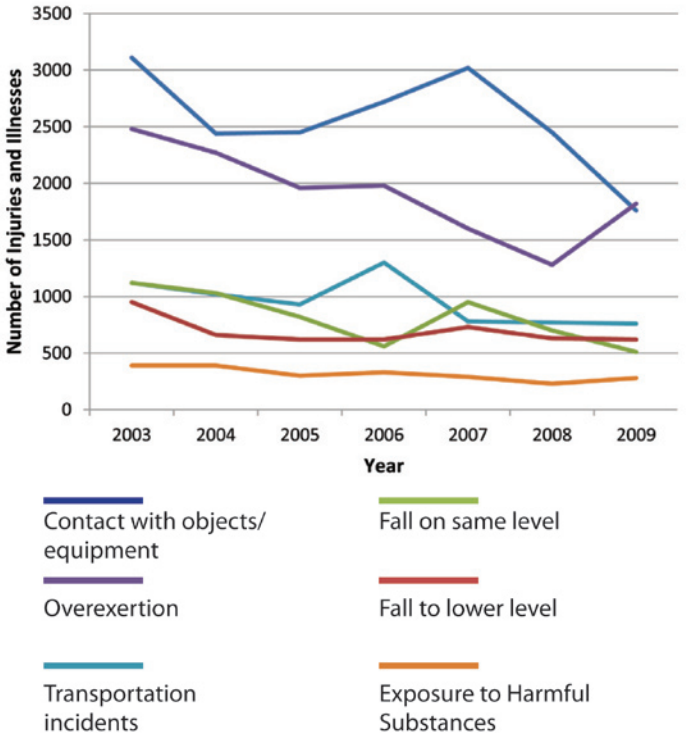
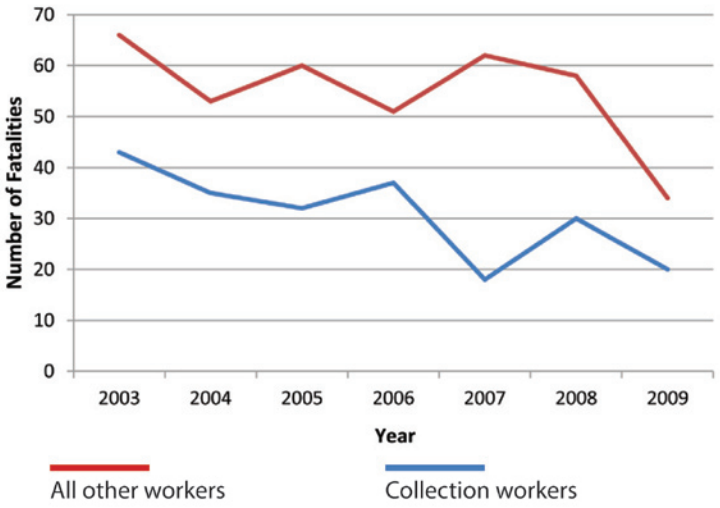
Figure 2. DAFW Injuries and Illnesses
All Private Solid Waste Industry Groups



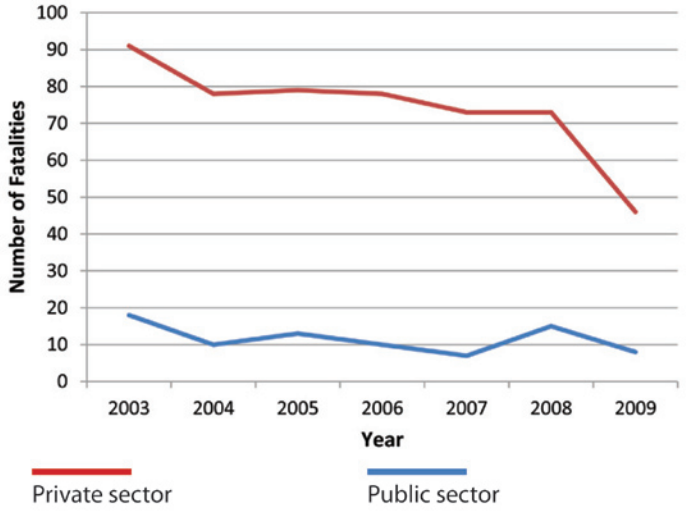
Source: U.S. Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

Figure 4. Occupational Fatalities by Job Class
Public and Private Solid Waste Industry



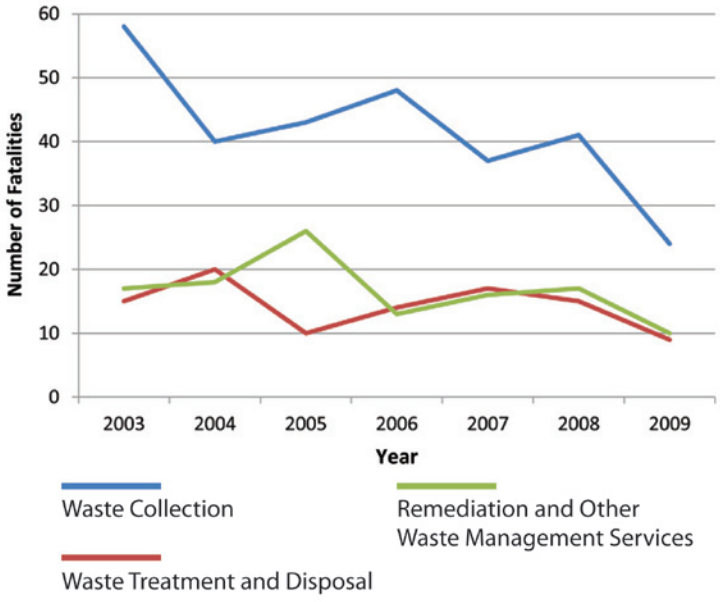
Source: U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries

Figure 3. Occupational Fatalities
Private and Public Solid Waste Industry



Source: U.S. Bureau of Labor Statistics, Census of Fatal Occupational Injuries

Figure 5. Occupational Fatalities by Industry Group
Private Solid Waste Industry



Source: U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries

Resources†

- Crushing Hazards Associated with Dumpsters and Rear-loading Trash Trucks http://www.osha.gov/dts/shib/shib120903.html
- Waste Disposal Worker Was Crushed Between a Waste Disposal Truck and a Dumpster – Oklahoma http://www.cdc.gov/niosh/face/stateface/ok/03ok016.html
- Municipal laborer dies after falling off the back of a forward moving refuse collection truck – Massachusetts http://www.cdc.gov/niosh/face/stateface/ma/09MA020.html
- 69-Year-old sanitation worker run over by refuse truck – New Jersey http://www.cdc.gov/niosh/face/stateface/nj/08NJ079.html
- City Engineer Killed in Landfill Manhole When Retrieving Flow Meter http://www.health.ny.gov/environmental/investigations/face/03ny027.htm
- Truck Driver Run Over by Trash Compactor at Municipal Landfill – New York http://www.health.ny.gov/environmental/investigations/face/02ny007.htm
- Sanitation Fatal Injury Facts (available in Spanish) http://www.health.ny.gov/environmental/investigations/face/facts/sanitation.htm
- Don't get hurt working around sanitation trucks (available in Spanish) http://www.state.nj.us/health/surv/documents/sanwk_en.pdf
- National Solid Waste Management Association – Making the Waste Industry Safer http://www.environmentalisteveryday.org/solid-waste-management/environmental-waste-garbage-safety-first/index.php
- American National Standard for Equipment Technology and Operations for Waste and Recyclable Materials. American National Standards Institute http://www.environmentalistseveryday.org/about-wastec-solid-waste-equipment-technology/ANSI/subcommittee-structure-rosters-docs.php

†Please note that mention of any company or product does not constitute endorsement by NIOSH.

Photograph courtesy of the City of Albany Department of General Services

1. U.S. Bureau of Labor Statistics, Occupational Employment Statistics, http://www.bls.gov/oes/current/naics3_562000.htm
2. U.S. Bureau of Labor Statistics, Current Population Survey, http://www.bls.gov/cps/cpsaat18.pdf
3. U.S. Bureau of Labor Statistics, National Employment Matrix, ftp://ftp.bls.gov/pub/special.requests/ep/ind-occ.matrix/occ_xls/occ_53-7081.xls
4. U.S. Bureau of Labor Statistics, Census of Fatal Occupational Injuries, http://www.bls.gov/iif/oshcfoi1.htm
5. U.S. Bureau of Labor Statistics, Survey of Occupational Injuries and Illnesses, http://www.bls.gov/iif/oshsum.htm

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