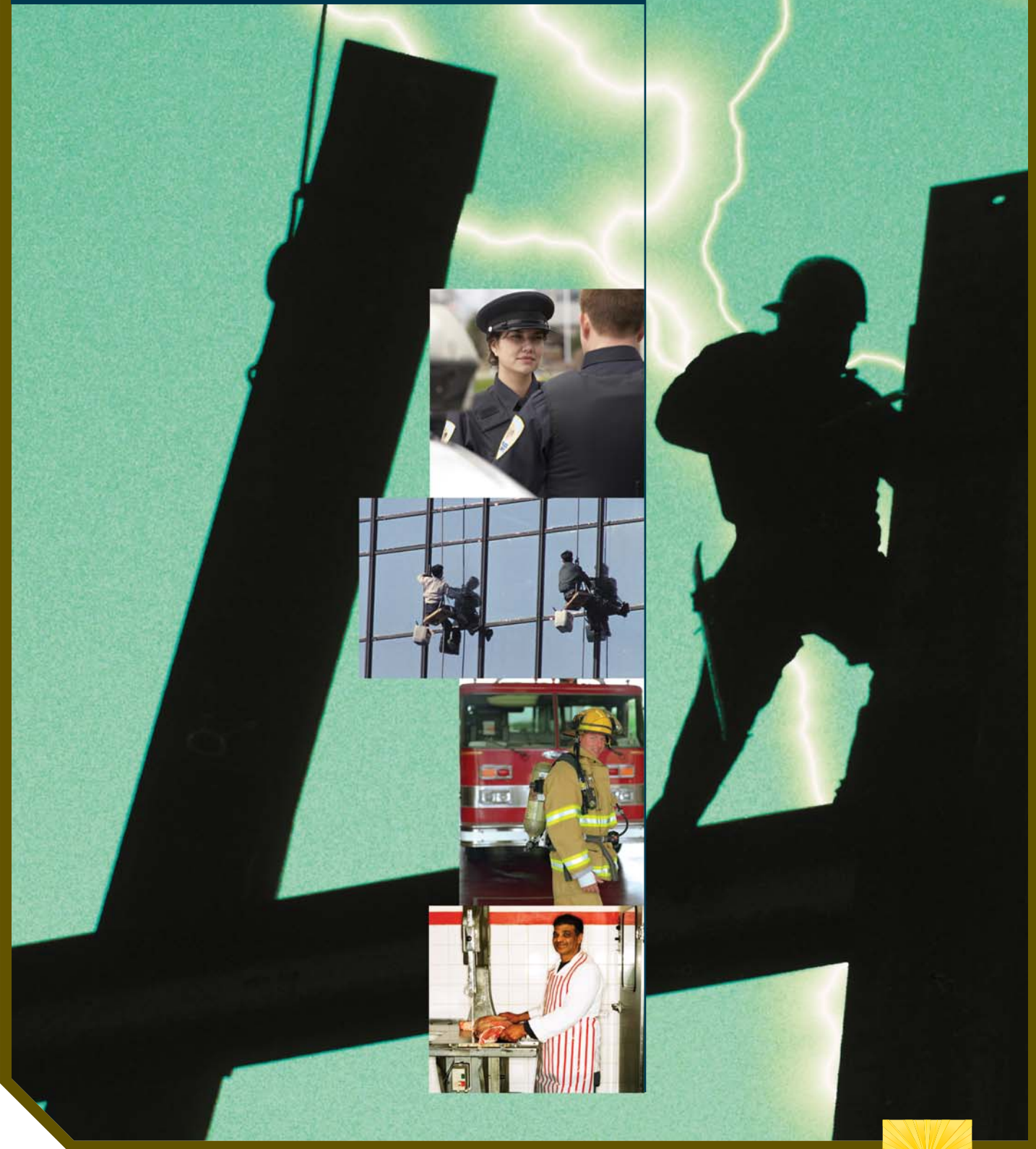


# Work-related Fatalities in Florida





## **Executive Summary, 2**

## **Introduction, 3**

About the Occupational Health and Safety Program  
Data Sources

## **Demographic Characteristics, 4**

## **Incident Type, 5**

Incident Type and Self-Employed Versus Wage and Salary Workers

## **Industry, 9**

Florida Compared to United States  
Industry and Race/Ethnicity  
Industry and Age Group

## **Occupations, 11**

## **Women and Fatalities, 12**

## **Five-year Snapshot of Work-related Fatalities, 13**

Number of Fatalities  
Fatality Rate

## **Summary and Next Steps, 17**



Overall, there were 363 work-related fatalities in Florida in 2007. The most common fatal incident types were those involving a transportation accident (38%), assaults and violent acts (19%—predominantly shootings), and falls (17%).

**BACKGROUND** In 2007, Florida ranked third nationally for number of work-related fatalities. These 363 fatalities represent almost one work-related death per day among Florida's workforce. The purpose of this descriptive analysis was to identify the most common incident type, high-risk industry/occupations, as well as to present demographic characteristics of fatally injured workers.

**METHODS** A descriptive analysis was performed on 2007 data (the most current data year available at start of analysis) from the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI) and the BLS Current Population Survey. Work-related fatalities were defined as injuries that occur at the workplace or while working and that result in death.

**RESULTS** Overall, there were 363 work-related fatalities in Florida in 2007. The most common fatal incident types were those involving transportation accidents (38%), assaults and violent acts (19%—predominantly shootings), and falls (17%). The leading incident type differed for self-employed versus wage and salary workers. Among the self-employed, the most common incident type was assaults and violent acts (48%). Among wage and salary workers the leading incident type was transportation accidents (41%).

Work-related fatality rates varied by race/ethnicity and sex. Overall, males had a higher rate of fatalities than females (7.0 vs. 0.7 per 100,000 workers). The distribution of incident type differed by sex; most notably a higher proportion of female workers were killed through assaults and violent acts than males (30% of female fatalities; 18% of male fatalities). Higher rates of work-related fatalities occurred among Hispanics (5.6 per 100,000 workers) and blacks (4.4 per 100,000 workers) than in whites (2.6 per 100,000 workers)

and rates for these two race/ethnicities groups in Florida were also higher than national rates.

Fatality rate also varied by the age of the worker. Workers 65 years and older (7.2 per 100,000 workers) had the highest fatality rate per age group. For workers age 55 and older, the highest proportion and rate of fatalities fell in the transportation and warehousing industry. For workers aged 20–54, the highest proportion and rate of fatalities occurred in the administrative and waste services industry.

Specific occupations with high fatality rates were agricultural workers (49.6 per 100,000 employed), aircraft pilots/flight engineers (34.3 per 100,000 employed) and masons (31.0 per 100,000 employed). Specific industries with the highest fatality rate were agriculture, forestry, fishing and hunting (37.7 per 100,000), administrative and waste services (12.6 per 100,000), and construction (9.0 per 100,000). Highest fatality rates among whites and Hispanics were in the agriculture, forestry, fishing and hunting industry and the highest rate among blacks was in the administrative and waste services industry.

**CONCLUSION** Fatal assaults and violent acts are a problem in the Florida workforce and they disproportionately affect self-employed workers and females. High-risk industries that should be considered for future targeted interventions are agriculture, forestry, fishing and hunting, administrative and waste services, and construction. Fatality rates in each industry differed by race/ethnicity and age. These differences will be taken into consideration when designing interventional and educational efforts. Next steps for our program will include collaborating with stakeholders within Florida that are currently working with these high-risk groups.



Population data used to calculate rates was obtained from the Bureau of Labor Statistics (BLS) Current Population Survey.

**THIS REPORT IS THE SECOND IN A SERIES OF SPECIAL REPORTS ON OCCUPATIONAL HEALTH IN FLORIDA AND FOCUSES ON WORK-RELATED FATALITIES IN FLORIDA IN 2007.**

Work-related fatalities are defined as injuries that occur at the workplace or while working and that result in death.

In 2007, Florida had the third highest number of work-related fatalities in the nation. These 363 deaths represent almost one death per day among Florida's workforce. The purpose of this report is to identify the most common incident type, high-risk industry/occupations, as well as demographic characteristics of fatally injured workers.

**ABOUT THE OCCUPATIONAL HEALTH AND SAFETY PROGRAM** The Occupational Health and Safety Program (OHSP) at the Florida Department of Health began operating in 2010 with funding from the National Institute of Occupational Safety and Health (NIOSH). At the start of this analysis project, the most current data available to the program was from 2007. An updated report with data through 2010 is planned in the coming year.

**DATA SOURCES** Population data used to calculate rates was obtained from the Bureau of Labor Statistics (BLS) Current Population Survey. Fatality data was obtained from the BLS Census of Fatal

Occupational Injuries (CFOI), which has been the primary source for work-related fatality data in the United States since 1992. The CFOI is an annual comprehensive count of work-related fatal injuries that utilizes multiple data sources such as death certificates, state workers' compensation records, news media, and Occupational Safety and Health Administration (OSHA) reports. CFOI includes deaths from both unintentional injuries (e.g. falls, electrocutions, caught in machinery, highway accidents) and intentional injuries (suicide and homicide). CFOI counts are considered a nearly complete count of work-related fatalities caused by injury, however; deaths caused by work-related illnesses are not captured. Full details about each death such as occupation and incident type are not always available due to missing information or because the details were not released due to small numbers; thus charts and tables will not always sum to the total number of fatalities.



**IN 2007, FLORIDA WAS HOME TO OVER 18.7 MILLION RESIDENTS<sup>1</sup> WITH A WORKFORCE OF 8.8 MILLION.<sup>2</sup>**

Fatalities occurred 10 times more often among males than females (Table 1), a pattern also seen nationally. The risk of fatality increased steadily with age and was highest among those 65 and older, more than twice the rate of workers age 20–24.

Blacks and Hispanics were also more likely to die from a work-related injury than whites. The Florida fatality rates for black and Hispanics were higher than the national rate (Table 1).

Workers were classified as either self-employed or as working for wage and salary. Self-employed workers had a higher fatality rate than wage and salary workers, (nearly twice the rate); however, the Florida fatality rate for self-employed (7.9 per 100,000 employed) was less than the U.S. rate of 10.0 per 100,000 employed.

Selected Characteristics	Number of Fatalities	Fatality Rate per 100,000 Employed Persons (FL)	Fatality Rate per 100,000 Employed Persons (US)
<b>TOTAL</b>	<b>363</b>	<b>4.1</b>	<b>3.9</b>
<b>SEX</b>			
Male	330	7.0	6.7
Female	33	0.7	0.6
<b>AGE GROUP</b>			
16–19	6	2.0	2.0
20–24	21	2.6	3.0
25–34	72	4.0	3.1
35–44	88	4.2	3.4
45–54	91	4.3	4.1
55–64	53	4.1	4.6
65 and older	30	7.2	10.2
<b>RACE/ETHNICITY</b>			
White, non-Hispanic	190	3.5	3.8
Black, non-Hispanic	56	4.7	3.9
Hispanic	111	5.6	4.6
<b>WORKER STATUS</b>			
Self-employed	42	7.9	10.0
Wage and salary worker	321	3.9	3.4

Table 1. Fatal occupational injuries by selected demographic characteristics, Florida and United States, 2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2007

**NEARLY 74% OF THE WORK-RELATED FATALITIES THAT OCCURRED IN 2007 WERE ATTRIBUTABLE TO THREE INCIDENT TYPES.**

The most common incident types were: transportation accidents (38%, 137 deaths), assaults and violent acts (19%, 70 deaths) and falls (17%, 62 deaths) (Table 2). Transportation accidents were also the leading incident type nationally (42% of all work-related fatalities). The majority of Florida transportation accidents were

highway accidents (70 out of 137 deaths). Assaults and violent acts were primarily homicides (60 out of 70 deaths), 51 of which were shootings. The majority of the fall-related deaths were falls from ladders, roofs, and scaffolds (55 out of 62 deaths); however, some fatalities did involve a fall from the same level (not from a height).

	Number of fatalities	Percentage of all fatalities
<b>TRANSPORTATION ACCIDENT</b>	<b>137</b>	<b>38%</b>
Highway accident	70	19%
Non-highway accident, except rail, air, water	22	6%
Pedestrian struck by vehicle	30	8%
Railway accident	4	1%
Water vehicle accident	4	1%
Aircraft accident	7	2%
<b>ASSAULTS AND VIOLENT ACTS</b>	<b>70</b>	<b>19%</b>
<b>Homicides:</b>	<b>60</b>	<b>17%</b>
Shooting	51	14%
Stabbing	3	1%
<b>Self-inflicted injuries:</b>	<b>10</b>	<b>3%</b>
Suicide	10	3%
<b>FALLS</b>	<b>62</b>	<b>17%</b>
<b>Fall to lower level:</b>	<b>55</b>	<b>15%</b>
Fall from ladder	13	4%
Fall from roof	14	4%
Fall from scaffold	4	1%
Fall on same level:	6	2%
<b>CONTACT WITH OBJECTS AND EQUIPMENT</b>	<b>45</b>	<b>12%</b>
Struck by object	29	8%
Caught in or compressed by equipment or objects	13	4%
<b>HARMFUL SUBSTANCES OR ENVIRONMENTS</b>	<b>42</b>	<b>12%</b>
Contact with electric current	21	6%
<b>Contact with temperature extremes:</b>	<b>3</b>	<b>1%</b>
Exposure to environmental heat	3	1%
<b>Exposure to caustic, noxious, or allergenic substances:</b>	<b>10</b>	<b>3%</b>
Ingestion of substances	8	2%
Oxygen deficiency	8	2%
Drowning, submersion	6	2%
<b>FIRES AND EXPLOSIONS</b>	<b>5</b>	<b>1%</b>

Table 2. Work-related fatalities by incident type, Florida, 2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2007



Among wage and salary workers, the highest percentage of fatalities occurred in transportation accidents (41%). Among self-employed workers, only 14% of fatalities were transportation accidents.

## Incident type and self-employed versus wage and salary workers

The leading incident type varied by worker status (Table 3). The two classifications for workers status were self-employed versus wage and salary worker. Among the self-employed workers, the leading incident type was assaults and violent acts (48%). Only 16% of the fatalities among the wage and salary workers involved assaults and violent acts.

Among wage and salary workers, the highest percentage of fatalities occurred in transportation accidents (41%) compared to only 14% in self-employed workers. This may be due in part to differences in the types of occupations and job duties for self-employed workers versus wage and salary workers.

	Self-employed			Wage & Salary		
	N	%	Rate*	N	%	Rate*
Contact with objects & equipment	5	12%	0.9	40	12%	0.5
Falls	8	19%	1.5	54	17%	0.6
Harmful substances or environments	3	7%	NA	39	12%	0.5
Transportation accident	6	14%	1.1	131	41%	1.6
Fires & explosions	0	0%	NA	5	2%	0.1
Assaults & violent acts:	20	48%	3.7	50	16%	0.6
Homicides	16	38%	3.0	44	14%	0.5
Self-inflicted injuries	4	10%	NA	6	2%	0.1
<b>Total†</b>	<b>42</b>	<b>100%</b>	<b>7.9</b>	<b>321</b>	<b>100%</b>	<b>3.9</b>

Table 3. Work-related fatal incident type by worker status, Florida, 2007

\* Rate is per 100,000 employed.

†Column may not sum to total due to missing incident type information

NA: Not available. Rates were not calculated when fewer than five fatalities are noted.

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) and Bureau of Labor Statistics, Current Population Survey (denominator), 2007

## AS EXPECTED, FATALITIES WERE CLUSTERED WITHIN SELECT INDUSTRIES.

Almost 50% of the work-related fatalities occurred within three industries: construction (80 deaths, 22%), administrative and waste services (64 deaths, 18%), and transportation and warehousing (36 deaths, 10%) (Figure 1). Transportation accidents accounted for the majority of deaths in the administrative and waste services and transportation and warehousing industries. Falls were the most common incident type in the construction industry (Table 4).

The highest rate of fatalities in 2007 (rather than the highest count) occurred in the agriculture, forestry, fishing and hunting industry (37.7 per 100,000 employed persons). This

industry also had the highest rate nationally. Twelve of the 16 incidents in this industry were transportation-related accidents (Table 4). The second and third highest rates occurred in the administrative and waste services and construction industries (12.9 and 9.0 per 100,000 employed persons).

Considering incident types, transportation accidents were the most common cause of work-related fatality. Transportation accidents also occurred across the widest variety of industries. Falls, the third most common type of accident, were concentrated largely in construction and administrative and waste services (Table 4).

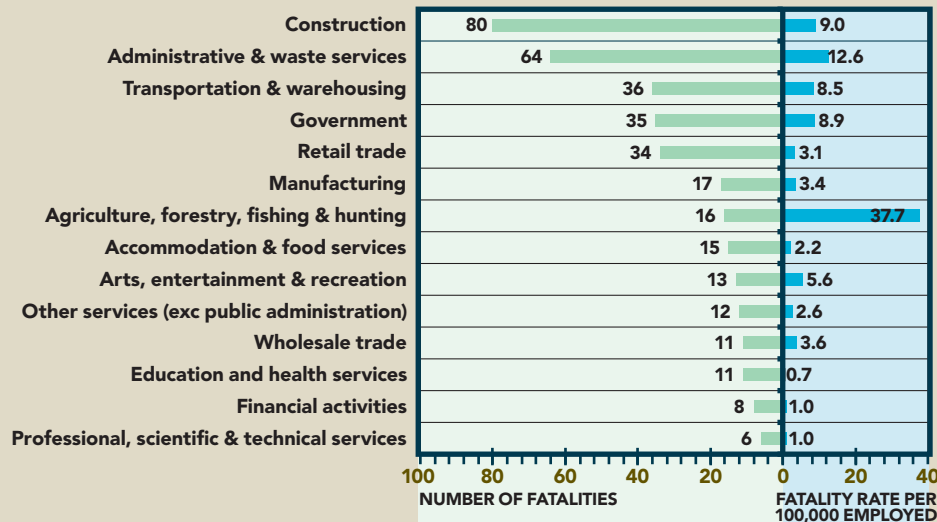


Figure 1. Number and rate of fatal occupational injuries by industry sector, Florida, 2007

Note: Industry sectors with less than four cases not shown.

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2007

Select Industries	Total*	Transportation Accidents	Assaults & Violent Acts	Falls	Contact with Objects & Equipment	Exposure to Harmful Substances or Environments†
Total for all industries	363	137	70	62	45	42
Construction	80	17	4	28	17	14
Administrative & waste services	64	20	3	19	7	12
Transportation & warehousing	36	23	7	NA	NA	NA
Government	35	17	10	NA	4	NA
Retail trade	34	9	14	3	3	3
Manufacturing	17	10	3	NA	NA	NA
Agriculture, forestry, fishing & hunting	16	12	NA	NA	NA	3
Accommodation & food services	15	4	9	NA	NA	NA
Arts, entertainment & recreation	13	5	NA	4	NA	NA
Other services—excluding public administration	12	NA	8	NA	3	NA
Wholesale trade	11	6	NA	NA	NA	NA
Education & health services	11	4	5	NA	NA	NA
Financial activities	8	NA	4	NA	NA	NA
Professional, scientific & technical services	6	4	NA	NA	NA	NA

Table 4. Work-related fatal incident type by industry, Florida, 2007

Note: Industry sectors with less than four cases not shown. Details on industry are not available for five incidents which were due to fire and explosion.

\*Columns and rows may not sum to total. Not all industries and incident types are included in table. In addition, industry and incident type information is not available for all cases.

†May include contact with electric current, contact with temperature extremes, exposure to caustic, noxious or allergenic substances, oxygen deficiency, or drowning.

NA: Not available. Bureau of Labor Statistics does not provide fatality counts if less than three cases are noted.

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2007





## Florida Compared to the United States

In 2007, the industry with the highest fatality rate in both Florida and the U.S. was agriculture, forestry, fishing, and hunting with Florida's rate being higher than the national rate, (37.7 per 100,000 in FL, 28.1 per 100,000 U.S.). The second highest fatality rate in the U.S. occurred in the mining industry. While Florida's natural resources

do allow for some phosphate mining activities, a very low proportion of Florida's workforce (~0.1%) are employed in mining. Some of the other industries in which Florida had a higher fatality rate than the U.S. average were administrative and waste services, public administration and arts, entertainment and recreation.

Industry	Florida Fatality Rate	US Fatality Rate
Agricultural, forestry, fishing & hunting	37.7	28.1
Administrative & waste services	12.6	6.6
Construction	9.0	10.5
Public administration	8.9	5.4
Transportation & warehousing	8.5	14.3
Arts, entertainment & recreation	5.6	3.7
Wholesale trade	3.6	4.7
Manufacturing	3.4	2.5
Retail trade	3.1	2.1
Other services except public administration	2.6	2.5
Accommodation & food services	2.2	1.7
Professional & business services	1.0	3.2
Financial activities	1.0	1.1
Education & health services	0.7	0.7
Mining	NA	24.8

Table 5. Work-related fatality rate per 100,000 employed persons by industry, 2007, Florida and the U.S.

NA: Not available. Rates were not calculated when fewer than five fatalities were noted.

Note: Industry sectors with less than four cases in Florida not shown except mining.

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2007



## Industry and Race/Ethnicity

Rankings for the industry with the highest number of fatalities differed by race/ethnicity (Table 6). In the CFOI data, Hispanic is considered an ethnicity and Hispanic workers can be of any race. The race/ethnicity categories utilized for this analysis were white non-Hispanic, black non-Hispanic, and Hispanic only. Individuals from other race/ethnic categories including multi-race were not included.

Among whites and Hispanics, the construction industry accounted for the highest number of deaths. However, among blacks, the administrative and waste services industry accounted for the

highest number of deaths with the construction industry as second.

For both whites and Hispanics, the highest rate of work-related fatalities occurred in the agriculture, forestry, fishing and hunting industry (Table 7). There were no reports of work-related fatalities among black workers in this particular industry in 2007. Among black workers, both the highest numbers and highest rates of work-related fatalities occurred in the same industry: administrative and waste services.

	White, non-Hispanic	Black, non-Hispanic	Hispanic
1. Industry: Number of Deaths	Construction: 39	Administrative & waste services: 13	Construction: 33
2. Industry: Number of Deaths	Administrative & waste services: 28	Construction: 10	Administrative & waste services: 24
3. Industry: Number of Deaths	Retail trade: 19	Transportation & warehousing: 9	Transportation & warehousing: 11

Table 6. Top three industries by race/ethnicity with highest number of work-related fatalities, Florida, 2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2007

Industry	White, non-Hispanic	Black, non-Hispanic	Hispanic
Administrative & waste services	6.8	15.5	17.0
Agriculture, forestry, fishing & hunting	19.4	0.0	51.7
Construction	4.9	12.0	11.4
Leisure & hospitality	2.0	5.5	NA
Retail trade	2.1	NA	4.2
Transportation & warehousing	5.5	9.3	4.7

Table 7. Fatality rate per 100,000 for select industries by race/ethnicity, Florida 2007

NA: Not available. Rates were not calculated when fewer than five fatalities.

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2007



## Industry and Age Group

Rankings for the industries with the highest number and rate of fatalities also varied by age group (Figure 2, Table 8). Fatality rates by age group were only calculated for the five industries with the highest overall fatality rates. Among 20–34 year olds, the highest number of deaths occurred in the construction industry; however, the highest rate was in the administrative and waste services industry. Among 35–54 year olds, an equal number of deaths occurred in the construction and the administrative and waste services industry; however, the highest rate was in administrative and waste services. Among those 55 and older, both the highest number and highest rate of fatalities occurred in the transportation and warehousing

industry. The fatality rate of 22.6 per 100,000 employed in the transportation and warehousing industry for workers age 55 and older was substantially higher than for other age groups.

Overall, there were a small number of deaths reported in the agriculture, forestry, fishing and hunting industry, too few to calculate stable rates for this industry by age group. However, it is possible that the rates for this industry are actually quite high if not the highest for several age groups given that the overall rates is Florida’s highest. In general, for most industries the fatality rate rose as age group increased and was highest among workers age 55 and up (Table 8).

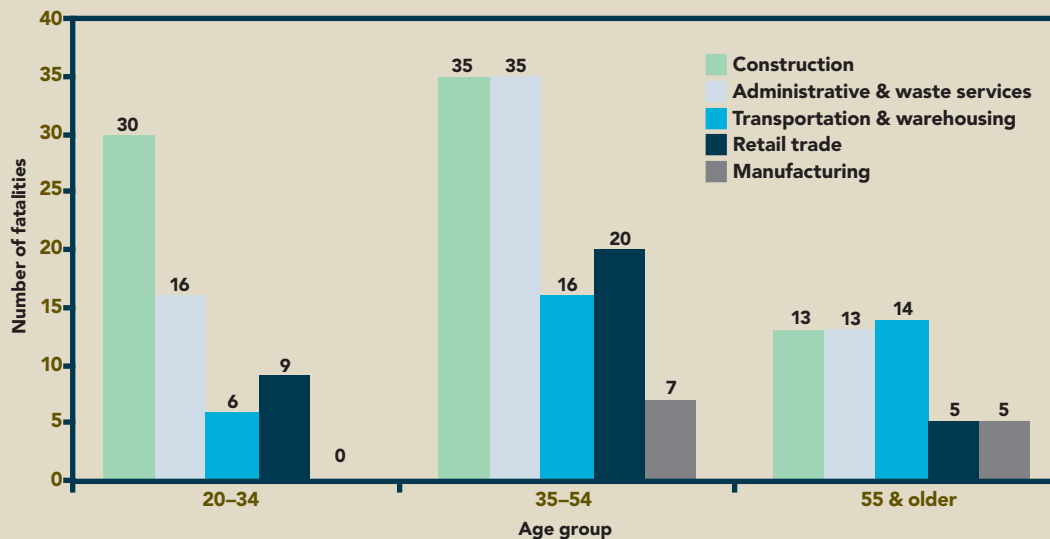


Figure 2. Work-related fatalities for select industries by age group, Florida, 2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2007

Age Group	Overall— Across All Industries	Construction	Administrative & Waste Services	Transportation & Warehousing	Retail Trade	Manufacturing
20-34	3.5	8.9	10.5	5.3	2.6	0.0
35-54	4.2	8.5	12.7	6.6	4.6	2.6
55 & older	4.9	10.4	16.7	22.6	2.1	4.7
All ages*	4.1	9.0	12.6	8.5	3.1	3.4

Table 8. Fatality rate per 100,000 employed by age group for select industries, Florida, 2007

Note: Rates were not calculated for industries with fewer than five fatalities.

\* Includes ages 16–19

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2007



Police officers ranked fourth with 15 fatalities in 2007.

**AS WITH INDUSTRY, ALL WORK-RELATED FATALITY RATES AND COUNTS VARY BY OCCUPATION.**

The 19 specific occupations shown in Table 9 represent 60% of the work-related fatalities that occurred in Florida in 2007. The highest number of fatalities occurred among drivers (44 deaths), construction laborers (28 deaths), and grounds maintenance workers (21 deaths). Police officers ranked fourth with 15 fatalities in 2007.

Although only nine deaths occurred in miscellaneous agricultural workers, this occupation had the highest overall fatality rate of 49.6 per 100,000 employed. Other high fatality rate occupations include aircraft pilots and flight engineers (34.3 per 100,000) and masons (31.0 per 100,000).

Occupation	Fatalities	Rate per 100,000†
1. Driver/Sales workers and truck drivers	44	20.2
2. Construction laborers	28	21.5
3. Grounds maintenance workers	21	18.2
4. Police officers	15	20.6
5. First-line supervisors/managers, sales workers	13	4.2
6. Laborers and material movers, hand	11	7.3
7. Electricians	11	20.1
8. Building cleaning workers	11	9.7
9. Roofers	9	26.4
10. Miscellaneous agricultural workers	9	49.6
11. Carpenters	8	7.3
12. Painters and paperhangers	6	10.9
13. Cashiers	6	3.2
14. Aircraft pilots and flight engineers	5	34.3
15. Sailors and marine oilers	5	NA
16. Construction managers	5	5.9
17. Security guards and gaming surveillance officers	5	6.8
18. First-line supervisors/managers, building and grounds cleaning and maintenance workers	5	23.5
19. Brickmasons, blockmasons, and stonemasons	5	31.0

Table 9. Fatalities by occupation\*, Florida, 2007

\*All occupations with at least five fatalities in 2007 were included in the table.

†Rate is per 100,000 persons employed in that occupation in 2007.

NA: Not Available. An estimate of the number of employed sailors and marine oilers was not available.

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2007

# Women & fatalities



...30% of female work-related fatalities were assaults and violent acts compared to only 18% of male deaths.

**ONLY 9% OF THE WORK-RELATED FATALITIES THAT OCCURRED IN 2007 WERE AMONG FEMALE EMPLOYEES.**

Only 9% of the work-related fatalities that occurred in 2007 were among female employees. The top three fatality incident types were the same for both men and women; transportation accidents, assaults and violent acts and falls (Table 10). However, over 93% of female fatalities occurred in the

forementioned categories while only 72% of male fatalities occurred in these categories. The most noticeable difference was that 30% of female work-related fatalities were assaults and violent acts compared to only 18% of male deaths.

Incident Type	Male N	Male %	Female N	Female %
Transportation accident	121	37%	16	48%
Assaults & violent acts	60	18%	10	30%
Falls	57	17%	5	15%
Contact with objects & equipment	45	14%	0	0%
Harmful substances or environments	40	12%	NA	NA
Fires & explosions	5	2%	0	0%
<b>Total*</b>	<b>330</b>	<b>100%</b>	<b>33</b>	<b>100%</b>

Table 10. Work-related fatal incident type by sex, Florida, 2007

NA: Not available. Bureau of Labor Statistics does not provide fatality counts if less than three cases are noted.

\* Columns may not sum to total due to missing incident type information.

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2007

# snapshot

## Five-year

### Number of fatalities

In order to obtain a broader view of occupational fatalities in Florida, the previous four years of data were also reviewed. A snapshot of work-related fatalities, for the period 2003–2007 shows that on average, 380 work-related deaths per year occurred in Florida’s workplaces (Table 11). The highest number of deaths occurred in 2004 (433 deaths) and 2005 (406 deaths).

The increased number of deaths in 2004 and 2005 were predominantly an increase in the

number of fatal falls and transportation incidents (Figure 3). Compared to 2003 there were 39 additional fall related deaths and 45 additional transportation accident related deaths in 2004. The decline in deaths seen in 2006 was related to fewer fatal transportation incidents that year (44 fewer deaths in 2006 than in 2005). The increased number of deaths seen in 2004 and 2005 occurred primarily in the construction and administrative and waste services industries (Figure 4).

Year	2003	2004	2005	2006	2007
Number of Fatalities	347	422	406	360	363

Table 11. Number of fatal occupational injuries by year, Florida, 2003–2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2003–2007

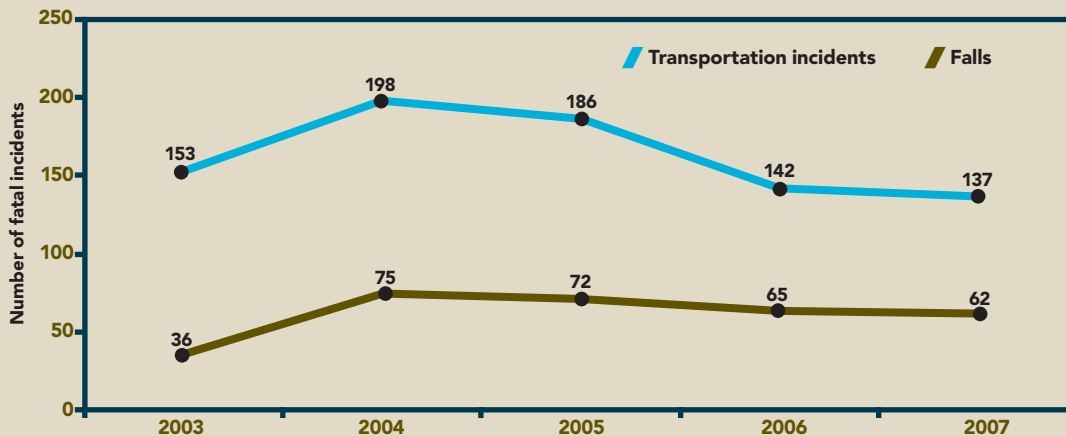


Figure 3. Most common work-related fatality incident types, Florida, 2003–2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2003–2007



Figure 4. Number of work-related fatalities in select industries, Florida, 2003–2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2003–2007



## **MAJOR HURRICANES HIT FLORIDA IN BOTH 2004 AND 2005.**

It is possible that some of the additional deaths may in some way be attributed to hurricane-related events; however, Florida studies showed that only between eight and 14 work-related fatalities were directly attributable to hurricanes in 2005. (No data was available for 2004) <sup>4,5</sup> Although increased activity in the construction and home building/repair industries post hurricane destruction did occur, it is difficult to attribute any subsequent but delayed increases in work-related injuries or fatalities to these hurricanes.

Part of the difficulty is the lack of uniform definition of what constitutes a hurricane-related death. Hurricane-related deaths may occur prior to

landfall, during landfall or during the clean-up effort. Fatalities can be directly caused by the force of the hurricane itself or indirectly caused by unsafe conditions created by the hurricane. The increase in fatalities in 2004–2005 may be related to long-term clean up and rebuilding efforts, devastation was great and clean-up and rebuilding took many months, though this association is not able to be shown from the data.

# snapshot

## Five-year



### Fatality rate

The overall work-related fatality rate in Florida declined from a high of 5.3 per 100,000 employed persons in 2004 to 4.1 per 100,000 employed in 2007. However, even with this decline, the 2007 fatality rate was still slightly elevated above the national rate (Figure 5).

The increases in the fatality rate that occurred in 2004 and 2005 were primarily a result of an increase in the rate of male deaths (Figure 6). The rate for female deaths remained relatively stable between 2003 and 2007.

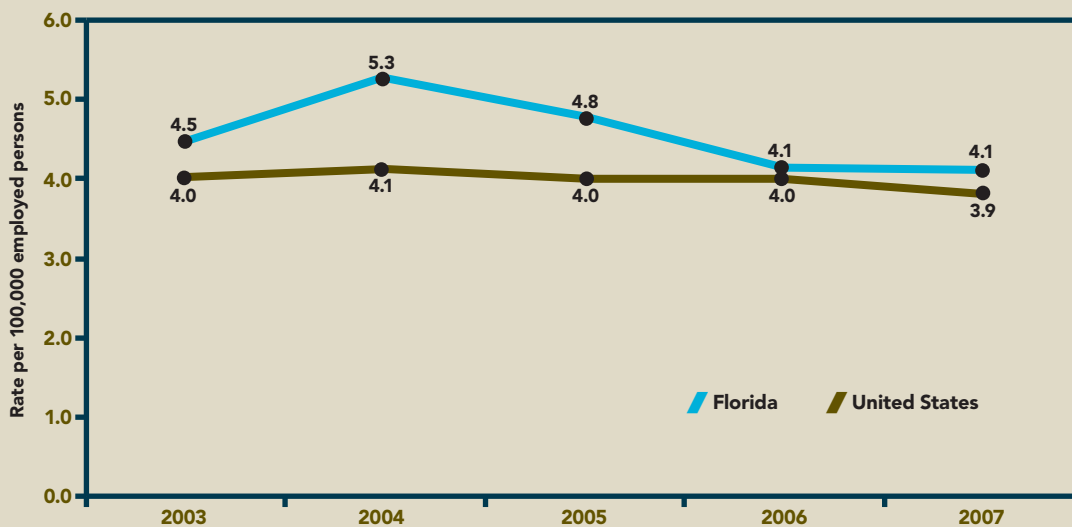


Figure 5. Florida occupational fatality rate compared to US rate, 2003–2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2003–2007

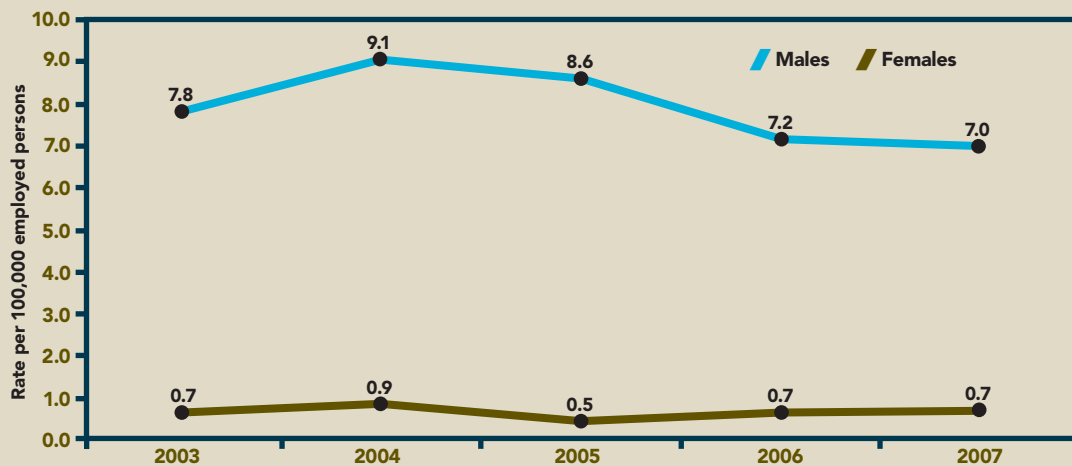


Figure 6. Work-related fatality rate by sex, Florida, 2003–2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2003–2007



### Fatality rate, continued

During the years with elevated work-related fatality levels (2004 and 2005), the greatest increase in rates was seen among Hispanic and black male workers (Figure 7).

Although both increases and decreases in rates were noted, the overall fatality rate declined over the period. The industries that had the highest increase over time in fatality rates (when

comparing 2007 to 2003) were administrative and waste services (12.6 vs. 8.7 per 100,000 employed) and the arts, entertainment and recreation industries (5.6 vs. 1.4 per 100,000 employed). The industry with the greatest decline in fatality rates over time (from 2003 to 2007) was agriculture, forestry, fishing, and hunting (37.7 vs. 54.4 per 100,000 employed) (Table 12).

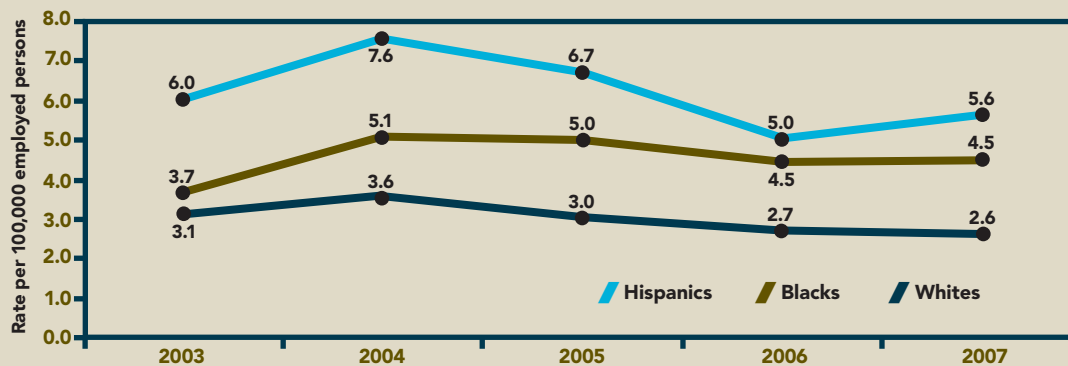


Figure 7. Work-related fatality rate by race/ethnicity, Florida, 2003–2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2003–2007

Industry	2003	2004	2005	2006	2007
Agriculture, forestry, fishing & hunting	54.4	53.1	39.6	49.1	37.7
Construction	13.4	15.1	12.7	10.3	9.0
Manufacturing	4.9	2.0	3.1	3.3	3.4
Wholesale trade	3.4	5.0	5.2	3.5	3.6
Retail trade	2.4	3.5	3.0	2.4	3.1
Transportation & warehousing	12.1	15.0	12.5	12.7	8.5
Financial activities	1.5	1.8	1.5	0.8	1.0
Administrative & waste services	8.7	11.4	16.1	9.7	12.6
Education & health services	0.6	1.0	0.8	0.5	0.7
Leisure & hospitality	2.2	4.3	1.5	2.4	3.1
Arts, entertainment & recreation	1.4	3.6	2.3	3.7	5.6
Accommodation & food services	2.5	1.4	1.3	2.0	2.2

Table 12. Work-related fatality rate per 100,000 employed persons for select industries, Florida, 2003–2007

Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (numerator) & Bureau of Labor Statistics, Current Population Survey (denominator), 2003–2007



Fortunately, many types of work-related fatalities are preventable.

**THE PURPOSE OF THIS REPORT WAS TO IDENTIFY THE MOST COMMON INCIDENT TYPES, AND HIGH-RISK INDUSTRY/OCCUPATIONS, AS WELL AS PRESENT THE DEMOGRAPHIC CHARACTERISTICS OF FATALLY INJURED WORKERS.**

Overall, in 2007 there were 363 work-related fatalities in Florida. Florida's fatality rate was slightly higher than that of the nation (4.1 vs. 3.9 per 100,000 employed). The highest fatality rates were seen among Hispanics and blacks and in workers of all race/ethnicities age who were 65 years of age and older

The most common incident types were those involving a transportation accident (38%), assaults and violent acts (19%), and falls (17%). The most common incident type varied based on whether the worker was a wage and salary worker or self-employed. Wage and salary workers were most commonly killed in transportation accidents (41%), while self-employed workers were more likely to experience a fatal assault or violent act (48%).

Almost 50% of the work-related fatalities occurred in three industries: construction (80 deaths, 22%), administrative and waste services (64 deaths, 18%), and transportation and warehousing (36 deaths, 10%). The industry with the highest rate of fatalities is agriculture, forestry fishing and hunting (37.7 per 100,000 employed), although this was based on only 16 fatalities. The second and third highest rates occurred in the administrative and waste services and construction industries (12.9 and 9.0 per 100,000 employed persons) and these industries had higher numbers of deaths (64 and 80, respectively).

Among occupations, the highest number of fatalities occurred among drivers (44 deaths), construction laborers (28 deaths), and grounds maintenance workers (21 deaths). Although only nine deaths occurred in miscellaneous agricultural workers, this occupation grouping had the highest overall fatality rate of 49.6 per 100,000 employed. Other high fatality rate occupations included aircraft pilots and flight engineers (34.3 per 100,000) and masons (31.0 per 100,000).

Fortunately, many types of work-related fatalities are preventable. Next steps for our program will include collaborating with stakeholders within Florida that are currently working with these high-risk groups and exploring health and safety interventions that other occupational health programs have successfully implemented. The industries and occupations with the highest fatality rates were often those that employed a smaller percentage of the workforce and thus had a smaller number of fatalities. In order to have the broadest impact, Florida's Occupational Health and Safety Program's efforts will begin focus on the highest risk industries/occupations that affect the greatest number of workers.

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4. National Census of Fatal Occupational Injuries in 2005. Bureau of Labor Statistics. 10 August 2006. [http://www.bls.gov/news.release/archives/cfoi\\_08102006.pdf](http://www.bls.gov/news.release/archives/cfoi_08102006.pdf)

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