

# Kentucky FACE Program Annual Report

## 2005



**KENTUCKY INJURY PREVENTION AND RESEARCH CENTER**

**Cooperative Agreement Number U60/CCU409879-10**

The Kentucky Fatality Assessment and Control Evaluation (KY FACE) Program is an occupational fatality surveillance project of the Kentucky Injury Prevention and Research Center (KIPRC)\*. The goal of KY FACE is to prevent fatal work injuries by studying the worker, the work environment, the tools used, the energy exchange resulting in fatal injury, and the role of management in controlling the interaction of these factors. KY FACE investigators evaluate information from multiple sources including interviews of employers, coworkers, witnesses and other investigators; examination of the fatality site and equipment; and review of records such as Occupational Safety and Health Administration (OSHA), police, and medical examiner reports; and employer safety procedures. The FACE program does not seek to determine fault or place blame on companies or individual workers. Findings are summarized in narrative reports that include recommendations for preventing similar events in the future.

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\*Organizationally, KIPRC is part of the University of Kentucky College of Public Health. It maintains a contractual relationship with the Kentucky Department for Public Health (KDPH). Funding for the KY FACE Project is from a cooperative agreement between the National Institute for Occupational Safety and Health (NIOSH) and KDPH that is subcontracted to KIPRC.

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## EXECUTIVE SUMMARY

KY FACE staff recorded 121 occupational fatalities for 2005. The following criteria were established by NIOSH in order for a 2005 fatal work-related incident to be eligible for a field investigation. The criteria were: youth fatalities (<18 years of age), highway work zone deaths, fatal machinery-related incidents, and fatalities of immigrant workers. Kentucky-specific criteria include fatal logging and motor vehicle collision (MVC) injuries. Six on-site investigations were conducted, published and disseminated to employers, safety managers, and others in a position to effect change in work, training, and teaching practices.

The following are significant findings of this annual report:

- 1. Kentucky's occupational fatality rate is 60% above the national rate (6.4 Kentucky worker deaths/100,000 workers compared to 4 US worker deaths/100,000 workers).**
- 2. Kentucky FACE recorded 121 work-related fatalities in 2005 and 25 of those decedents were self-employed.**
- 3. The most frequent fatal occupational incidents occurred in the Trade, Transportation and Utilities industry sector (25%). The decedents were killed more frequently between the hours of 2 and 3:59 pm, were most often between 50-54 years of age, and were primarily Kentucky residents.**
- 4. Almost one-third (32%) of all work-related deaths were due to motor vehicle collisions. The majority (57%) of all occupational drivers were NOT wearing their seat belts when the fatal injury occurred. Semi/tractor-trailers accounted for 33% of the occupational MVCs.**
- 5. There were ten occupational homicides in the state of Kentucky in 2005 and six of the worker homicides involved personal relationships.**
- 6. There were eight occupational fatalities in the Logging industry in Kentucky in 2005 and the most frequent external cause of death was due to being "struck by" an object (50%).**
- 7. More workers in the Transportation and Materials Moving occupations (25%) died in fatal work-related incidents than in any other individual occupations.**
- 8. In 2005 there was a sum of 2453 Years of Potential Life Lost (YPLL) due to occupational fatalities in the state of Kentucky.**
- 9. Farming, Fishing, Forestry occupations had the highest fatality rate (244 deaths/100,000 workers in Kentucky compared to the US rate of 73 deaths/ per 100,000 workers).**

## *INVESTIGATION PROGRAM*

The KY FACE Program completed six on-site investigations of selected occupational fatalities. In order for an incident to be eligible for an investigation: criteria established by NIOSH were met; the incident was a KY FACE state target; or the case was determined by the KY FACE Program to be an investigative case in order to address important safety issues.

The reports that were released in 2005 included one poisoning related incident, one fall related incident, one struck-by related incident, one machine-related incident, and two motor vehicle collision (MVC) related incidents.

**Case 1:** On October 6, 2003, a 49-year-old male equine farm manager accidentally died after injecting himself with an unknown quantity of Sedazine (xylazine), a sedative commonly used to sedate horses. After visiting a barn's storage area at approximately 8:45 am, the farm manager went to his house located on the farm and apparently tried to ease his pain by injecting himself with xylazine. At approximately 9:45 am, a female co-worker saw the farm manager's dog running unrestrained outside and went to the farm manager's house to return the dog. Upon entering the house, she found the farm manager lying face down on the kitchen floor. She looked for a phone but did not find one. The worker went outside, flagged down a passing farm truck and asked the driver to call emergency services. Emergency services personnel arrived, found the victim dead, and contacted local law enforcement and the coroner. The coroner arrived at the scene and pronounced the victim dead.

**Case 2:** On February 23, 2004, a 50-year-old male cleaner died when he fell approximately 35 feet through a temporary roof opening and was impaled on a piece of equipment on the factory floor. He had been cleaning an exhaust fan on a factory roof with a pressure washer. He and two co-workers had removed the fan from its casing creating a temporary roof opening and set the fan beside the roof opening for cleaning. Facing the fan with his back to the opening, the cleaner apparently stepped backwards and fell through the opening. He fell onto a 1200-ton die-casting machine on the factory floor. Onsite personnel working nearby heard the cleaner fall onto the machine. They summoned help for the fallen cleaner. Factory-employed emergency response trained personnel responded to the scene, assessed the situation and called for an ambulance. Local emergency medical personnel and police personnel arrived at the scene and contacted the coroner. The coroner arrived, and declared the cleaner dead at the scene.

**Case 3:** On March 5, 2004, a 57-year-old male laborer died when a 19 inch wide x 31 inch long log rolled down a mountain hitting him in his head and chest. The laborer had been employed for three days by a landscaping company contracted to clear the tree canopy over a gas line right-of-way. At approximately 2:20 pm, the company owner and five laborers were felling trees and bucking downed trees with chain saws and pole saws to remove the trees and limbs hanging over and growing in the gas line right-of-way. Two of the laborers were working topside at the left edge of the hilltop right-of-way; the decedent and another laborer were working the right edge in the middle of the hill, while the owner and another laborer were on the left edge of the right-of-way at the bottom. The topside crew felled a walnut tree into the right-of-way. After felling the walnut tree, one of the topside workers sawed the felled tree into approximately 30 inch lengths.

One of these 30-inch logs bounced and rolled down the hillside for 200 to 300 feet, and hit the decedent in the chest and head. The company owner called emergency services who arrived at the scene and contacted the coroner. When the coroner arrived, he declared the victim dead at the scene due to multiple blunt trauma to his head and chest.

**Case 4:** On January 31, 2004, a 45-year old female horse farm owner (decedent) died when she was pinned under a golf cart. The woman had driven a gas-powered golf cart from her house on the farm to the horse barn to muck stalls and put horses in the barn. After driving the golf cart into the barn, the farm owner placed two square bales of hay on the golf cart; one on the back and one on the passenger side of the front seat. Leaving the ignition key of the golf cart in the “on” position, she left the golf cart in the aisle at the end of the barn. She then walked the length of the barn, entered a stall, mucked it out, exited the stall into the barn aisle, and leaned the pitch fork against the wall next to the stall door. Unbeknownst to the farm owner, the bale of hay on the passenger seat had slipped off the seat and fallen onto the gas pedal of the golf cart. With the pedal depressed by the hay bale and the key in the “on” position, the golf cart proceeded down the barn aisle, striking the victim and pinning her underneath. Several hours later, the farm owner’s daughter went to the barn and found her mother pinned underneath the golf cart. Upon finding her mother, she called a friend then went to the farm manager’s house located nearby on the farm. The daughter informed the farm manager that her mother was in the barn pinned underneath the golf cart. The farm owner’s daughter returned to the barn with the farm manager to find the daughter’s friend and her friend’s mother on the phone with emergency services. Emergency services arrived and contacted the coroner who arrived and declared the horse farm owner dead at the scene due to “compression asphyxia with hypothermia”.

**Case 5:** On November 11, 2004, a 33-year-old male dump truck driver died when he was crushed between the driver’s side of the dump truck and the swinging counter-weight of an excavator (trackhoe). His dump truck became stuck in mud after the trackhoe loaded dirt into it so he walked to the on-site office and informed the owner. The owner located a bulldozer on site and drove it to the dump truck while the driver retrieved a chain from his personal pickup truck. The owner raised the blade so the driver could attach the chain to it. Raising the blade of the bulldozer blocked the owner’s view of the ground and the cab of the dump truck, but he could still see the operator in the cab of the trackhoe operating beside the dump truck. After attaching the chain to the bulldozer blade, the dump truck driver either proceeded to attach the chain to the dump truck and tried to enter the cab; or, had already done so when the chain slipped and he was exiting the cab to reattach the chain. The counter-weight of the trackhoe swung toward the dump truck pinning the dump truck driver between the dump truck and the counterweight. At the same time, the owner thought the chain was properly attached and began backing the bulldozer away from the dump truck but did not feel the tug of the chain. Upon hearing the bulldozer engine accelerate, the trackhoe operator looked in the rear-view mirror and saw the dump truck driver on the ground. Stopping the bulldozer, the owner looked toward the trackhoe operator to check if the chain had slipped. The trackhoe operator was signaling to him that something was wrong. Both men exited their equipment to find the dump truck driver unconscious on the ground. A nearby employee went to the office and told office staff to call emergency services. Emergency services arrived, observed no vital signs in the dump truck driver, and summoned the local coroner to the scene. The local coroner arrived and declared the dump truck driver dead at the scene.



**Case 6:** On June 6, 2005 a 55-year-old male dump truck driver (Driver 1) died when he was buried waist deep in 400-degree Fahrenheit asphalt. Driver 1 stopped along the highway to help another dump truck driver (Driver 2), (both were independent truck drivers), who had experienced brake problems. As the two men were examining the pneumatic brake system at the rear of the disabled dump truck, the tailgate opened unexpectedly, spilling hot asphalt onto the decedent who was under the rear of the truck.

### QUANTITATIVE ANALYSIS

The KY FACE Program identified 121 fatal occupational injuries that occurred during 2005, compared to 128 recorded in 2004. The following section provides a descriptive analysis of the 2005 KY FACE data.

#### Identification of Cases

The primary source of identification for 2005 cases was newspapers, the notification source for 36% of the cases (Figure 1). Other media, which is defined as radio or television, was the notification source for 19% of the cases, respectively. Vital Statistics (death certificates) was the initial source of notification for 17% of the cases, respectively. The KY FACE Program was informed of 49% of the occupational fatality cases within two days of the fatality and was notified regarding 73% of the cases within 30 days or less of the fatality (Figure 2).

**Figure 1. Sources of Notification – 2005.**

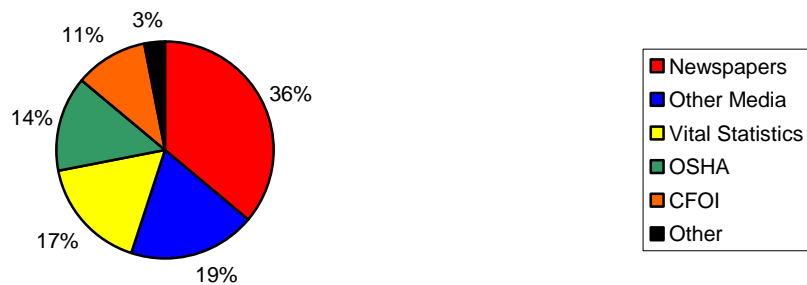
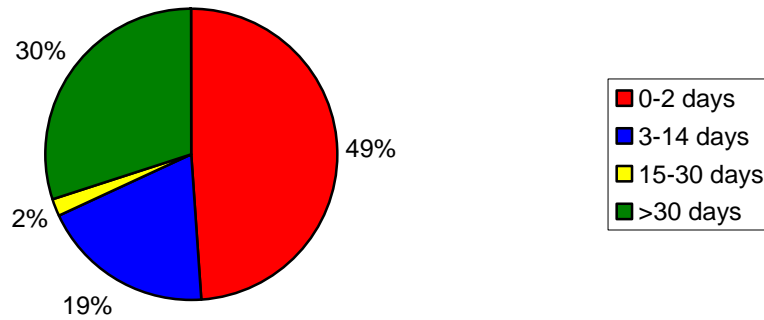
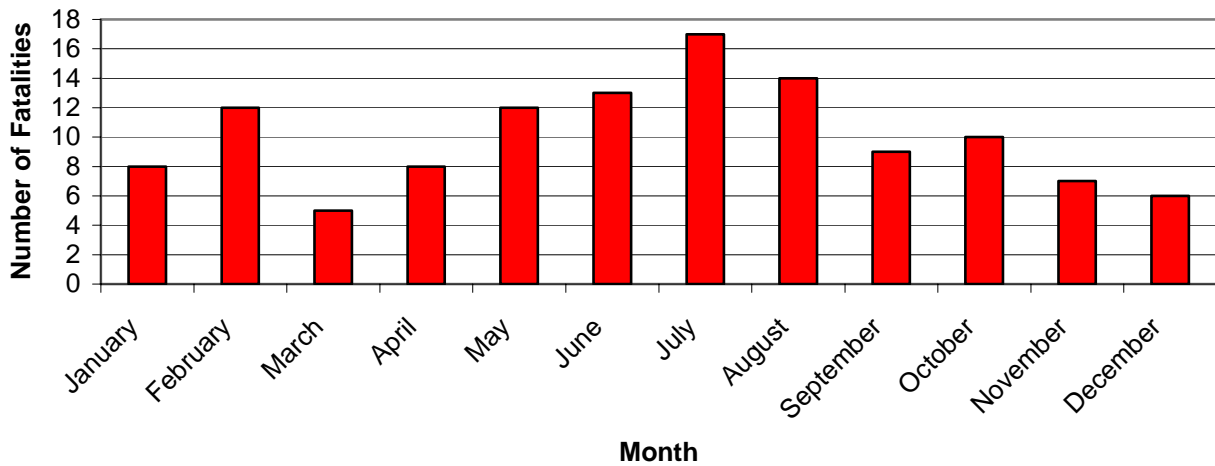


Figure 2. Time between Occupational Fatality and Initial Notification – 2005.

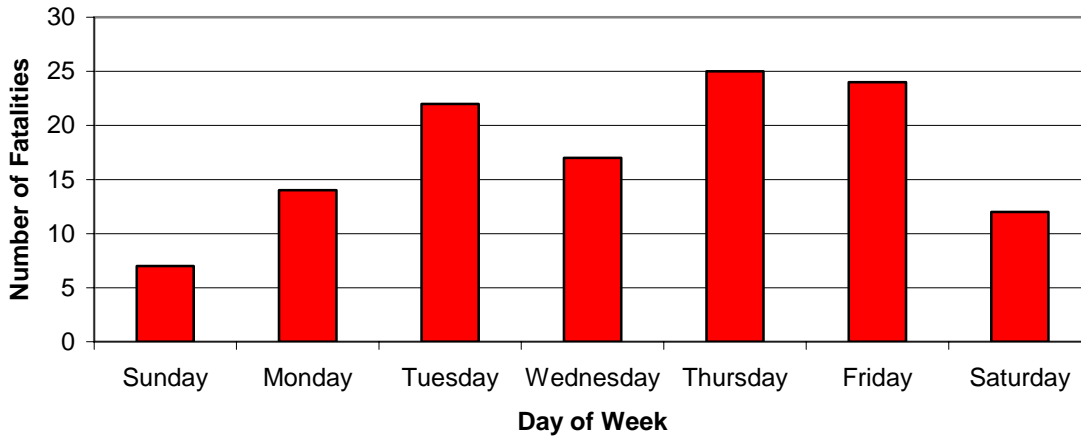


The months in which the most work-related fatalities occurred were June, July, and August (n = 44). The lowest number of occupational fatalities during 2005 occurred during the month of March (n = 5). The day of the week in which the most fatal occupational incidents occurred in 2005 was Thursday (n = 25) and the fewest work-related fatal incidents occurred on Sunday (n = 7).

Figure 3. Kentucky Occupational Fatalities by Month – 2005.



**Figure 4. Occupational Fatality Incidents by Day of Week – 2005.**



The most occupational fatalities occurred between the hours of 2:00 pm and 5:59 pm and the fewest number of fatalities were recorded between 4:00 am to 5:59 am (Figure 5).

**Figure 5. Fatal Occupational Incidents by Time of Day – 2005.**

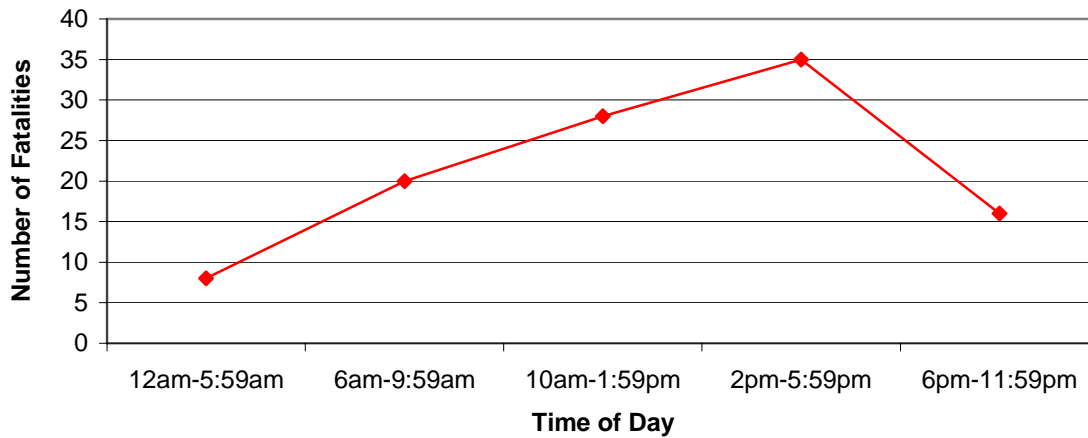
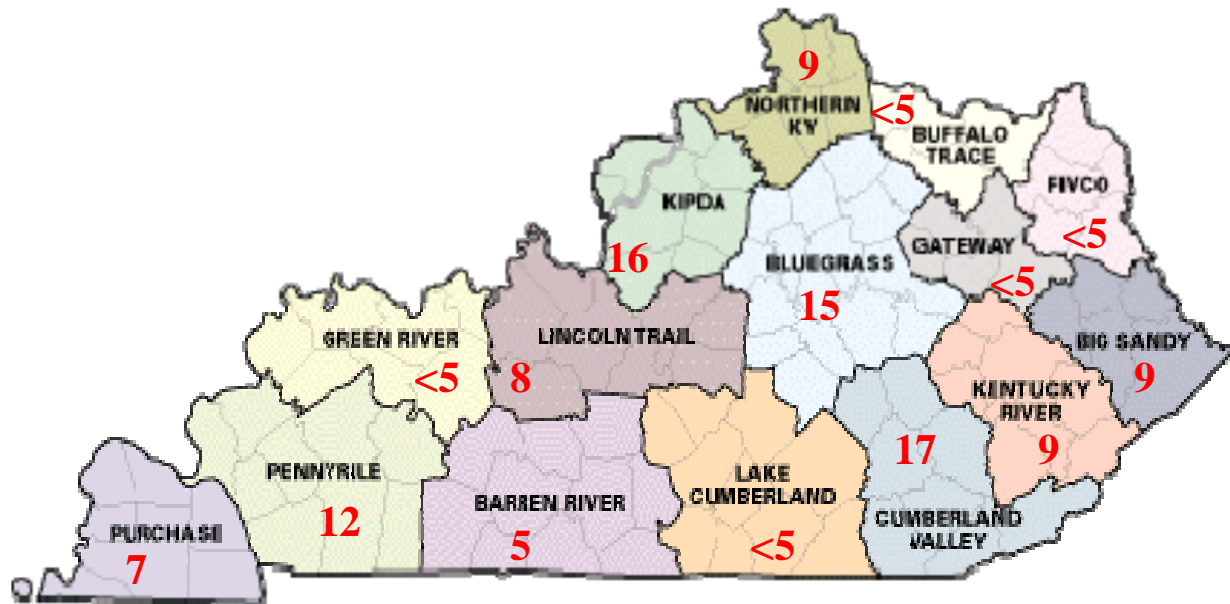


Figure 6 depicts the Commonwealth of Kentucky as Area Development Districts (ADD). ADD's are defined as partnerships of local governments and these partnerships provide for planned growth within the area. KY FACE recorded the most 2005 occupational fatalities within the Cumberland Valley ADD (n = 17), closely followed by the KIPDA District (n = 16) and the Bluegrass District (n = 15). The fewest number of work-related fatal incidents occurred in the Gateway District and the Buffalo Trace District.

Figure 6. Occupational Fatality Incidents per Area Development District (ADD) – 2005.



Sixty-three counties of Kentucky’s 120 counties had at least one fatal occupational incident occur within its borders in 2005. The county with the highest number fatal work-related incidents was Jefferson County (n = 13), followed by Pike County (n = 6). Table 1 shows the fatality rate per 100,000 workers for the two counties with the highest number of fatalities (employment estimates are used).

Table 1. Fatality Rates for Counties with the Greatest Frequency of Fatal Occupational Incidents – 2005.

County	Fatalities	Employment <sup>a</sup>	Fatality Rate per 100,000 Workers
Jefferson	13	356,566	3.6
Pike	6	21,340	28.1
<b>Total KY</b>	121	1,878,341	6.4

<sup>a</sup>State and county employment estimates are from the 2005 Kentucky Deskbook of Economic Statistics. Kentucky Cabinet for Economic Development, Division of Research; Frankfort, KY.

## Demographics

Table 2 depicts the demographic characteristics of workers who were fatally injured on the job in 2005. Male workers accounted for 95% of all recorded work-related fatalities in Kentucky in 2005 and 90% of the fatally injured workers were white. The ages of the workers involved in occupational fatalities ranged from 11 years of age to 81 years of age. Sixty-seven percent of the decedents whose marital status could be confirmed were married and 17% of the decedents were never married. Sixty-eight percent of workers involved in occupational fatalities were high school graduates. The majority of those fatally injured at work were born in the United States, although seven decedents were born in other countries. Nearly all of the decedents (at least 89%) spoke English.

When in-state (KY) vs. out-of-state deaths were examined, 19% of the fatal incidents involved out-of-state residents who were fatally injured while working in Kentucky.

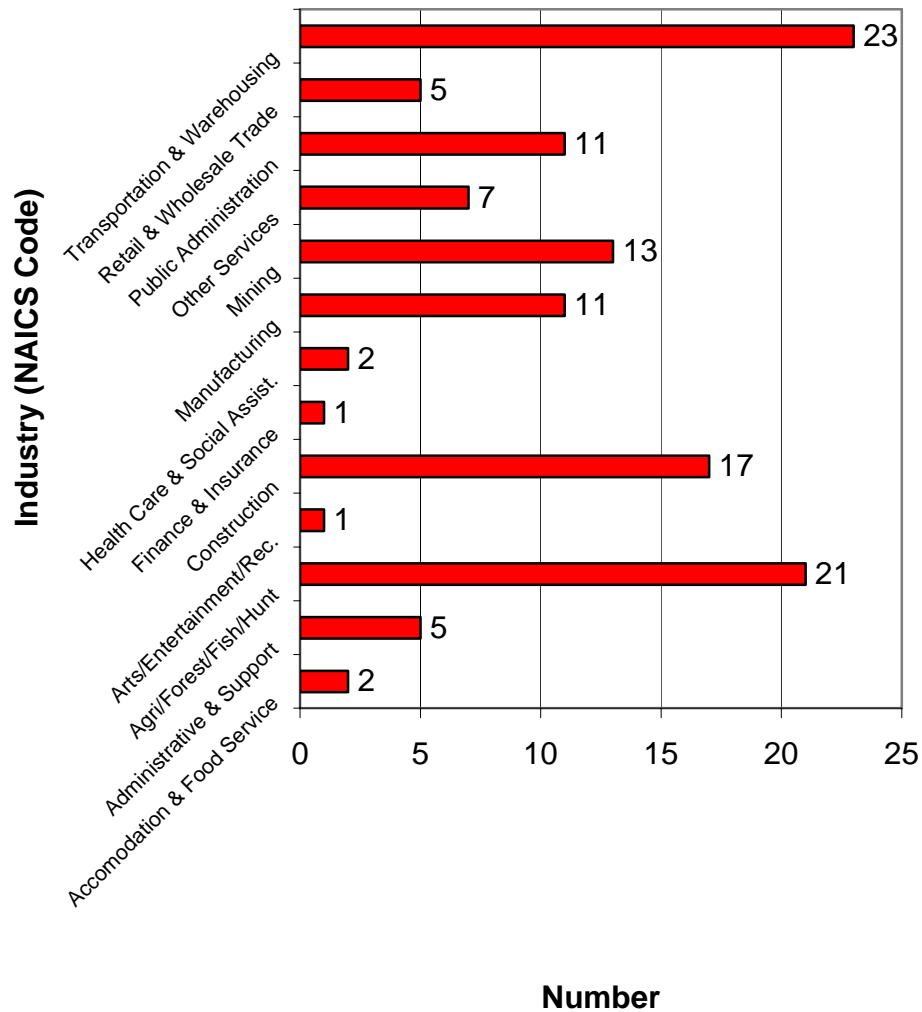
Table 2. Demographic Characteristics of Fatally Injured Workers – 2005.

<b>Characteristics</b>	<b>Number</b>	<b>Percent</b>
<b>Total Fatalities</b>	121	100
<b><u>Sex</u></b>		
Male	115	95
Female	6	5
<b><u>Race</u></b>		
White	104	90
Black	4	3
Other	8	7
<b><u>Age</u></b>		
<20	3	2
20-29	20	17
30-39	23	19
40-49	25	21
50-59	29	24
60-69	13	11
70-79	6	5
80-89	2	2
<b><u>Marital Status</u></b>		
Never married	19	17
Married	76	67
Divorced	15	12
Widowed	3	3
<b><u>Education</u></b>		
Less than high school	20	19
Some high school	17	16
Finished High School	51	48
Some College	14	13
College Graduate	8	7
<b><u>Country of Origin</u></b>		
United States	107	88
Mexico	5	4
Canada	1	1
Other	1	1
Unknown	7	6
<b><u>Primary Language</u></b>		
English	108	89
Spanish	6	5
Unknown	7	6
<b><u>State of Residence</u></b>		
Kentucky	96	81
Indiana	7	6
Ohio	3	3
Illinois	2	2
Tennessee	2	2
Texas	2	2
Wisconsin	2	2
Other	5	4

### Industry

Figure 7 and Table 3 depict the number of workers that were fatally injured in each industry (as classified by the *North American Industry Classification System (NAICS)*). Table 3 also shows a comparison of state and national occupational fatality rates. The Trade, Transportation and Utilities industry sector recorded most of the work-related deaths in Kentucky in 2005 (n = 30, 25% of total fatalities). The occupational fatality rate for this industry was 8.1 worker deaths per 100,000 employed. The highest fatality rates were in the Mining industry (68 deaths /100,000 employees), the Other Services industry (65/100,000), and in the Agriculture, Forestry, Fishing, and Hunting industry (46/100,000).

**Figure 7. Occupational Fatalities by Industry (NAICS code) – 2005.**



**Table 3. Occupational Fatalities by Major Industry Sectors (NAICS code) – 2005.**  
(Rates calculated per 100,000 workers<sup>a</sup>).

Industry <sup>b</sup>	# of KY Deaths	KY Employment	2005 KY Fatality Rate	# of US Fatalities	US Employment	2005 US Fatality Rate <sup>c</sup>
Professional and Business Services	5	579,268	0.9	481	16,882,000	2.8
Agric/Forest/Fish/Hunt	21	47,811	46.0	714	2,196,923	32.5
Construction	17	83,207	20.4	1,186	7,277,000	16.3
Manufacturing	11	263,695	4.2	393	14,232,000	2.8
Mining	13	19,105	68.0	159	625,000	25.6
Other Services	7	10,771	65.0	208	5,386,000	3.9
Government	11	253,183	4.3	514	21,803,000	2.4
Trade, Transportation, and Utilities	30	368,860	8.1	1512	25,909,000	5.8
<b>Total</b>	<b>121</b>	<b>1,878,341</b>	<b>6.4</b>	<b>5702</b>	<b>142,550,000</b>	<b>4.0</b>

<sup>a</sup>Number of employed persons obtained from the Bureau of Labor Statistics and Kentucky Deskbook of Economic Statistics.

<sup>b</sup>Office of Management and Budget. North America Industry Classification System. 2002. Bernam Press. Lanham, MD.

<sup>c</sup>Census of Fatal Occupational Injuries Summary. US Dept. of Labor, Bureau of Labor Statistics, National Census of Fatal Occupational Injuries in 2005.

## External Cause of Death

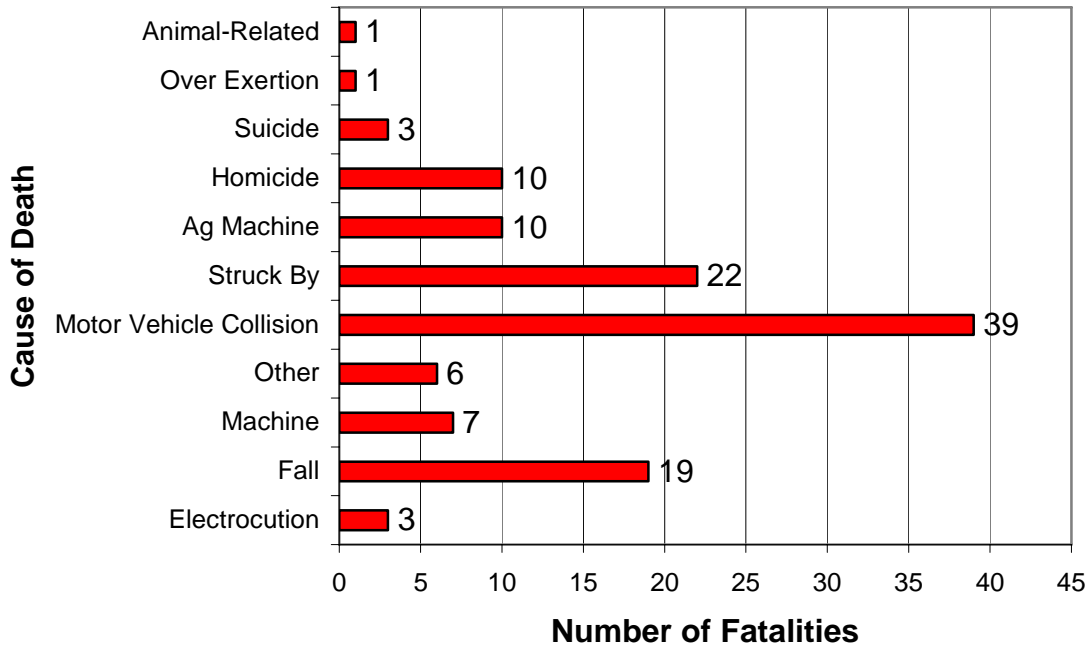
Figure 8 shows the external cause(s) of death for occupational fatalities. Motor Vehicle Collisions (MVCs) were the leading cause of occupational fatalities (n = 39, 32%) in 2005. The second leading cause of worker death was being struck by an object (n = 22, 18%), and falls were the third major cause of fatal occupational incidents (n=19, 16%). Ag machine-related fatalities (n = 10) accounted for 8% of the worker deaths.

According to the E-code classifications described in the *International Classification of Diseases, Ninth Revision (ICD-9 CM)* the majority of the deaths that occurred in the Transportation and Warehousing industry were attributed to MVCs (74%) while most deaths in the Construction industry were caused by falls (53%). In the Agriculture/Forestry/Fishing/Hunting industry, over half of the deaths were due to machinery (52%).

Kentucky continues to have one of the highest worker fatality rates in the nation and increased prevention efforts are necessary for educational and training purposes. Areas of concentration for 2006 are MVC incidents, particularly in the Transportation and Agriculture industries.



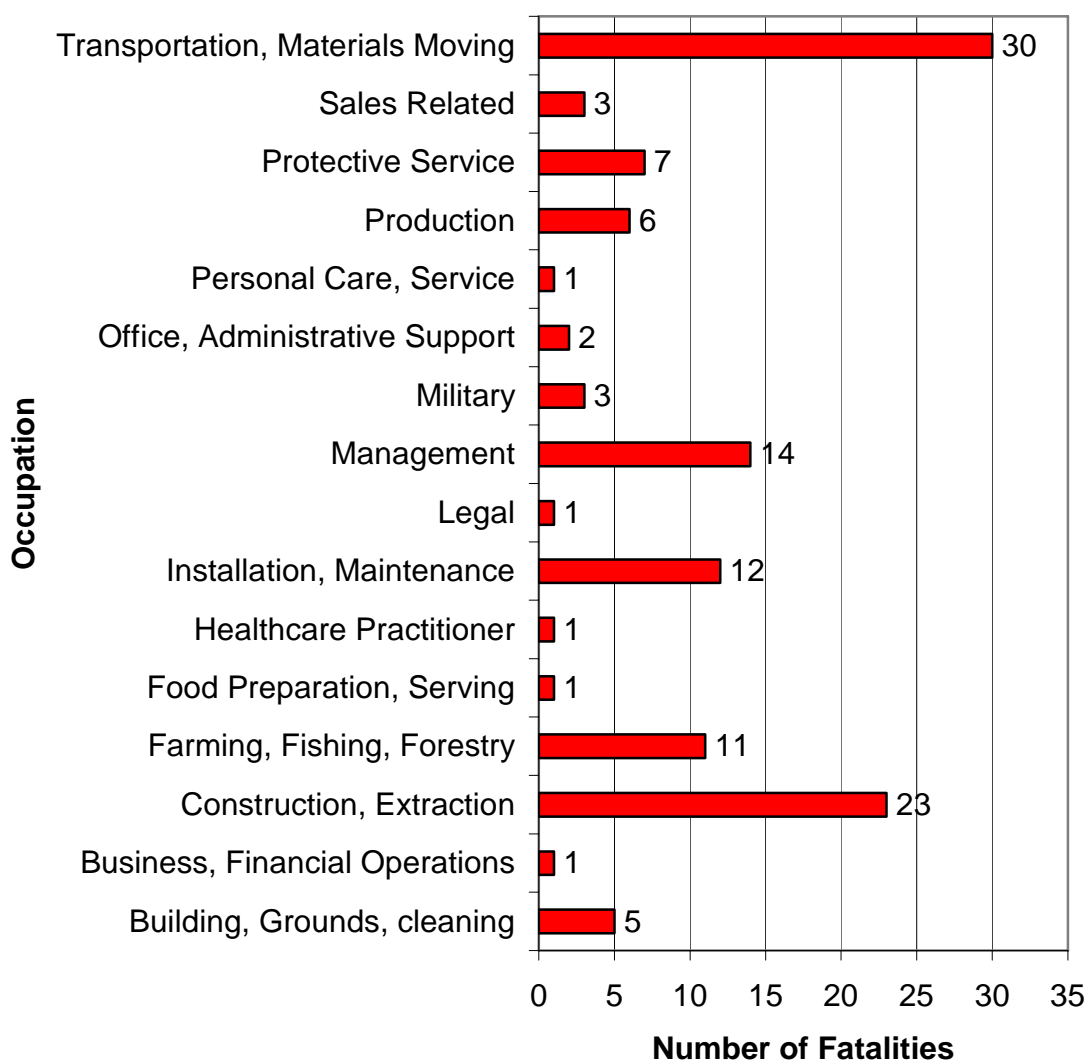
Figure 8. Occupational Fatalities by Incident Type – 2005.



### Occupation

Figure 9 represents Kentucky work-related fatalities classified by occupation, coded according to the *Standard Occupation Classification Manual, 2000*. The Transportation/Materials Moving occupations accounted for 30 of the 121 occupational deaths in 2005 (25%). Nineteen percent of the decedents were employed in Construction/Extraction occupations. The Kentucky and United States fatality rates are shown in Table 4. The Farming, Fishing, and Forestry occupational class had the highest fatality rate. The occupation with the second highest fatality rate was the Construction and Extraction occupational class.

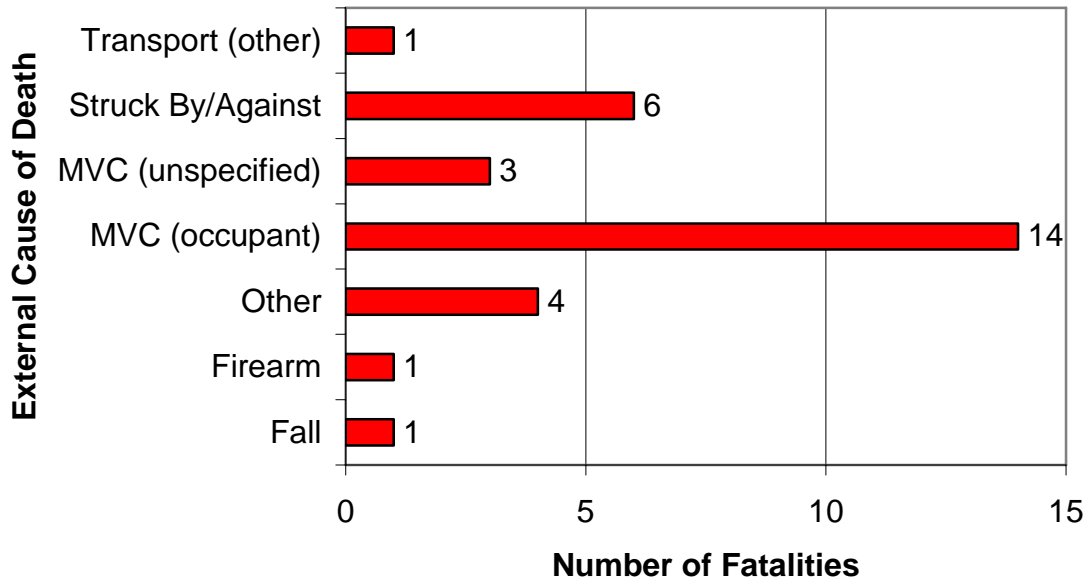
In Figures 10-12, the primary cause of death is listed for the three occupational classes with the highest frequency of deaths. Within the Transportation /Materials Moving occupations, motor vehicle collisions were the most frequently occurring incident type (57%). Within the Management occupational classification, machinery caused the most deaths (50%). Falls were the most frequent cause of death in the Construction and Extraction occupations (39%).

**Figure 9. Work-Related Fatalities by Occupation (SOC) – 2005.****Table 4. Work-Related Fatalities by Major Occupational Classification – 2005.**

Occupational Classification	Number (%)	# Employed in KY	2005 KY Rate	Number	# Employed in US	2005 US Rate <sup>a</sup>
Building, Grounds Cleaning	5 (4%)	53,810	9.3	264	4,342,550	6.1
Construction, Extraction	23 (19%)	83,570	27.5	1180	6,370,400	18.5
Farming, Fishing, Forestry	11 (9%)	4,510	243.9	324	443,070	73.1
Installation, Maintenance	12 (10%)	79,000	15.2	396	5,305,260	7.5
Management	14 (11%)	80,300	17.4	567	5,960,560	9.5
Production	6 (5%)	203,850	2.9	274	10,249,220	2.7
Protective Service	7 (6%)	32,870	21.3	256	3,056,660	8.4
Transportation, Material Moving	30 (25%)	153,400	19.6	1543	9,594,920	16.1

<sup>a</sup>Employment figures obtained from *Census of Fatal Occupational Injuries – 2005 data*, US Department of Labor, Bureau of Labor Statistics, Washington, DC 20212-0001. Rates were calculated as the number of occupational fatalities per 100,000 workers.

**Figure 10. External Causes of Death for Transportation and Material Moving Occupations (SOC) - 2005.**



**Figure 11. External Causes of Death for Management Occupations (SOC) – 2005.**

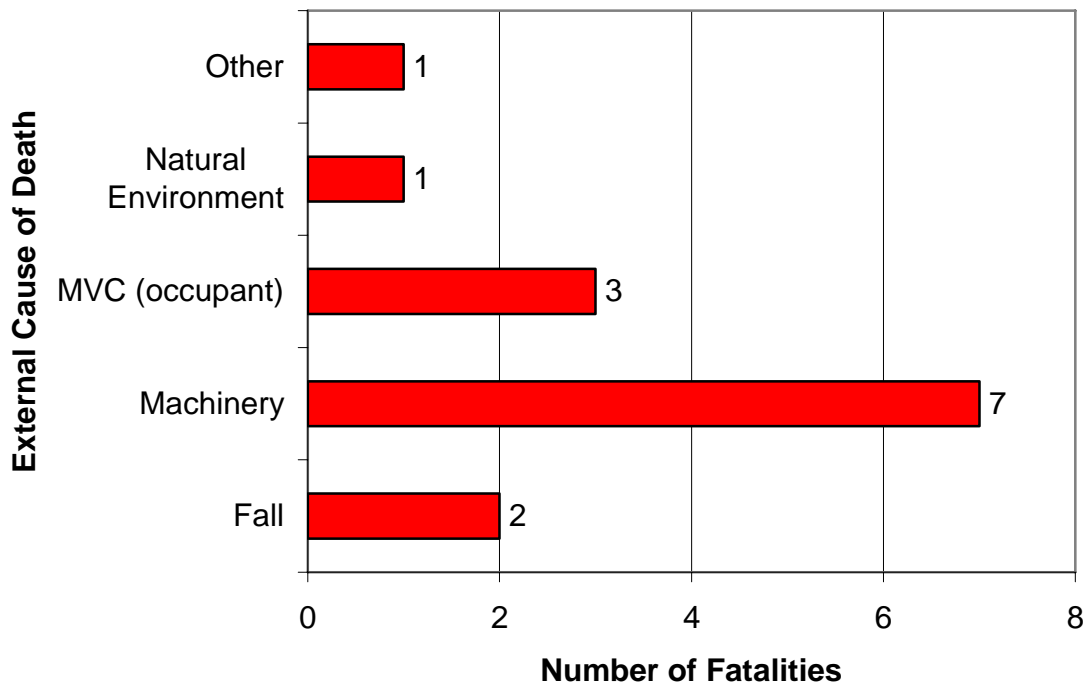
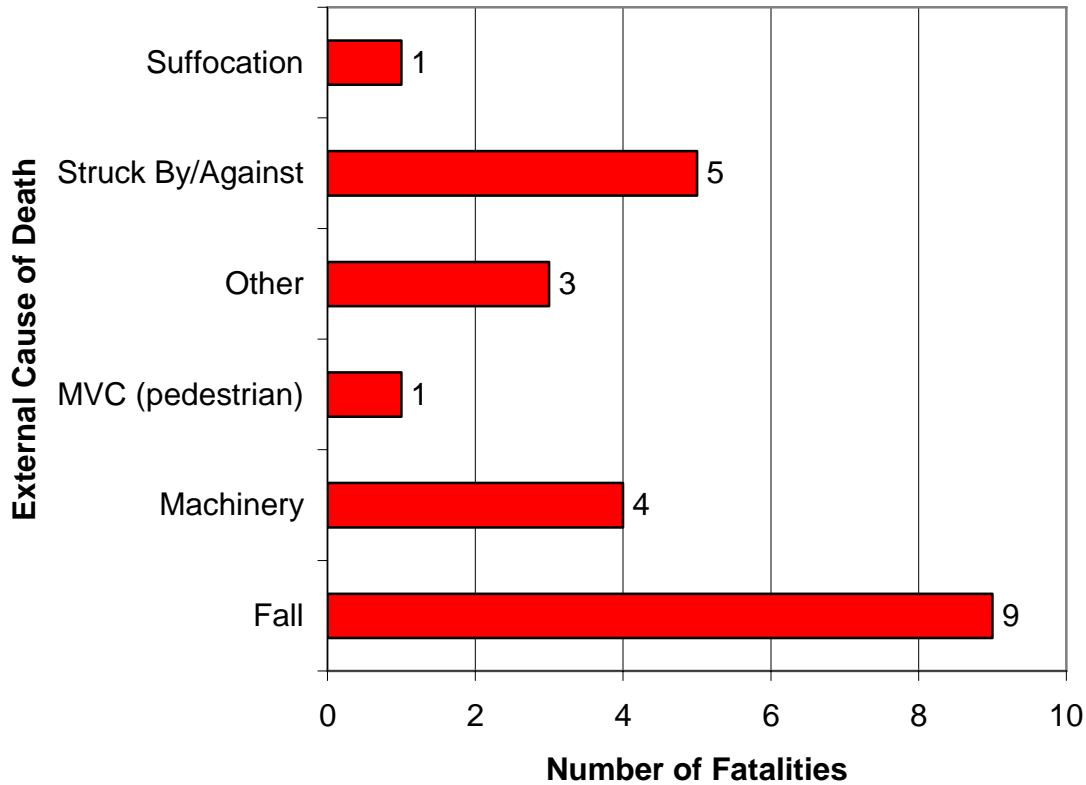


Figure 12. External Causes of Death for Construction and Extraction Occupations (SOC) – 2005.



### Years of Potential Life Lost (YPLL)

Figure 13 represents the total YPLL for the years of 1995 – 2005. In 2005, the total YPLL of the 121 workers who were fatally injured was 2453 (YPLL is based on the age of 65). YPLL is calculated as the age of the worker at the time of death, subtracted from the average lifespan. The age of 65 is representative of a “lifespan” for the purposes of this analysis (U.S. Decennial Life Tables for 1989-1991, CDC/National Center for Health Statistics, 1997) because this is the average age of workers at the time of retirement. The YPLL statistic is more representative of years of employment lost (Struttman *et al.* 1998).

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**Figure 13. Total Years of Potential Life Lost (YPLL) in Kentucky, 1995-2005.**

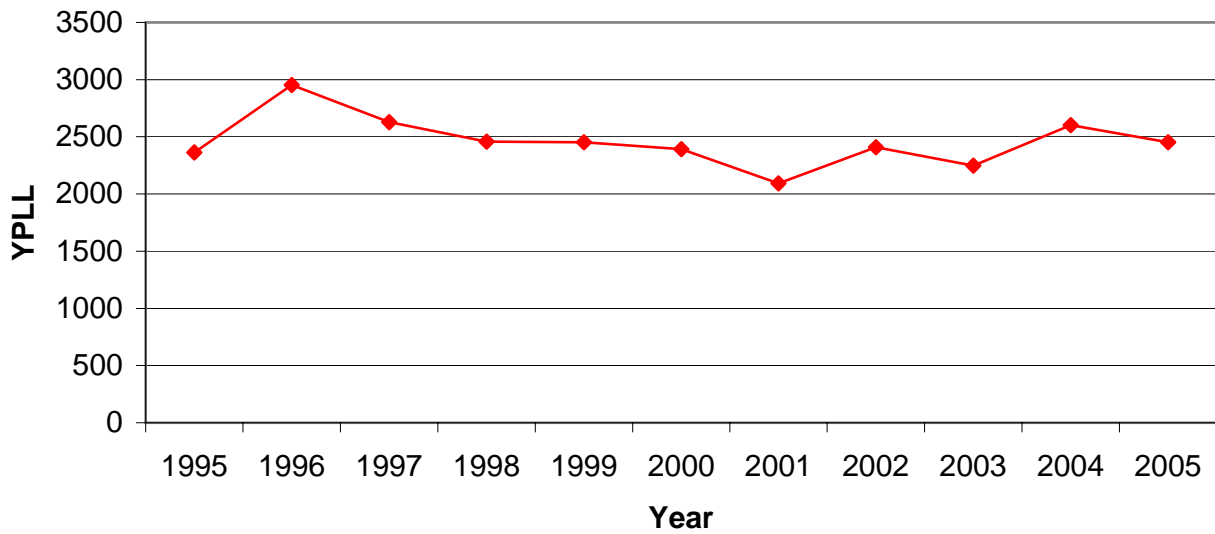


Table 5 represents the YPLL calculation for each major industry classification (NAICS). The industries with the highest average YPLL were in the Mining, Manufacturing, and Construction industries. These results indicate that workers in these industries are being fatally injured at a younger age. The Trade, Transportation, and Utilities industry sector had the highest total YPLL, which indicates the loss of potential employment and future lost productivity was highest for this industrial group (\$18.8 million dollars). Table 6 shows that future lost earnings could total as much \$92.4 million dollars due to these work-related fatalities. Those industries with future losses of greater than \$10 million dollars are the Mining industry, the Trade, Transportation and Utilities industry sector, the Construction industry, the Manufacturing industry, and the Government industry.

**Table 5. Total and Average YPLL by Industry Classification – 2005.**

<b>Industry Classification</b>	<b>Total Fatalities</b>	<b>2005 Total</b>	<b>Average YPLL per Fatality</b>
Agriculture, Forestry, Fishing, and Hunting	21	278	13.2
Mining	13	353	27.2
Trade, Transportation, and Utilities	30	462	15.4
Construction	17	436	25.6
Manufacturing	11	289	26.3
Financial Activities	1	12	12
Professional and Business Services	5	103	20.6
Education and Health Services	2	47	23.5
Leisure and Hospitality	3	96	32
Other Services (except Public Administration)	7	138	19.7
Government	11	239	21.7

**Table 6. Future Lost Wages (by Industry) Due to Work-Related Fatalities – 2005.**

<b>Industry Classification</b>	<b>Average Salary<sup>a</sup></b>	<b>Total Earnings Lost (in millions)</b>	<b>% of Total</b>
Agriculture, Forestry, Fishing, and Hunting	\$22,470	\$6.3	7%
Mining	\$45,210	\$16.0	17%
Trade, Transportation, and Utilities	\$40,765	\$18.8	20%
Construction	\$40,960	\$17.9	19%
Manufacturing	\$39,240	\$11.3	12%
Financial Activities	\$49,200	\$0.6	.06%
Professional and Business Services	\$29,510	\$3.0	3%
Education and Health Services	\$39,400	\$1.9	2.1%
Leisure and Hospitality	\$19,090	\$1.8	1.9%
Other Services (except Public Administration)	\$30,710	\$4.2	4.5%
Government	\$44,250	\$10.6	11.5%
<b>Total</b>		<b>\$92.4</b>	<b>100%</b>

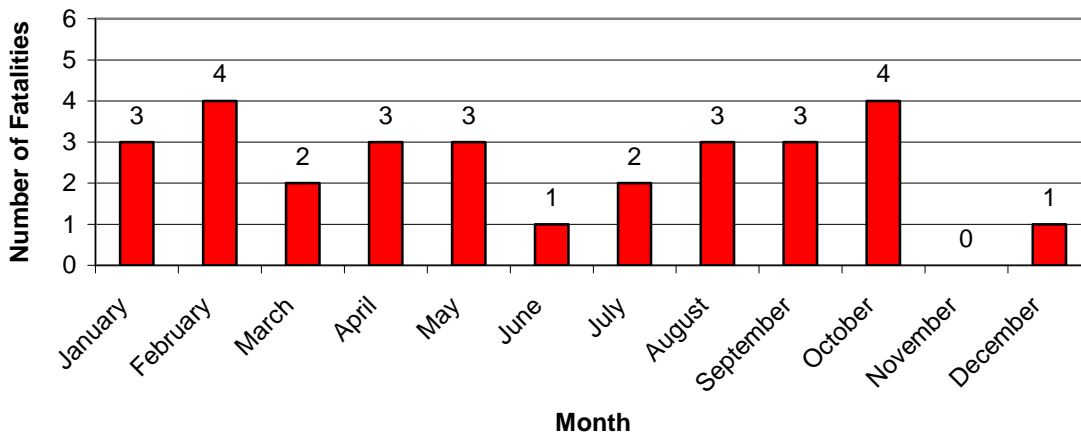
<sup>a</sup>Average Salaries from *May 2005 National Industry-Specific Occupational Employment and Wage Estimates*. U.S. Bureau of Labor Statistics. Amounts are not adjusted for inflation.

**SPECIAL TOPICS**

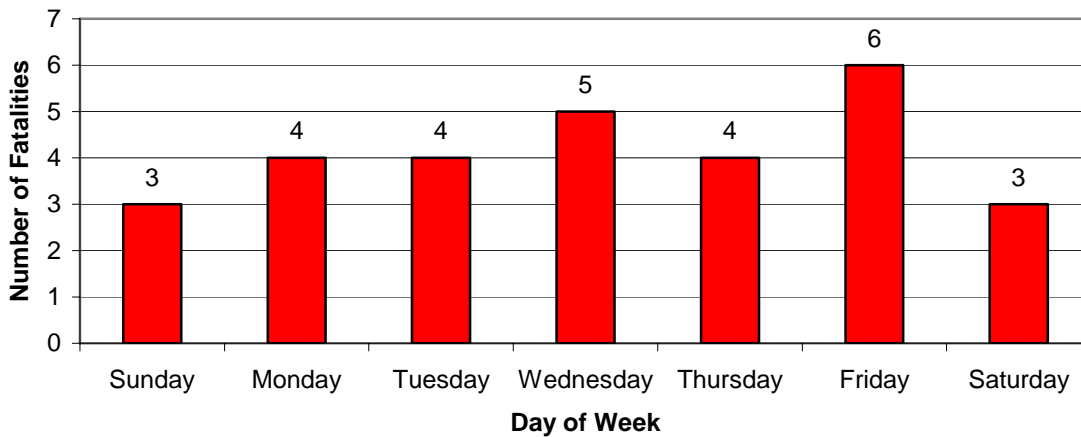
**Fatal Trade, Transportation, and Utilities Injuries**

The Trade, Transportation, and Utilities industry (Transportation industry) accounted for 30 of the 121 (25%) total work-related fatalities in 2005. Fatal incidents in this industry sector more frequently occurred in the months of February, August, and October (Figure 14). The day of the week in which most of the fatalities occurred in this industry was Friday (Figure 15).

**Figure 14. Transportation Industry Worker Deaths by Month – 2005.**

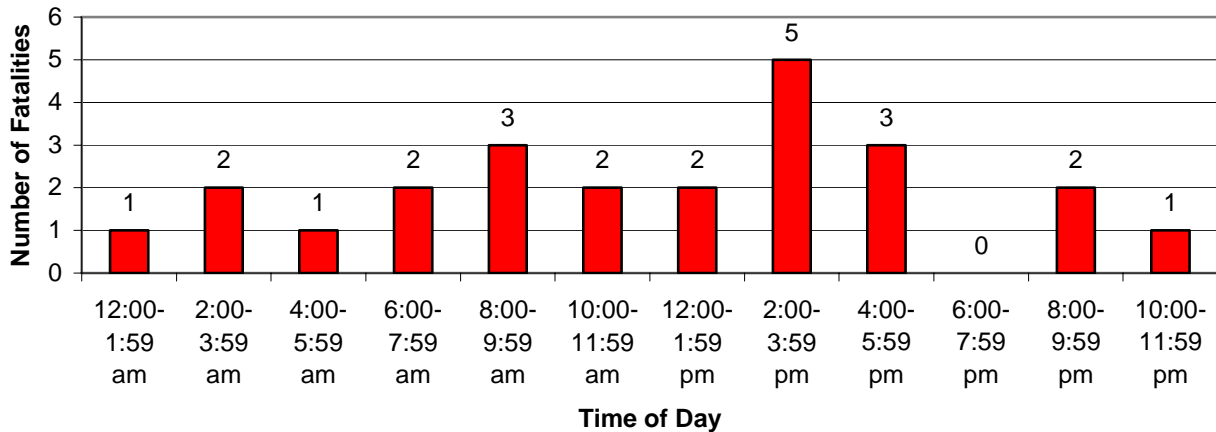


**Figure 15. Transportation Industry Fatal Incidents by Day of the Week – 2005.**

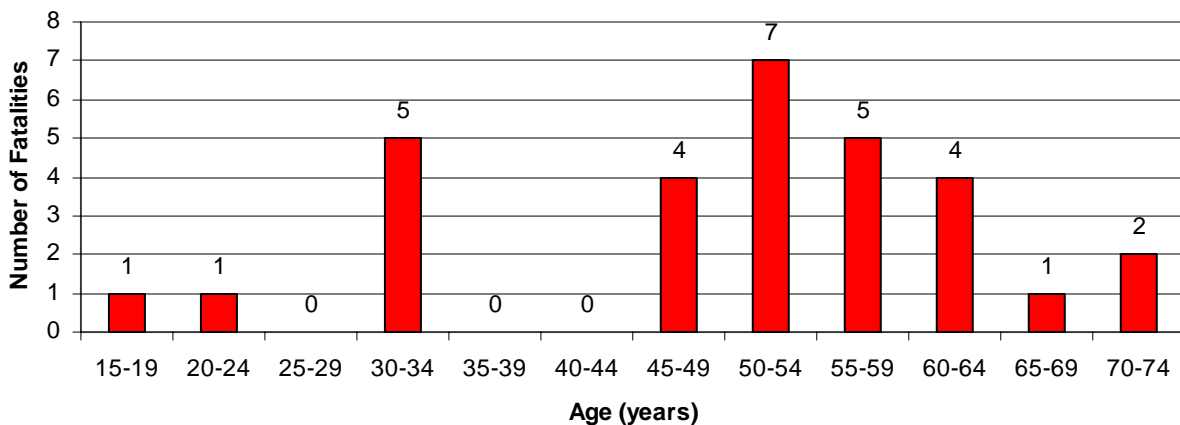


The most Transportation industry fatalities occurred between 2:00 pm and 3:59 pm (Figure 16). The ADD district where most of this industry’s fatalities occurred was the KIPDA district. The ages of 50-54 was the age range with the highest frequency of decedents (Figure 17).

**Figure 16. Time of Transportation Industry Fatal Incidents - 2005.**



**Figure 17. Age of Transportation Industry Worker at Time of Fatal Incident – 2005.**



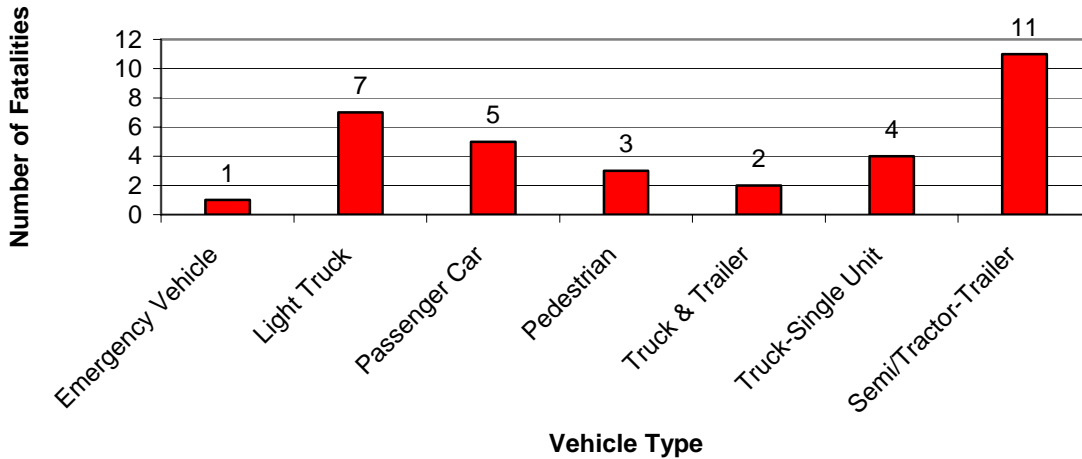
The country of origin for at least 28 of the decedents was the United States and sixteen of the fatally injured workers were Kentucky residents.

### Motor Vehicle Collisions

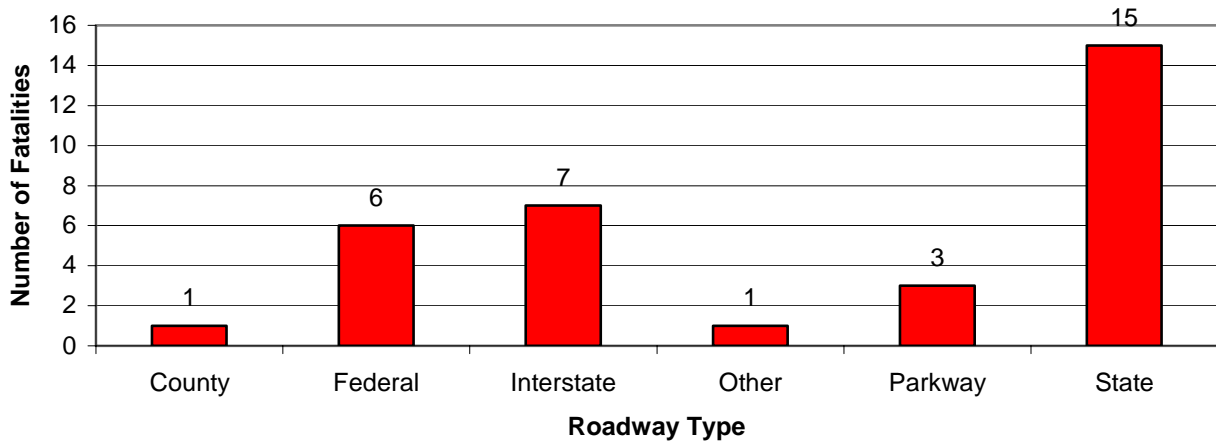
Motor vehicle collisions (MVCs) were the leading cause of occupational fatalities in 2005 (Figures 18-19). Thirty-nine of the 121 work-related deaths in 2005 were due to MVCs (32%). The most common industry in which MVCs occurred was the Transportation and Warehousing industry (n=18). Twenty-three percent of MVCs occurred on a Friday and 18% of all occupational MVCs occurred during the month of February. Semi/tractor-trailers accounted for 33% (respectively) of the occupational MVCs and 45% occurred on a state highway, respectively. Of note, fifty-seven percent of the occupational drivers who died in a MVC were NOT wearing a seat belt when the fatal incident occurred.



**Figure 18. Motor Vehicle Collisions by Vehicle Type – 2005.**



**Figure 19. Type of Roadway Where Motor Vehicle Collision Occurred – 2005.**

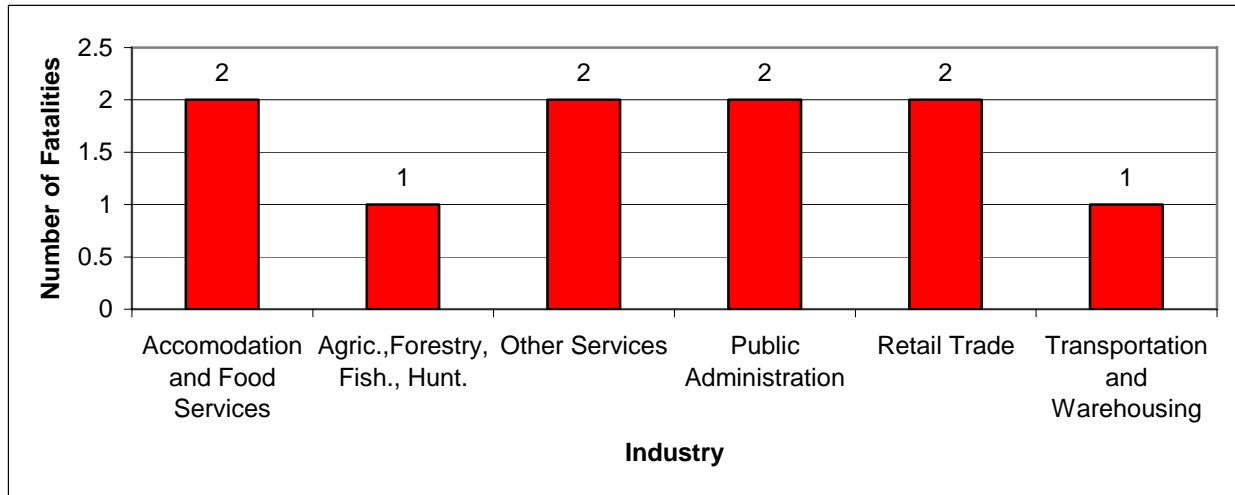


**Occupational Homicides**

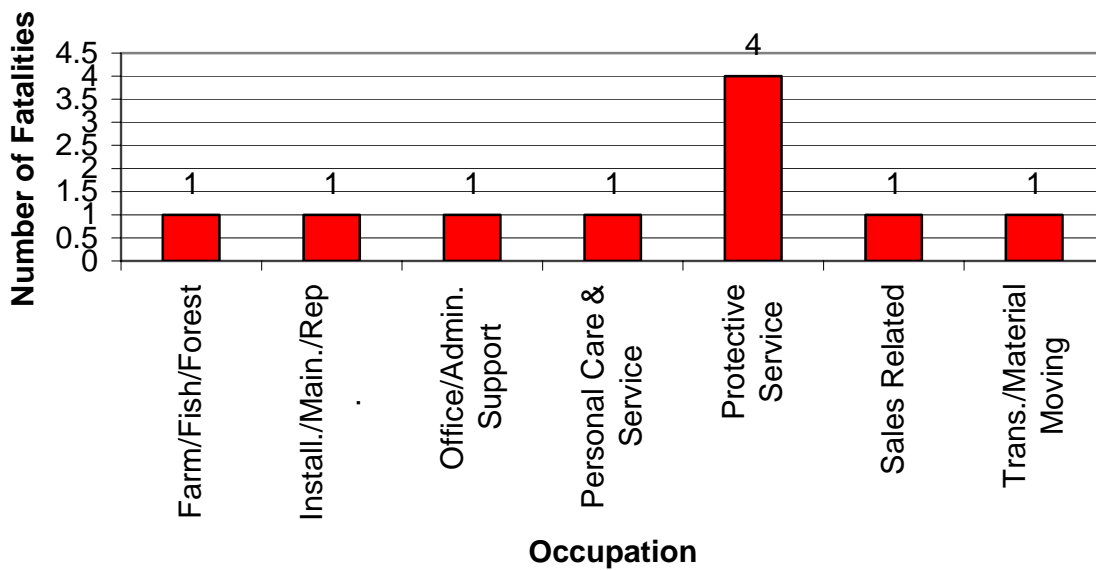
During 2005, ten of the 121 occupational fatalities were a result of homicides. Three of the homicides occurred during the month of June. There were two homicides per each of the following industries: Accommodation and Food Services industry, the Public Administration industry, the Transportation and Warehousing industry, and the Other Services industry (Figure 20). The occupational classification in which the majority of the homicides occurred was Protective Services (Figure 21). Eight of the occupational homicides involved firearms and 2 involved beating with a blunt object.

When the type of workplace violence was categorized, two of the incidents involved criminal intent, and one involved a customer/client type of relationship. Personal relationships were involved in six of the homicides (four were shot by friends, one was shot by a friend’s ex-husband, one was shot by an estranged husband, and one was killed during a domestic violence dispute).

**Figure 20. Work-Related Homicides by Industry – 2005.**



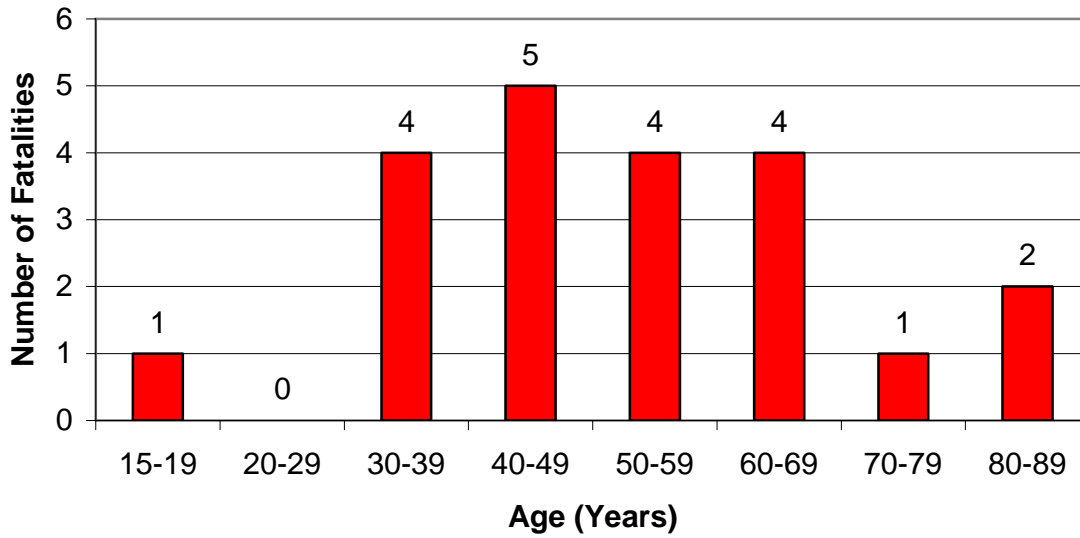
**Figure 21. Work-Related Homicides by Occupation – 2005.**



**Agricultural Industry Occupational Fatalities**

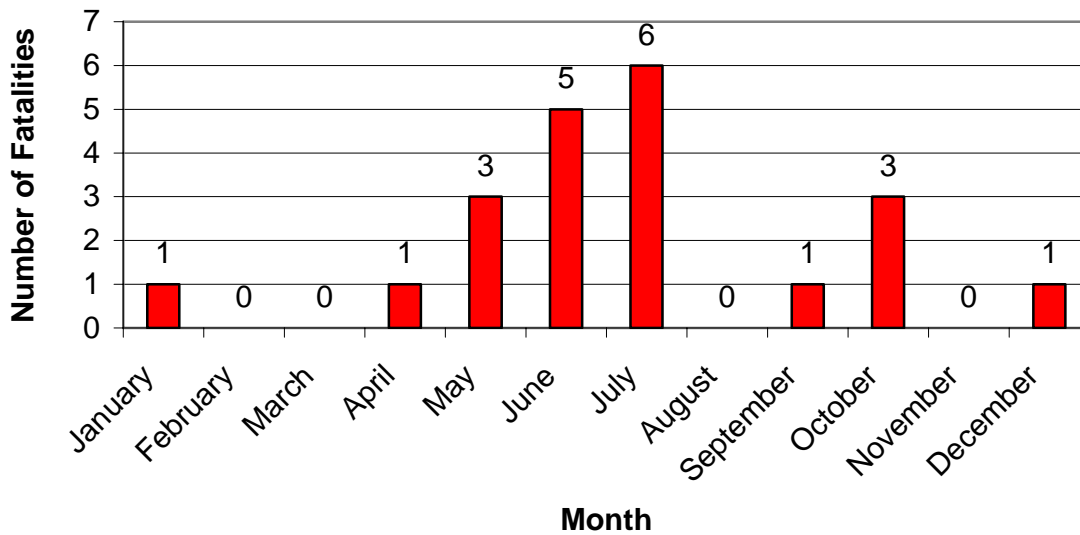
During 2005, 21 of the 121 occupational fatalities that were recorded by the KY FACE Program occurred within the Agriculture, Forestry, Fishing, and Hunting industry (NAICS). The majority of the decedents in this industry were self-employed (n = 14) at their time of death. Figure 22 represents the ages of the fatally injured workers in this industry at their time of death.

**Figure 22. Age of Agricultural Industry Worker at Death – 2005.**



In the Agricultural industry, more workers died in the month of July (Figure 23) than in other months, and more workers died on a Tuesday than any other day of the week (Figure 24).

**Figure 23. Month of Agricultural Industry Worker Death – 2005.**



**Figure 24. Day of Fatal Incident for Agricultural Industry Workers – 2005.**

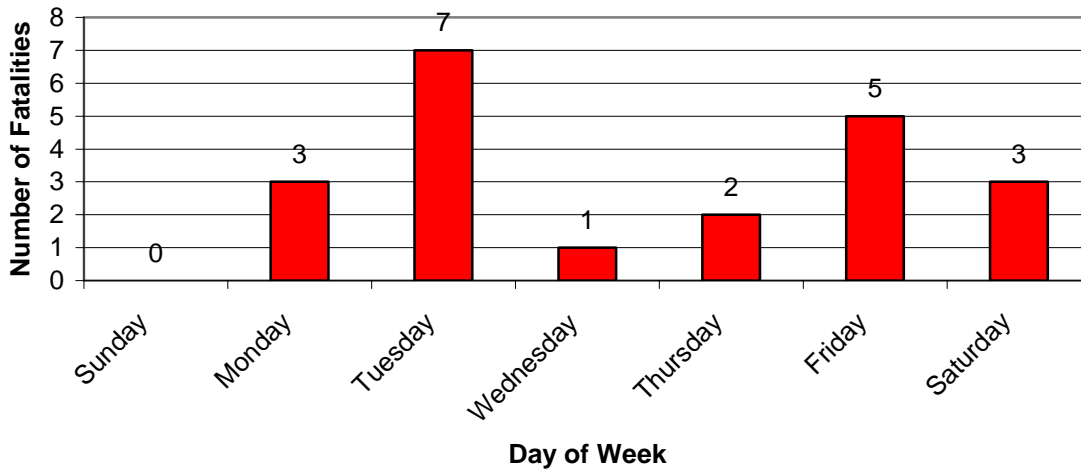
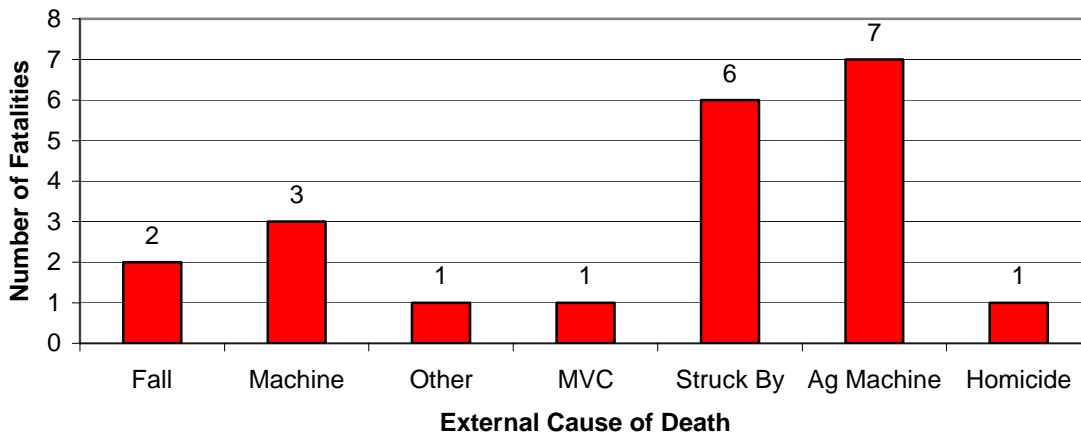


Figure 25 represents the external cause of death for workers in the Agricultural industry. The leading causes of death for these workers were incidents involving agricultural machinery (n = 7) and being struck by an object (n = 7). Nine of the decedents were involved in a tractor-related incident.

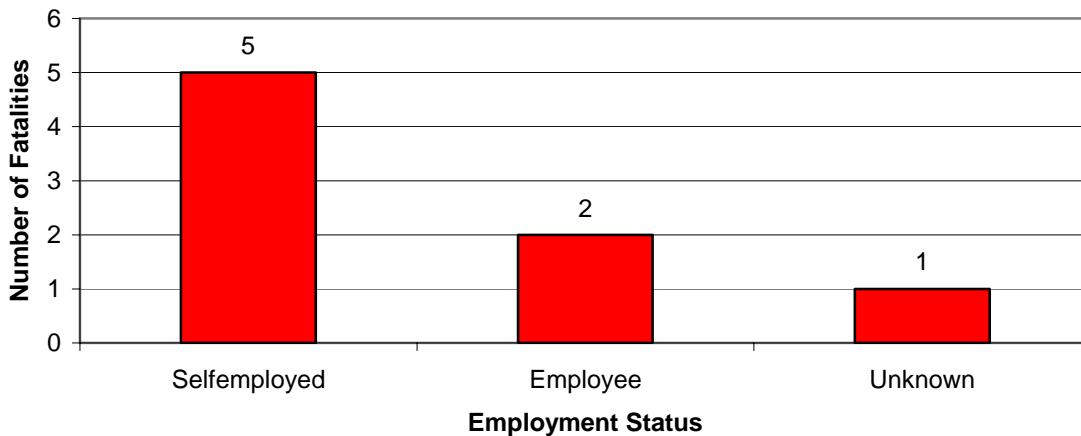
**Figure 25. External Cause of Death for Agricultural Industry Workers – 2005.**



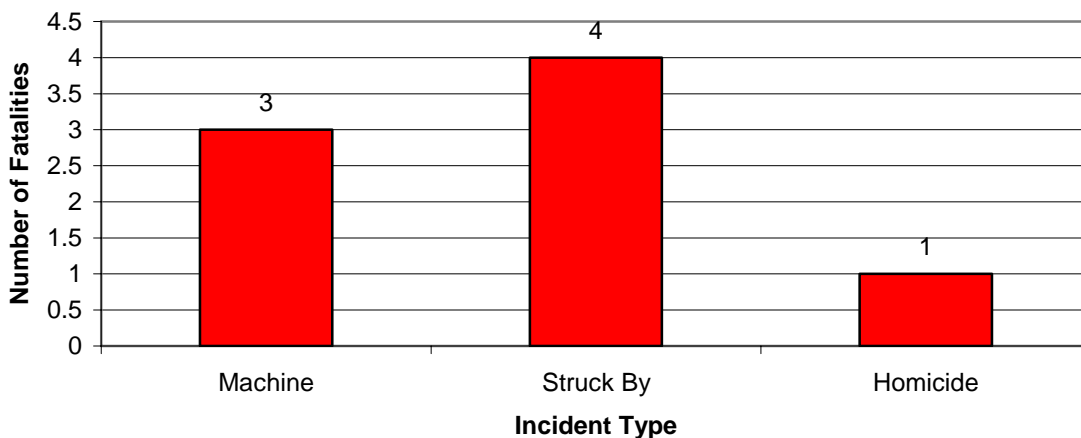
### Logging Industry Fatalities

The KY FACE Program recorded eight fatalities in the Logging industry in 2005. Five of these workers were between 34 and 44 years of age and 63% of them did not complete high school. Five of the decedents were self-employed (Figure 26) and the most frequent external cause of death in this industry was being struck by an object (Figure 27).

**Figure 26. Employment Status of Decedents in the Logging Industry – 2005.**



**Figure 27. External Cause of Death for Decedents in the Logging Industry – 2005.**



### Self-Employed Statistics

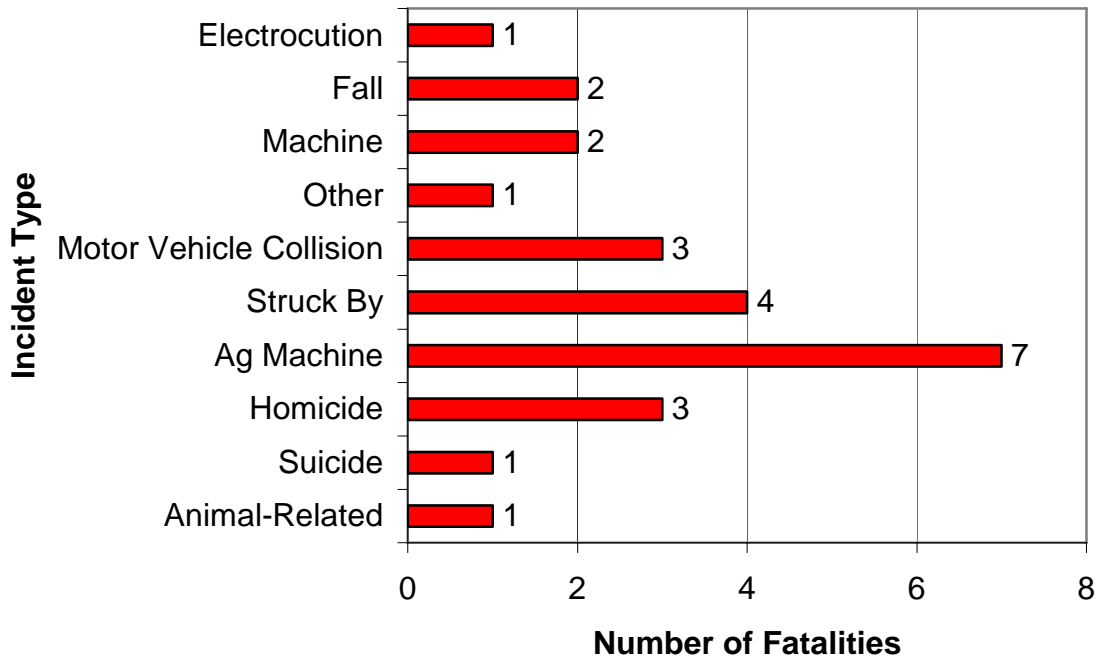
Twenty-five of the decedents who were involved in occupational fatalities during 2005 were self-employed (21%). In order to classify a worker as self-employed, various sources were used. These sources included death certificates, newspaper articles, coroner reports, and other sources.

The average age of fatally injured self-employed workers was 55 years of age, all were males and all were residents of Kentucky. Fourteen of the 25 self-employed workers were employed in the Agricultural industry (Figure 28). The most common external cause of death for self-employed workers in 2005 was due to agricultural machinery (28%) (Figure 29).

**Figure 28. Self-Employed Fatalities by Industry – 2005.**



Figure 29. Self-Employed Fatalities by Incident Type – 2005.



## **CONCLUSION**

While the Kentucky worker fatality rate decreased from 9 deaths/ 100,000 workers in 1994 to 6.4 worker deaths/ 100,000 workers in 2005, Kentucky's occupational fatality rate is still 60% above the national fatality rate. Further targeted intervention strategies and approaches are needed in high-risk industries and occupations such as Mining, Transportation, Construction, and Agriculture for the identification and characterization of new and emerging risk factors which contribute to occupational fatalities.