PROGRAM-RELATED FATALITIES

MICHIGAN 2014

Management Information Systems Section
Technical Services Division
Michigan Department of Licensing & Regulatory Affairs
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INTRODUCTION

In 2014, Michigan reported 37 Program-Related fatalities. Program-Related fatalities in Michigan are recorded and tabulated by the Management Information Systems Section (MISS), Michigan Occupational Safety and Health Administration (MIOSHA), Michigan Department of Licensing and Regulatory Affairs (LARA). The sources of data include the Basic Report of Injury – Form 100 and telephone reports of fatalities to MIOSHA. The conditions necessary for a fatal case to be Program-Related are defined in the NOTE ON PROGRAM RELATED CASES (see Page 8).

The intention of this report is to promote an understanding of what constitutes a Program-Related fatality and to assist in the continued effort of preventing and reducing fatal cases. Information presented in this report may be of special interest to employers, employees, safety professionals and consultants. Any inquiries regarding this report may be addressed to:

Management Information Systems Section
Technical Services Division
Michigan Occupational Safety and Health Administration (MIOSHA)
Michigan Department of Licensing & Regulatory Affairs
7150 Harris Drive, Box 30643
Lansing, Michigan 48909-8143
Telephone (517) 322-1851

HIGHLIGHTS OF PROGRAM-RELATED FATALITIES, MICHIGAN 2014

This Program-Related fatality information for Michigan was compiled from the "Employers Basic Report of Injury," Workers Disability Form 100s, and from direct telephone reports of fatalities to MIOSHA. Only fatal cases that are Program-Related, as defined by MIOSHA, are compiled. Therefore, the data does not include fatalities resulting from heart attacks, homicides, suicides, personal motor vehicle accidents, and aircraft accidents. The figures are shown in **Tables 1 through 7**.

PROGRAM-RELATED FATALITY TRENDS

A definition of Program-Related cases can be found on Page 7 of this report. Program-Related fatality trends for 1987 through 2014 are shown in **Table 1**, as well as data from 1989 through 2014 in **Chart 1**.

This report is an overview of how the fatalities were distributed across industry groups and occupations. Frequencies of fatalities by age group, gender, month of occurrence, and counties of occurrence are also provided.

PROGRAM-RELATED FATALITIES BY INDUSTRY

Table 2 shows the distribution of Program-Related fatalities by industry groups in 2014. This was determined by the job being performed by the employee at the time of the accident. Beginning in 2003, the industry group category is based on the Northern American Industry Classification System (NAICS), which groups establishments into industries based on the activities in which they are primarily engaged. Prior to 2003, the industry group category was based on the Standard Industrial Classification (SIC) of the employer. Due to the substantial differences between the current and previous classification system, the results by industry in 2003 and thereafter constitute a break in series and users are advised against making comparisons between the 2003 industry categories and the results for previous years.

During 2014, the largest number of Program-Related fatalities was reported in the Construction industry (NAICS 23) with 9 fatalities. Agriculture, Forestry, Fishing and Hunting (NAICS 11); Manufacturing (NAICS 31-33), and Transportation and Warehousing (NAICS 48-49) had the second highest number with five fatalities each. This was followed by Administrative and Support and Waste Management and Remediation Services (NAICS 56) and Other Services (except Public Administration) (NAICS 81) reporting three fatalities each.

PROGRAM-RELATED FATALITIES BY AGE AND GENDER

The distribution of Program-Related fatalities by age and gender are shown in **Tables 3 and 4**. The age group of 51-55 reported seven fatalities, 46-50 reported six and 21-25, 31-35, and 41-45 each reported four fatalities. Of the 37 victims, 34 were male employees**.**

PROGRAM-RELATED FATALITIES BY MONTH OF OCCURRENCE

Fatality data categorized by the month of occurrence is shown in **Table 5**. The month of October recorded the highest number of program-related fatalities with 7. Five fatalities were reported for the month of June and 4 were reported during the month of March. The months of January, July, September and November each reported 3 fatalities.

PROGRAM-RELATED FATALITIES BY INDUSTRY GROUPS AND DAYS OF THE WEEK

Program-Related fatalities by industry groups and days of the week are shown in **Table 6**. The highest number of fatalities by day of the week shows Wednesday with 9, followed by Monday with 8, Tuesday with 6, Friday with 5, Thursday and Saturday with 4 each and Sunday with 1 fatality reported.

PROGRAM-RELATED FATALITIES BY COUNTY OF OCCURRENCE

The distribution of fatality cases by counties shows that Program-Related fatalities were reported as occurring in 22 counties during 2014. Eight fatalities were reported in Wayne County, 5 in Kent County, and 3 in Macomb County. The counties of Huron and Oakland each reported 2 fatalities. Sixty-one counties had no program-related fatalities. A complete distribution of fatality cases by county of occurrence is shown in **Table 7.**

Even though Michigan's 2014 total Program-Related fatality cases are far less than the thousands of cases reported nationwide, the consequences of these on-the-job deaths in terms of human suffering, lost workdays, decreased production, and increased compensation rates are too significant to be overlooked.

In order for Michigan to reduce the number of on-the-job fatality cases, it requires a conscious effort on the part of employers to recognize and comply with MIOSHA standards, develop and implement safe working procedures and assure that employees observe and practice these procedures. The MIOSHA program offers onsite consultation, and consultation, education and training (CET) opportunities to employers and employees alike to help them achieve this goal.

Those Michigan employers, who would like to request education and training services, as well as onsite consultation programs, may contact:

Consultation Education and Training (CET) Division
Michigan Occupational Safety and Health Administration (MIOSHA)
Michigan Department of Licensing & Regulatory Affairs
7150 Harris Drive, Box 30643, Lansing, Michigan 48909
Telephone (517) 322-1809

The Program-Related fatality data for Michigan are presented in the following series of **Tables 1 through 8**. A brief description of how the Program-Related fatalities occurred is also provided following the series of tables. The descriptions are listed by industry groups based on the North American Industry Classification System (NAICS), which is based on the activity in which the establishment is primarily engaged. Safety professionals may find this information useful for accident prevention.

NOTE ON PROGRAM-RELATED CASES

A fatality is recorded as "Program-Related" if the deceased party was employed in an occupation included in MIOSHA jurisdiction as defined in Public Act 154 of 1974, as amended, and the fatality appears to be related to one or more of the following conditions:

1. The incident was found to have resulted from violations of MIOSHA safety and health standards or the "general duty" clause.

2. The incident was considered to be the result of a failure to follow a good safety and health practice that would be the subject of a safety and health recommendation.

3. The information describing the incident is insufficient to make a clear distinction between a "Program-Related" and "non-Program-Related" incident, but the type and nature of the injury indicates that there is a high probability that the injury was the result of a failure to adhere to one or more MIOSHA standards, the "general duty" clause, or good safety and health practice.

Any inquiries may be addressed to:

Management Information Systems Section
Technical Services Division
Michigan Occupational Safety and Health Administration (MIOSHA)
Michigan Department of Licensing & Regulatory Affairs
7150 Harris Drive, Box 30643
Lansing, Michigan 48909-8143
(517) 322-1851

CHART 1
PROGRAM-RELATED FATALITY TRENDS,
MICHIGAN 1989-2014

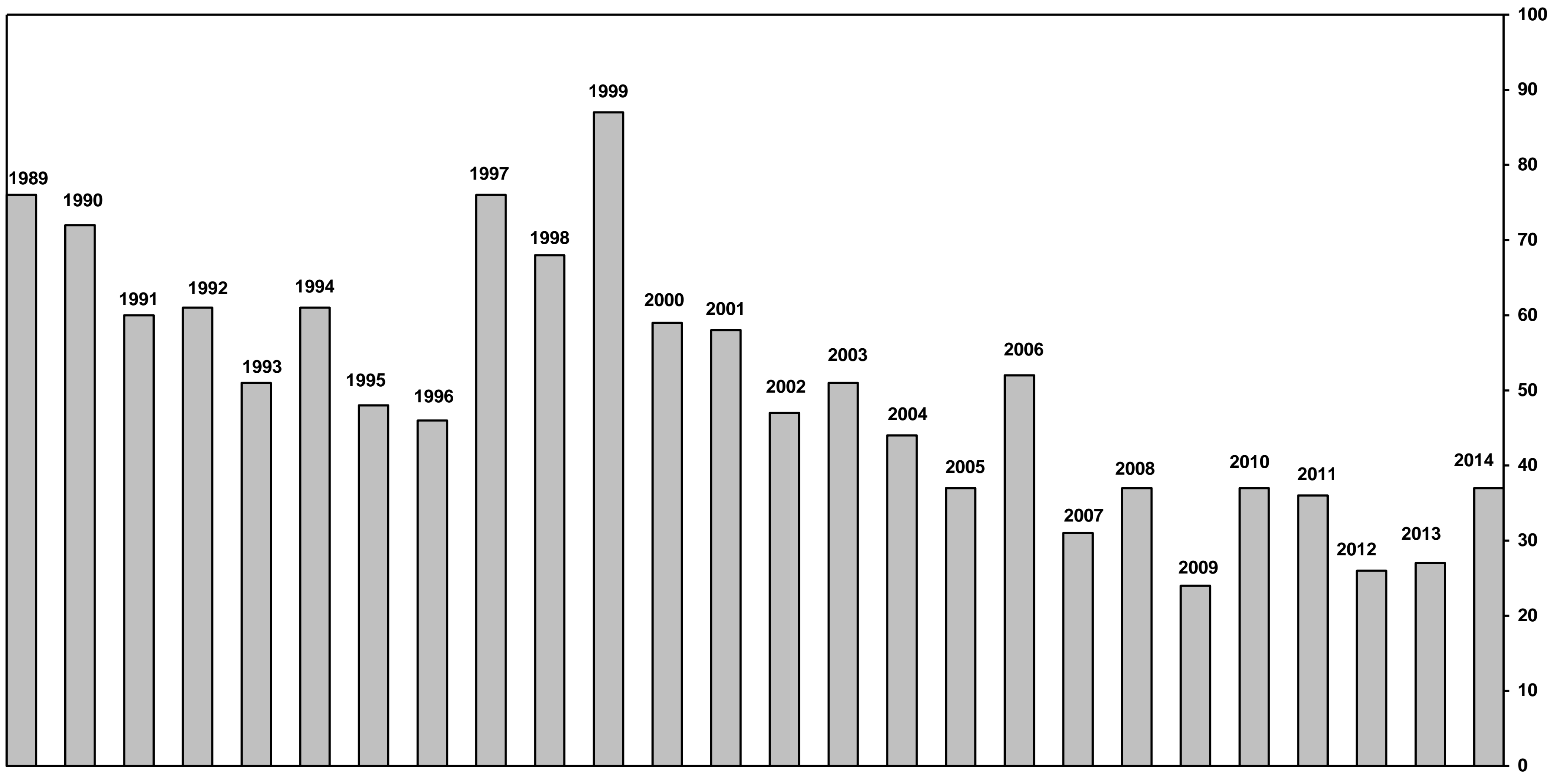

TABLE 1

**PROGRAM-RELATED FATALITY TRENDS,
MICHIGAN 1987 – 2014**

YEAR	NUMBER	PERCENT CHANGE FROM PREVIOUS YEAR	PERCENT CHANGE FROM 1987
1987	73	--	---
1988	64	-12.3	-12.3
1989	76	18.8	4.1
1990	72	-5.3	-1.4
1991	60	-16.7	-17.8
1992	61	1.7	-16.4
1993	51	-16.4	-30.1
1994	61	19.6	-16.4
1995	48	-21.3	-34.2
1996	46	-4.2	-37.0
1997	76	65.2	4.1
1998	68	-10.5	-6.8
1999	87	27.9	19.2
2000	59	-32.2	-19.2
2001	58	-1.7	-20.5
2002	47	-19.0	-35.6
2003	51	8.5	-30.1
2004	44	-13.7	-39.7
2005	37*	-15.9	-49.3
2006	52	40.5	-28.8
2007	31	-40.4	-57.5
2008	37	19.4	-49.4
2009	24	-35.1	-67.1
2010	38*	58.3	-47.9
2011	36	-5.3	-50.7
2012	26	-27.8	-64.4
2013	27	3.8	-63.0
2014	37	37.0	-50.7

Source: MISS/TSD/ MIOSHA/Michigan Department of Licensing & Regulatory Affairs

Note: An amendment has been made to both the 2005 and 2010 fatality counts. They previously were reported as 36 and 37 total fatalities respectively.

TABLE 2

**PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS,
MICHIGAN 2014**

NAICS MAJOR SECTOR	INDUSTRY GROUP	TOTAL
11	AGRICULTURE, FORESTRY, FISHING AND HUNTING	5
21	MINING	0
22	UTILITIES	1
23	CONSTRUCTION	9
31-33	MANUFACTURING	5
42	WHOLESALE TRADE	1
44-45	RETAIL TRADE	2
48-49	TRANSPORTATION AND WAREHOUSING	5
51	INFORMATION	0
52	FINANCE AND INSURANCE	0
53	REAL ESTATE AND RENTAL AND LEASING	0
54	PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES	0
55	MANAGEMENT OF COMPANIES AND ENTERPRISES	0
56	ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES	3
61	EDUCATIONAL SERVICES	0
62	HEALTH CARE AND SOCIAL ASSISTANCE	1
71	ARTS, ENTERTAINMENT AND RECREATION	1
72	ACCOMMODATION AND FOOD SERVICES	1
81	OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)	3
92	PUBLIC ADMINISTRATION	0
TOTAL		**37**

Note: The industry group categories are based on the Northern American Industrial Classification System (NAICS), which is based on the activities in which the establishments are primarily engaged.

Source: MISS/TSD/ MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 3

PROGRAM-RELATED FATALITIES BY AGE, MICHIGAN 2014

AGE	NUMBER OF CASES	PERCENT OF CASES
20 and Under	0	0
21 - 25	4	11
26 - 30	3	8
31 - 35	4	11
36 - 40	3	8
41 - 45	4	11
46 - 50	6	16
51 - 55	7	19
56 - 60	3	8
61 and Over	3	8
TOTAL	**37**	**100**

Source: MISS/TSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 4

PROGRAM-RELATED FATALITIES BY GENDER, MICHIGAN 2014

GENDER	NUMBER OF CASES	PERCENT OF CASES
MALE	34	92
FEMALE	3	8
TOTAL	**37**	**100**

Source: MISS/TSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 5

**PROGRAM-RELATED FATALITIES
BY MONTH OF OCCURRENCE,
MICHIGAN 2014**

MONTH OF OCCURRENCE	**NUMBER OF CASES**
JANUARY	3
FEBRUARY	2
MARCH	4
APRIL	2
MAY	2
JUNE	5
JULY	3
AUGUST	1
SEPTEMBER	3
OCTOBER	7
NOVEMBER	3
DECEMBER	2
TOTAL	**37**

Source: MISS/TSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 6

**PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS AND DAY OF THE WEEK,
MICHIGAN 2014**

INDUSTRY GROUP	DAY OF THE WEEK							
	SUN	**MON**	**TUE**	**WED**	**THUR**	**FRI**	**SAT**	**TOTAL**
AGRICULTURE, FORESTRY, FISHING & HUNTING	0	2	0	0	2	1	0	**5**
UTILITIES	0	0	0	0	0	0	1	**1**
CONSTRUCTION	0	1	2	4	1	1	0	**9**
MANUFACTURING	0	1	1	1	0	1	1	**5**
WHOLESALE TRADE	0	1	0	0	0	0	0	**1**
RETAIL TRADE	0	1	1	0	0	0	0	**2**
TRANSPORTATION & WAREHOUSING	0	0	0	3	0	1	1	**5**
ADMNISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES	0	1	1	0	1	0	0	**3**
HEALTH CARE AND SOCIAL ASSISTANCE	0	0	1	0	0	0	0	**1**
ARTS, ENTERTAINMENT, & RECREATION	0	0	0	1	0	0	0	**1**
ACCOMMODATION AND FOOD SERVICES	0	0	0	0	0	0	1	**1**
OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)	1	1	0	0	0	1	0	**3**
TOTAL	**1**	**8**	**6**	**9**	**4**	**5**	**4**	**37**

Source: MISS/TSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 7
PROGRAM-RELATED FATALITIES BY COUNTY OF OCCURRENCE, MICHIGAN 2014

COUNTY	NUMBER OF CASES
BARRY	1
CLARE	1
GENESEE	1
GRATIOT	1
HURON	2
JACKSON	1
KENT	5
LAPEER	1
MACOMB	3
MARQUETTE	1
MASON	1
MONROE	1
MUSKEGON	1
OAKLAND	2
OGEMAW	1
OTTAWA	1
SAGINAW	1
ST JOSEPH	1
SANILAC	1
SHIAWASSEE	1
TUSCOLA	1
WAYNE	8
TOTALS	**37**

Source: MISS/TSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

PROGRAM-RELATED FATALITY INCIDENTS
BRIEF DESCRIPTIONS OF CASES BY INDUSTRY GROUPS

AGRICULTURE, FORESTRY, FISHING AND HUNTING:

1. A farmhand was moving approximately 60 cows from a pen to a barn for milking. A bull that was allowed to routinely mix with the cows attacked and mauled the farmhand, resulting in her death.

2. The owner of a logging company was killed when a section of a tree he was cutting fell and struck him in the head. The tree being cut had a rotted center and split into several pieces upon striking other trees during its fall.

3. A barn maintenance employee was working on a tine rake tire trying to seat it by using a hammer. The tire exploded causing the rim and tire to be propelled into the employee's chest causing fatal injuries.

4. A farm worker was standing on top of the front blade of a bulldozer he had been operating when the dozer moved forward. The employee lost his balance falling between the blade and the machine which continued to run over the employee. There was a second employee on the fender of the dozer. It is not known if he had touched the controls.

5. A farmer was crushed by a combine while trying to dislodge a stone.

UTILITIES:

6. An overhead lineman was electrocuted while replacing a pole top transformer.

CONSTRUCTION:

7. A roofer was re-roofing a home when he fell approximately 30-feet to the ground. He was taken to the hospital and later passed away from his injuries.

8. A crane operator was lifting a section of duct with a crane when the crane began to tip forward and its counterweights dislodged and struck the operator.

9. A construction laborer was disassembling and removing conveyor equipment from a grain elevator when he fell through an opening in the bottom of a catwalk and fell 60-feet below.

10. The owner of an electrical contracting company was on a 6-foot ladder performing electrical work at a nursing facility when he came in contact with electrical power lines. This caused him to fall. He suffered traumatic injuries from the fall as well as injuries from the contact with electricity.

11. A foreman was working on a road construction project when he was run over by a piece of construction equipment.

12. A laborer was assisting a co-worker with installing a chimney liner at a residence. He left the laborer, who was standing on an extension ladder, to go to the basement and receive the liner as it was inserted. Upon hearing a loud noise, the co-worker left the basement to investigate and found the laborer lying on the ground. He was transported to a local hospital where he died from his injuries.

13. An engineering technician was struck by a motorist while performing work in the roadway.

14. While installing insulation on the roof of a newly constructed pole barn, the roofer fell approximately 20-feet to the concrete floor below.

15. The owner of a construction company was performing work in an excavation approximately 18-feet deep when it collapsed, crushing him.

MANUFACTURING:

16. A material handler at a manufacturing facility was instructed by his supervisor to go behind the machine and adjust the chute to allow parts to fall down. He opened the gate. The interlock back gate was defeated with a rag. While the employee was inside the mold adjusting the chute, the supervisor shut the gate on the front and the injection molding machine cycled.

17. While cleaning pieces of conveying equipment where the conveyor belt had been removed, a sanitation worker's gloved right hand became caught in a plastic drive gear causing him to become entangled in the equipment.

18. A die setter was crushed when an operator of a horizontal plastic injection mold press started the machine without knowing that the die setter was inside the machine. The machine was set to automatically cycle when started.

19. A shot blast operator was operating a machine with two fabricated metal guards placed around the front that were placed there because they were running a large part that prevented the doors from being closed. The guards weighed approximately 632 pounds each. The operator had climbed underneath the guards to clean off the table and as he did so, he bumped the guards off a lip that was holding them in place. The guards fell onto the employee, crushing him.

20. While pressure testing a prototype fuel tank containing argon and carbon, it failed the pressure test and exploded. As a result, an assembler died and two other employees and a customer were injured and hospitalized.

WHOLESALE TRADE:

21. A warehouse employee was loading steel pipes onto a trailer using an overhead crane. During the loading process, it appeared the load shifted, striking and crushing the worker.

RETAIL TRADE:

22. A rider was in the back of a box truck providing guidance to the driver who was backing up to a semi-trailer they were going to transfer materials to. When the driver stopped and walked to the back of the box truck, he observed the deceased pinned between the truck and semi-trailer.

23. A tire repair technician responded to an after-hours repair of a semi-truck tire. He removed the flat tire from the rim while still mounted on the truck. Upon placing the new tire on, it would not inflate. It appeared that he then went under the truck to let air out of the air bottle jack so as to seal the tire. As he released the bottle jack that was holding up the cab, it came down crushing him.

TRANSPORTATION AND WAREHOUSING:

24. While working at a grain storage terminal, an employee was loading a railroad car from atop when he fell through the hatch into the soybeans being loaded. The employee died of possible suffocation.

25. A truck driver was at a company yard picking up a trailer. It appeared that the employee was raising the landing gear on the trailer when it slid into place in the opening of the fifth wheel device on the tractor causing the trailer being loaded to move closer to the parked trailer pinning the employee between the two.

26. A truck driver was standing outside a truck operating the controls while switching out a 40-yard scrap dumpster box. He raised the dump bed so that the dumpster box could roll off the truck onto the ground. While doing so, the dump bed contacted the 7,500-volt overhead power lines. The truck driver was electrocuted while operating the controls.

27. While loading and unloading baggage from an aircraft, a ramper was struck by a belt loader vehicle pinning him against the aircraft.

28. A truck driver was helping a co-worker off-load a trailer. He was standing on the passenger side of a semi-tractor between the cab and the rear double set of tires at the back of the tractor. When the driver pulled the tractor forward, he did not see him and pulled the tractor forward, running over him.

ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES:

29. A tree trimmer was in a lift device between two trees when the device struck a branch and got stuck. The branch broke loose and shook the boom, throwing the tree trimmer from the bucket to the ground 45 to 50 feet below.

30. While flagging traffic for a tree trimming operation, a vehicle being driven by a distracted driver entered the work zone and struck the foreman.

31. A driver of a sugar beet truck was found lying in a field. It appeared he was struck by or caught between equipment during loading operations.

HEALTH CARE AND SOCIAL ASSISTANCE:

32. A direct care worker in a group home was slapped in the face by an angry resident when she entered his room. She fell back onto a bed and then got up and left the room. She reported the incident a couple of days later when she lost a tooth. She followed up with medical and dental care and was released to return to work. She was found at home the next day unconscious and was transported to the hospital where she died a couple of days later due to a blunt traumatic head injury.

ARTS, ENTERTAINMENT AND RECREATION:

33. A supervisor was operating a flat-bottom boat from the stern with two employees onboard. They worked at a recreation club and were returning to a boat launch after loading the boats with tents and cots from a cabin. Waves hit the boat and it began to fill up. All three employees were thrown into the water. They all were wearing Type II personal floatation devices. Two employees swam approximately 100 yards to shore. However, the supervisor drowned and was unable to be resuscitated.

ACCOMMODATION AND FOOD SERVICES:

34. The owner of an ice cream shop was found unresponsive by a passerby. It appears he was in the process of cleaning a frozen custard machine when he was electrocuted. The back panel of the machine had been removed.

OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION):

35. A refrigeration technician was using a ladder to access the top of a building for purposes of repairing a condensing unit when it appeared he fell from the ladder.

36. An employee was working on a metal shaft that was in a lathe when his shirt became entangled as he walked too close to the shaft. The employee was transferred to the hospital where he died a couple of weeks later.

37. After closing the bar, a bartender went into the basement where she was overcome by carbon dioxide that was leaking from a faulty pump. Carbon dioxide was used to carbonate beverages in the facility. She was found unresponsive by a co-worker several hours later and was transported to the hospital where she later died.