

IN Review

**INDIANA OCCUPATIONAL SAFETY AND HEALTH
AN ANNUAL PUBLICATION OF THE INDIANA DEPARTMENT OF LABOR**



2019



**YOU CAN'T WIN IN
SAFETY & HEALTH
WITHOUT A
GAME
PLAN**

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IN Review 2019

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COACH'S NOTES

THE Indiana Department of Labor (IDOL) is proud to present the 2019 edition of its annual publication, *IN Review*.

This edition of the annual report stresses the need for an occupational safety and health game plan. Achieving your goals is not possible if your team takes the field without a strategy to protect themselves and each other. As in sports, practice and teamwork are essential in executing your safety and health game plan. Training should always be part of your strategy. Every position on your team, from owners and management down to the front lines, should always have their minds on the game. No one should be riding the bench.



The IDOL continues to emphasize the importance of communication as a necessary element to a successful safety and health program. An open dialog between employees and management fosters a culture of safety by demonstrating that safety and health are everyone's concern. This helps employers achieve buy-in for safety and health programs at all levels. When everyone is focused on safety, companies can make huge strides in the quick identification and elimination of potential hazards.

Please use the information and articles in this edition of *IN Review* to help review and enhance your own worker safety and health programs.

The IDOL is pleased to announce that the 2017 nonfatal occupational injury and illness rate remained at the historic low of 3.5 per 100 full-time workers. Since 1992, this rate has declined by an impressive 69 percent. However, even just one injury is too many, and there is still work to be done.

If you have any questions concerning this publication or its data, we encourage you to contact our free workplace safety and health consultation program, **INSafe**, by email at insafe@dol.in.gov or by calling (317) 232-2688.

Thank you for your contributions to the safety and health of Hoosier workers.

To your safety and health both on and off the field,

Rick J. Ruble
Commissioner of the Indiana Department of Labor

HOOSIER OCCUPATIONAL SAFETY AND HEALTH IN REVIEW

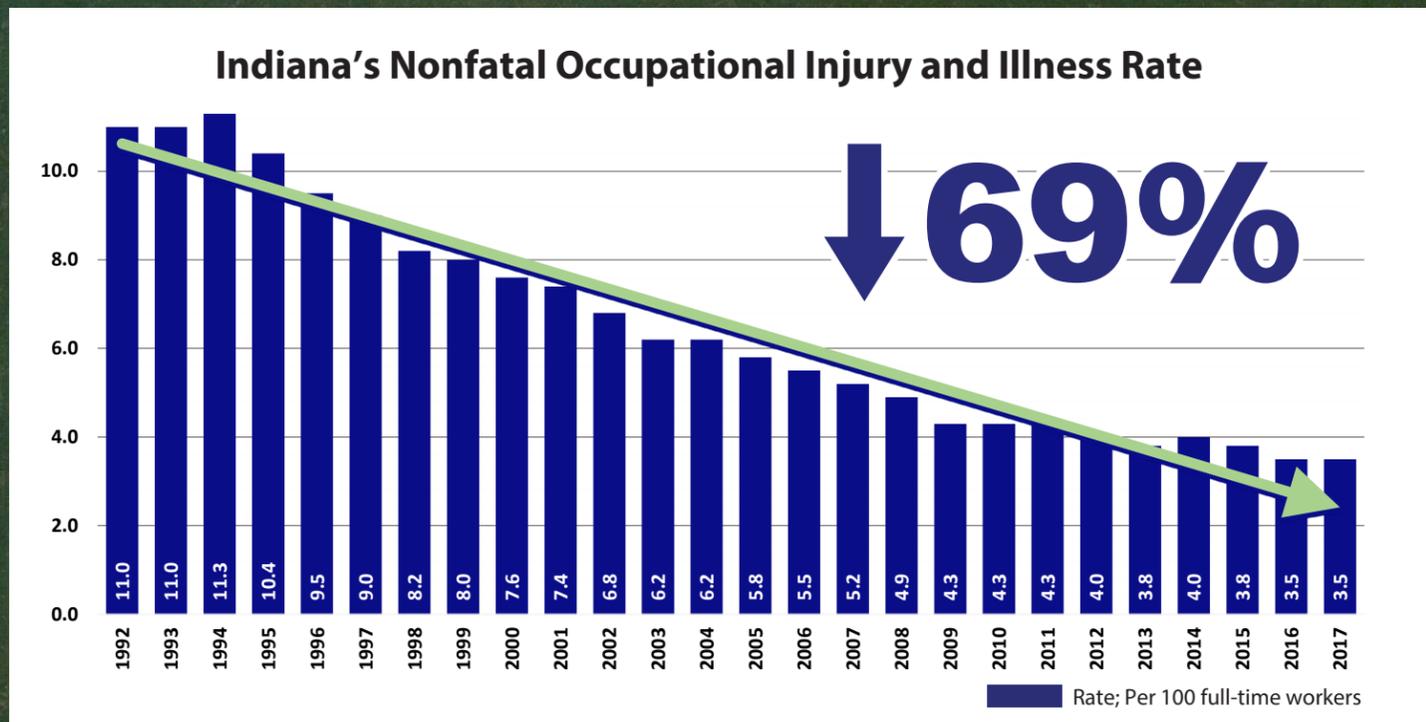
DATA used to compile this edition of *IN Review* were provided by the federal Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses (SOII) and the Census of Fatal Injuries (CFI). Case-specific information and other data were obtained from the Indiana Occupational Safety and Health Administration's (IOSHA) case files and OSHA Express data reports.

The overall Indiana nonfatal occupational injury and illness rate for 2017 was 3.5 per 100 workers. This means that 3.5 of every 100 full-time workers in Indiana experienced a work-related injury severe enough to require medical treatment beyond first aid.

The 2017 rate remains tied with 2016 as the lowest nonfatal injury and illness rate on record for the state of Indiana. In 2017, 10 of the 21 major industries in Indiana experienced a decrease in work-related injuries and illnesses.

Just over half (50.2%) of all recordable injuries and illnesses in 2017 resulted in one or more days away from work or days with job transfer or restriction.

At the inception of the BLS SOII in 1992, the nonfatal occupational injury and illness rate was 11.0 per 100 workers. The rate reached a high of 11.3 in 1994 and has declined by more than 69 percent over the last 24 years.



SOME OF INDIANA'S INDUSTRIES EXPERIENCED REDUCTIONS IN THEIR RESPECTIVE INJURY AND ILLNESS RATES FOR 2017, INCLUDING:

**RETAIL TRADE
11% REDUCTION**



**CONSTRUCTION
7% REDUCTION**



While the state's overall nonfatal occupational injury and illness rate was 3.5 per 100 workers in 2017, some Hoosier industries experienced a higher rate.

Indiana industries reporting the highest nonfatal injury and illness rates in 2017 included:

Agriculture, Forestry, Fishing, and Hunting	5.3
Arts, Entertainment, and Recreation	5.0
Healthcare and Social Assistance	4.8

There were 83,500 nonfatal Hoosier workplace injuries and illnesses reported in 2017, representing a one-percent (1%) decrease from 84,300 in 2016.

Indiana industries with the highest nonfatal injuries and illnesses (in raw numbers) in 2017 included:

Manufacturing	21,500
Healthcare and Social Assistance	14,300
State and Local Government	12,000

In 2017, Hoosier workplaces reported 138 worker fatalities. This represents a nine-year high for the State of Indiana. Indiana industries with the highest number of work-related fatalities in 2017 included:

Agriculture, Forestry, Fishing, and Hunting	28
Transportation and Warehousing	26
Construction	14

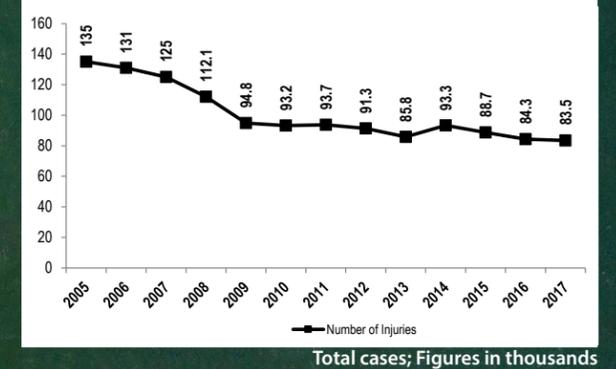
In Indiana in 2017, the leading causes of Hoosier workplace fatalities included:

Transportation-related incidents	50
Violence and other injuries by persons or animals	28
Contact with objects and equipment	21

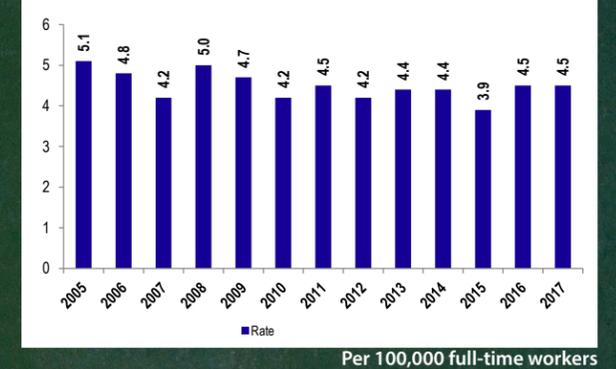
Indiana's Nonfatal Occupational Injury and Illness Rate



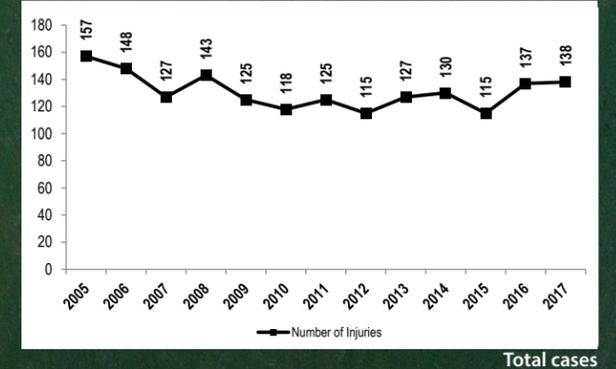
Indiana's Nonfatal Occupational Injuries and Illnesses



Indiana's Fatal Occupational Injury Rate



Indiana's Fatal Occupational Injuries



MANUFACTURING

The nonfatal workplace injury and illness rate for the Hoosier **manufacturing** industry increased slightly from a historic low of 4.1 injuries and illnesses per 100 workers to 4.2 in 2017. Even with this increase, the rate reflects a decrease of over 70 percent from the rates published two decades ago.

Indiana's manufacturing industry is comprised of a variety of industrial facilities including steel mills; automobile, food, chemical, and wood product manufacturers; foundries, and many others. The industry employs more Hoosier workers than any other industry in the state.

In 2017, approximately 19 percent (4,000) of the estimated 21,100 nonfatal injuries and illnesses suffered by Hoosier workers in manufacturing were severe enough to require at least one day away from work to recover. The median number of days away from work in the manufacturing industry was eight—one day more than the 2016 median of seven. Employees who suffered from injuries resulting in days away from work were most often **male** (69%), **Caucasian** (60%), and between the **ages of 45 and 54** (26%).

The most common events or exposures resulting in a work-related injury with days away from work in the manufacturing industry in 2017 included **overexertion and bodily reaction** (39%); **contact with objects or equipment** (32%); and **falls, slips, and trips** (22%). Common natures of injuries included **sprains, strains, and, tears** (28%); **fractures** (14%); and **cuts, lacerations, and soreness and pain** (11%).

Transportation equipment manufacturing (6.0), **wood product manufacturing** (5.9), and **food manufacturing** (4.8) were the top three sub-industries in Indiana with high nonfatal workplace injury and illness rates.

According to the Bureau of Labor Statistics' (BLS) Census of Fatal Occupational Injuries (CFOI), there were nine Hoosier manufacturing industry worker fatalities in 2017. This represents a decrease of one worker death from the 2016 report. Four of the workers were killed in **transportation incidents**. Three more workers also died in **contact with objects or equipment** incidents.

STATE AND LOCAL GOVERNMENT

The **State and Local Government** industry is a very broad category comprised of sub-industries that include police officers; firefighters; teachers; city, county, and municipal workers; and elected officials. Some public sector occupations, such as healthcare workers at state-run hospitals, overlap private industry duties. In Indiana, the Indiana Occupational Safety and Health Administration (IOSHA) maintains jurisdiction over both private and public sector workplaces.

In 2017, the nonfatal injury and illness rate for state and local government workers decreased from 4.3 to 4.2 injuries or illnesses per 100 workers. This continues the decrease previously reported from 2015 to 2016. The 2017 rate marks a historic low for the industry.

Public sector workers suffered an estimated 12,000 occupational injuries or illnesses in 2017—the same number estimated for 2016. Work groups in the state and local government sector with high worker injury and illness rates in 2017 were **local hospitals** (6.5), **local educational services** (4.0) and **justice, public order and safety activities** (3.1). Nearly 18 percent (2,100) of the reported injuries in this sector required the injured or ill

worker to miss at least one day of work to recover. The median number of missed workdays in 2016 for state and local government workers was five days—one day fewer than 2016.

More than half of the sector's injuries and illnesses requiring days away from work in 2017 were suffered by **men** (55%). The most frequent injuries suffered by workers in the state and local government sector were **sprains, strains, and tears** (27%); **soreness and pain** (26%) and **fractures** (8%).

In 2017, **overexertion and bodily reaction** (32%) was the most common injury-causing event for state and local government workers. **Falls, slips, and trips** (26%) and **contact with objects and equipment** (15%) were second and third respectively.

There were six occupational-related fatalities in this sector in 2017. Three of the six fatalities were attributed to **transportation-related events**. The remaining three fatal injuries were due to **violence and other injuries by persons or animals; falls, slips and trips; and exposure to harmful substances or environments**.

Manufacturing Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	571,000	6.3	8.3	48,600	10
2006	570,000	6.0	7.3	41,900	13
2007	568,000	5.6	6.6	36,600	7
2008	538,500	5.0	5.8	30,800	18
2009	470,800	4.3	4.7	21,500	12
2010	437,600	4.4	5.2	22,800	14
2011	456,200	4.4	5.2	23,700	14
2012		4.2	5.3	25,100	11
2013		4.0	4.8	23,000	12
2014		4.0	4.9	24,800	10
2015		3.8	4.7	23,800	12
2016		3.6	4.1	21,500	10
2017		3.5	4.2	22,100	9

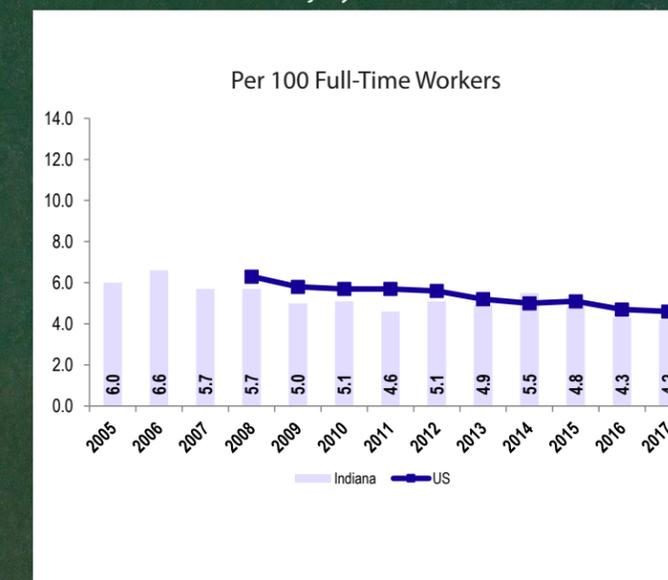
U.S. and Indiana Manufacturing Nonfatal Injury and Illness Rates



State and Local Government Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	362.2		6.0	17.5	9
2006	360.3		6.6	19.7	7
2007	361.2		5.7	17.1	9
2008	368.8	6.3	5.7	15.5	10
2009	371.1	5.8	5.0	15.3	6
2010	368.6	5.7	5.1	14.5	9
2011	359.4	5.7	4.6	13.5	9
2012		5.6	5.1	13.4	8
2013		5.2	4.9	13.9	7
2014		5.0	5.5	15.8	7
2015		5.1	4.8	13.3	2
2016		4.7	4.3	12	6
2017		4.6	4.2	12	6

U.S. and Indiana State and Local Government Nonfatal Injury and Illness Rates



AGRICULTURE, FORESTRY, FISHING, AND HUNTING

Over five (5.3) of every 100 workers in the Hoosier **agriculture, forestry, fishing, and hunting** industry suffered a nonfatal work-related injury or illness in 2017. This marks a 23 percent increase from the 2016 rate of 4.3 nonfatal injuries or illnesses per 100 workers.

The **crop production** sub-industry had the highest rate of nonfatal injuries and illnesses within the Hoosier agriculture, forestry, fishing, and hunting industry (6.9). The **animal production and aquaculture** sub-industry rate was 5.7.

Approximately 20 percent (100) of the 500 work-related injuries required the worker to miss one or more days of work. The median number of days away from work for an injured worker in the industry in 2017 was two (2)—seven days shorter than the 2016 median of nine (9). The most common event or exposure resulting in an injury with days away from work in the agriculture, forestry, fishing,

and hunting industry in 2017 was **falls, slips, and trips** with 50 injuries. **Sprains, strains and tears** were the most common natures with 30 injuries. The second most common nature was **fractures** with 20 injuries. Despite the increase in the nonfatal injury and illness rate for agriculture, forestry, fishing, and hunting employees, the number of workplace fatalities in 2017 decreased by 15 percent to 28 from 33 in 2016.

Even with this decrease, however, agriculture, forestry, fishing, and hunting still experienced the highest number of fatal injuries of all Hoosier industries in 2017. **Contact with objects** (11) and **transportation incidents** (9) accounted for the majority of these fatalities. Eighteen (18) of the 28 total fatalities in agriculture, forestry, fishing, and hunting were attributed to the **crop production** segment, with nine (9) fatalities occurring in **animal production and aquaculture** and one (1) in **forestry in logging**.

HEALTHCARE AND SOCIAL ASSISTANCE

Nursing assistants, nurses, case managers, physicians, and other workers in the **healthcare and social assistance** industry often face exposure to bloodborne pathogens and biological hazards, chemical and drug exposures, respiratory hazards, laser hazards, and hazards associated with laboratories, radioactive material, and x-rays.

In 2017, the Hoosier healthcare and social assistance nonfatal injury and illness rate was 4.8 per 100 workers, a decrease from a rate of 4.9 in 2016. The 2017 rate is the lowest rate on record for this industry in state history. Hoosier healthcare and social assistance sub-industries with high nonfatal worker injury and illness rates in 2017 included **nursing and residential care facilities** (6.9) and **hospitals** (6.0).

Indiana's healthcare and social assistance workers experienced an estimated 14,800 work-related injuries in 2017, and over 2,500 of these injuries were severe enough to require at least one day away from work for the worker to recuperate. The median number of days away from work in the healthcare and social assistance industry in 2017 was six (6)—unchanged from 2015 and 2016.

Employees who suffered injuries in the healthcare and social assistance industry requiring days away from work

were most often **female** (84%), **Caucasian** (45%), and between the **ages of 25 and 34** (23%). Common events or exposures resulting in an injury requiring days away from work in the healthcare and social assistance industry in 2017 included **overexertion and bodily reaction** (40%); **falls, slips, and trips** (25%); and **violence by other persons or animals** (17%).

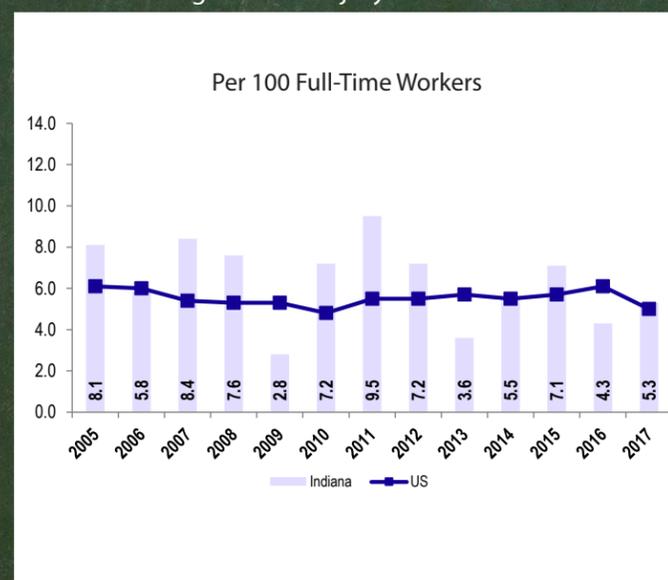
The most common natures of injuries suffered by Hoosier healthcare and social assistance workers in 2017 included **sprains, strains, and tears** (47%); **soreness and pain** (15%); and **bruises and contusions** (9%). The most frequent sources of injuries were most often identified as **persons other than the injured worker** (37%); **floors, walkways, and ground surfaces** (21%); and **person, injured or ill worker** (10%).

According to the Bureau of Labor Statistics (BLS) CFOI report, there were four (4) work-related fatalities in 2017 in the Hoosier healthcare and social assistance industry. Two of these fatalities were attributed to **transportation incidents**. A third was due to **violence and other injuries by persons or animals**. Due to BLS confidentiality restraints, additional information about the fourth fatality in this industry is unavailable.

Agriculture, Forestry, Fishing, and Hunting Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	8,800	6.1	8.1	600	26
2006	8,800	6.0	5.8	500	12
2007	9,200	5.4	8.4	700	22
2008	9,300	5.3	7.6	600	25
2009	9,300	5.3	2.8	300	23
2010	9,300	4.8	7.2	600	24
2011	9,700	5.5	9.5	800	16
2012		5.5	7.2	600	16
2013		5.7	3.6	400	17
2014		5.5	5.5	600	28
2015		5.7	7.1	800	23
2016		6.1	4.3	500	33
2017		5.0	5.3	500	28

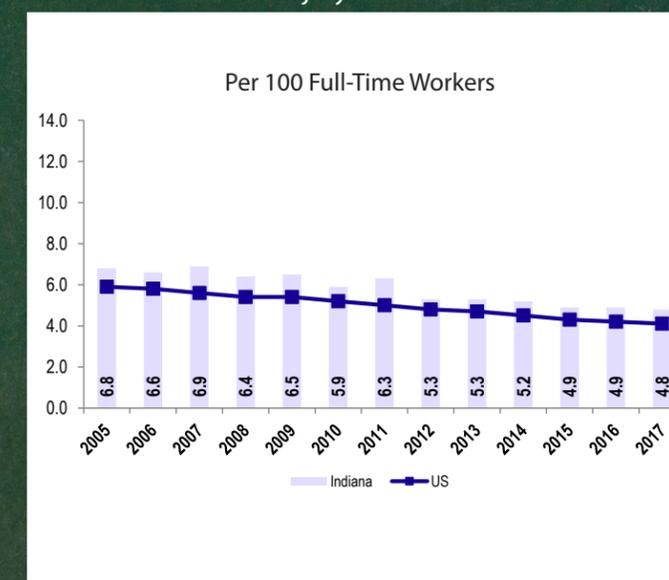
U.S. and Indiana Agriculture, Forestry, Fishing, and Hunting Nonfatal Injury and Illness Rates



Healthcare and Social Assistance Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	308,400	5.9	6.8	16,100	4
2006	316,000	5.8	6.6	16,500	--
2007	325,600	5.6	6.9	17,100	--
2008	332,600	5.4	6.4	16,000	5
2009	341,000	5.4	6.5	16,600	6
2010	348,100	5.2	5.9	16,200	4
2011	353,900	5.0	6.3	17,300	-
2012		4.8	5.3	14,500	-
2013		4.7	5.3	15,100	3
2014		4.5	5.2	15,000	3
2015		4.3	4.9	14,000	4
2016		4.2	4.9	14,300	2
2017		4.1	4.8	14,800	4

U.S. and Indiana Healthcare and Social Assistance Nonfatal Injury and Illness Rates



TRANSPORTATION AND WAREHOUSING

The 2017 nonfatal occupational injury and illness rate for the Indiana **transportation and warehousing** industry was 4.2 per 100 workers—an increase over the historic low rate of 3.9 in 2013. Sub-industries within the transportation and warehousing industry with high nonfatal worker injury and illness rates in 2017 included the **couriers and messengers** (7.3), **warehousing and storage** (5.0), and **truck transportation** (3.7).

Workers in the transportation and warehousing industry suffered an estimated 5,000 nonfatal injuries and illnesses. Two-thousand (2,000) of these injuries were severe enough to require at least one day away from work for the worker to recover, while 2,100 resulted in job transfer or working restrictions.

The median number of days away from work in the transportation and warehousing industry in 2017 was four (4)—five days less than the 2016 median of nine (9). Employees who suffered injuries resulting in days

away from work in the transportation and warehousing industry were most often **men** (70%), **Caucasian** (37%), and between the **ages of 55-64** (25%). The most common events or exposures resulting in injuries in the transportation and warehousing industry in 2017 were **overexertion and bodily reaction** (35%); **falls, slips, and trips** (30%); and **contact with objects and equipment** (17%).

Injuries resulting in days away from work by workers in the transportation and warehousing industry in Indiana in 2017 were most often **sprains, strains, and tears** (41%); **bruises and contusions** (12%); and **fractures** (12%). With 26 fatalities, Indiana’s transportation and warehousing industry experienced the second highest number fatal of occupational injuries in 2017 and had an increase of five fatalities (24%) over the 2016 total of 21. The truck transportation sub-industry experienced 17 of these fatal injuries, with 15 falling under the **general freight trucking, long distance**.

RETAIL TRADE

The 2017 nonfatal injury and illness rate for the **retail trade** industry is 3.4 injuries or illnesses per 100 full-time workers. The 2017 rate ties with 2013 as the lowest retail industry nonfatal injury and illness rate in state history.

Sub-industries within the Hoosier retail trade industry with workplace injury and illness rates above the overall industry average included **building material and garden equipment and supplies dealers** (5.0); **nonstore retailers** (4.9) and **furniture and home furnishings stores** (4.5).

Workers in the retail trade industry are subject to a wide variety of workplace safety and health hazards including contact with the public, working long or irregular hours, and ergonomic-related stressors from repetitive motion injuries which may be caused by excessive lifting and bending, extended reaching, and working on stepstools and ladders. Large scale retail sales events such as “Black Friday” can also contribute to worker injuries with increased shopper volumes.

Hoosier retail trade industry workers suffered an estimated 9,600 nonfatal injuries and illnesses in 2017, with 2,400 resulting in one or more days away from work.

Workers who suffered injuries resulting in days away from work were most often **women** (52%) between the **ages of 55 and 64** (19%). The most frequent injury-causing event was **contact with objects and equipment** (44%), followed by **overexertion and bodily reaction** (29%) and **falls, slips, and trips** (20%). The most common nature of injury requiring days away from work in the retail trade industry in 2017 was **sprains, strains, and tears** (37%). **Bruises and contusions** was the nature of 16 percent of the injuries, with **fractures** accounting for 15 percent.

The sources of the majority of the injuries were most often **vehicles** (20%), **containers** (17%) and **floors, walkways, and ground surfaces** (13%). The retail trade industry experienced 10 workplace fatalities in 2017, down from 11 in 2016. Violence and other injuries by persons or animals (3) was the leading cause of fatal occupational injury for workers in the retail trade industry.

Transportation and Warehousing Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	105,200	7.0	5.6	6,300	28
2006	108,800	6.5	5.3	5,900	34
2007	110,900	6.4	5.5	6,200	31
2008	108,800	5.7	5.0	5,800	16
2009	107,200	5.2	4.5	5,200	18
2010	103,000	5.2	4.9	5,100	16
2011	106,300	5.0	4.6	4,900	25
2012		4.9	4.5	5,000	21
2013		4.7	3.9	4,500	25
2014		4.8	4.4	5,000	13
2015		4.5	4.6	5,700	27
2016		4.6	3.4	5,700	21
2017		3.3	3.4	5,000	26

U.S. and Indiana Transportation and Warehousing Nonfatal Injury and Illness Rates



Retail Trade Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	332,100	5.0	5.1	13,000	13
2006	330,700	4.9	5.4	13,700	5
2007	330,900	4.8	5.1	12,500	4
2008	328,400	4.4	4.9	12,100	13
2009	316,000	4.2	4.3	10,200	9
2010	306,200	4.1	3.9	8,700	7
2011	307,200	3.9	3.7	8,500	8
2012		4.0	3.6	8,500	7
2013		3.8	3.4	8,100	9
2014		3.6	3.7	8,700	8
2015		3.5	4.0	9,400	4
2016		3.3	3.8	9,600	11
2017		3.3	3.4	8,400	10

U.S. and Indiana Retail Trade Nonfatal Injury and Illness Rates



ACCOMMODATION AND FOOD SERVICES

Accommodation and food services is a sub-industry of the much larger leisure and hospitality industry. Hoosiers in this industry work in places such as hotels, restaurants, and vacation camps. These workers provide visitors with lodging and food and beverage services, and are critical to providing the “Hoosier hospitality” that Indiana is known for delivering.

In 2017, accommodation and food service industry workers suffered an estimated 3,600 work-related injuries and illnesses that required treatment beyond first aid, and an additional 1,800 that resulted in days away from work, working restrictions, or job transfers. The 2017 nonfatal occupational injury and illness rate for the Hoosier accommodation and food services industry was 3.3 and represents a three (3) percent decrease from the 2016 rate of 3.4.

The median number of days an injured or ill worker in the accommodation and food services industry spent away from work was five (5) in 2017—seven days (58%) lower

than the median of 12 for 2016. Injured or ill workers in this industry most often suffered from **carpal tunnel syndrome** (20%); **sprains, strains, and tears** (19%); and **heat (thermal) burns** (12%). These injuries were most often attributed to **falls, slips, and trips** (32%); **contact with objects and equipment** (24%); and **overexertion and bodily reaction** (23%).

Accommodation and food service workers who suffered injuries and illnesses resulting in days away from work were most often **female** (59%), **Caucasian** (41%), and between the **ages of 16 and 19** (25%).

In 2017, eight workers were killed in the Hoosier accommodation and food services sub-industry. According to the Bureau of Labor Statistics (BLS) CFOI, six (75%) of the eight work-related deaths were attributed to **violence and other injuries by persons or animals**, one was the result of a **transportation incident** and the last was the result of a **slip, trip, or fall**.

ARTS, ENTERTAINMENT, AND RECREATION

The **arts, entertainment, and recreation** sub-industry is a part of the much larger leisure and hospitality industry. This sub-industry includes a wide range of establishments that operate facilities or provide services to meet the varied interests of their respective customers. The sub-industry also includes spectator sports, amusement parks, gambling venues, live performances and events, exhibits (cultural or educational), and recreation or leisure time activities.

The 2017 nonfatal occupational injury and illness rate for the Indiana arts, entertainment, and recreation sub-industry was 5.0 per 100 workers. This reflects an increase from 4.9 in 2016 (2%). Workplace safety and health hazards in this sub-industry include noise, player-to-player contact during sporting events, cleaning agents, falls from heights, slips and trips from ground-level placed objects, contact with objects and equipment, and workplace violence.

In raw numbers, workers in the arts, entertainment, and recreation sub-industry suffered approximately 1,200 nonfatal workplace injuries and illnesses. One hundred (100) of these injuries were severe enough to require at least one day away from work for the worker to recover.

The median number of days away from work the sub-industry in 2016 was five (5)—one day less than the 2016 median of six (6) days. Workers who suffered from injuries resulting in days away from work were most often **male** (55%) and **Caucasian** (36%), with the injuries spread evenly between workers in the **age categories of 25-34, 35-44, 45-54 and 55-64** (18% for each).

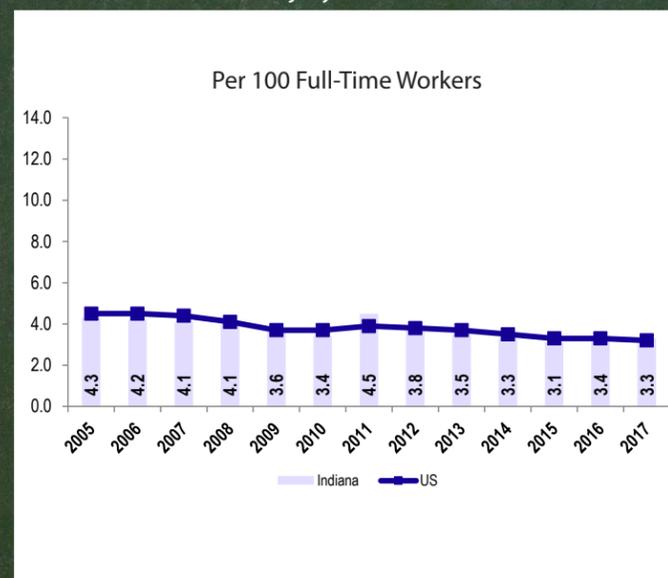
In 2017, the most common event or exposure resulting in an injury with days away from work for workers in the industry was **overexertion and bodily reaction** (36%), followed by **contact with objects and equipment** (27%) and **falls, slips, and trips** (27%). Injuries resulting in days away from work most often suffered by workers in Indiana’s arts, entertainment, and recreation sub-industry in 2017 were **sprains, strains, and tears** (36%). **Cuts, lacerations, and punctures** (18%) and **soreness and pain** (18%) were also in the top three natures of injury for this sub-industry.

According to the Bureau of Labor Statistics (BLS) 2017 CFOI report, there was one work-related death suffered by a worker in the arts, entertainment, and recreation sub-industry. This is a 67 percent decrease from three industry fatalities in 2016.

Accommodation and Food Service Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	232,900	4.5	4.3	6,100	5
2006	236,100	4.5	4.2	6,300	3
2007	242,100	4.4	4.1	6,100	3
2008	244,300	4.1	4.1	5,800	3
2009	240,200	3.7	3.6	5,100	4
2010	233,700	3.7	3.4	4,800	-
2011	236,500	3.9	4.5	6,800	3
2012		3.8	3.8	5,400	1
2013		3.7	3.5	5,300	4
2014		3.5	3.3	5,000	5
2015		3.3	3.1	4,800	7
2016		3.3	3.4	5,400	6
2017		3.2	3.3	5,200	8

U.S. and Indiana Accommodation and Food Service Nonfatal Injury and Illness Rates



Arts, Entertainment, and Recreation Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	43,800	6.1	4.7	1,400	-
2006	43,300	5.3	4.2	1,200	-
2007	43,700	5.3	7.6	2,400	-
2008	43,300	5.1	6.3	1,800	6
2009	44,800	4.9	7.2	1,800	3
2010	42,300	4.8	7.6	2,000	4
2011	41,400	4.5	4.9	1,200	5
2012		4.6	5.2	1,300	5
2013		4.8	4.4	1,100	1
2014		4.2	6.2	1,500	3
2015		4.1	6.3	1,500	1
2016		4.4	4.9	1,200	3
2017		4.2	5.0	1,300	1

U.S. and Indiana Arts, Entertainment, and Recreation Nonfatal Injury and Illness Rates



MINING, QUARRYING, AND OIL AND GAS EXTRACTION

Indiana's **mining, quarrying, and oil and gas extraction** industry helps to supply the nation with stone, gypsum and energy-rich coal for use in in electricity generation, construction, cement manufacturing, and as a liquid fuel. The 2017 nonfatal occupational injury and illness rate for the Indiana mining, quarrying, and oil and gas extraction industry was 2.7 per 100 full-time workers.

Workers in the Hoosier mining, quarrying, and oil and gas extraction industry suffered approximately 200 work-related injuries and illnesses. Half (100) of these injuries required the worker to miss at least one day of work to recuperate. The median number of days away from work missed by injured or ill workers in the mining industry was seven (7). This is a significant decrease (80%) from the 2016 median of 35 days.

Seventy-nine percent (79%) of the work-related injuries requiring days away from work in this industry were suffered by **men**. The most common injury suffered by workers in this industry resulting in lost work time in 2017 was **sprains, strains, and tears** (36%). The second most common category was **fractures** (29%). Frequent injury events or exposures experienced by Indiana mining industry workers in 2017 were **falls, slips and trips**

(43%) and **contact with objects and equipment** and **overexertion and bodily reaction**, tied with 29 percent each.

There are currently six active underground coal mines and 11 surface coal mines in Indiana. While the data for the mining, quarrying, and oil and gas extraction industry includes all Hoosier mining activities—surface and underground, the Indiana Department of Labor's Bureau of Mines and Mine Safety only has jurisdiction over the underground coal mining operations and activities in the state. The coal mining sub-industry nonfatal injury and illness rate was 3.0 injuries or illnesses per 100 full-time workers—11 percent above the overall state mining, quarrying, and oil and gas extraction industry rate.

The Indiana Bureau of Mines and Mine Safety, located in Vincennes, Indiana, works very closely with mine management, labor, and the federal Mine Safety and Health Administration (MSHA). The Indiana Bureau of Mines conducts an inspection of each underground coal mine at least once per quarter. These inspections are conducted by the assistant commissioner of the Bureau of Mines or the chief mine inspector, both individuals are certified mine foremen.



**SLOPE IT.
SHORE IT.
SHIELD IT.**

Mining, Quarrying, and Oil and Gas Extraction Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	6,500	3.6	4.5	300	-
2006	6,500	3.5	3.4	200	-
2007	6,600	3.1	3.3	200	-
2008	6,400	2.9	3.8	300	-
2009	6,400	2.4	3.3	200	-
2010	6,400	2.3	3.3	200	-
2011	6,400	2.2	4.7	300	-
2012		2.1	2.6	200	-
2013		2.0	3.2	200	1
2014		2.0	2.7	200	1
2015	DATA UNAVAILABLE	1.4	2.7	200	-
2016		1.5	2.6	200	-
2017		1.5	2.7	200	-

U.S. and Indiana Mining, Quarrying, and Oil and Gas Extraction Nonfatal Injury and Illness Rates



2019

TRENCHING AND EXCAVATION AWARENESS WEEK

April 8 - 12, 2019

Join the Indiana Department of Labor and other Region V Occupational Safety and Health Administration (OSHA) offices in emphasizing education and safe procedures for workers heading into the trenches and excavating! Visit www.osha.gov/SLTC/trenchingexcavation to learn more and download resources today!

CONSTRUCTION

Workers in the **construction** industry perform a number of varied duties and, therefore, are exposed to many occupational hazards including falls from elevated workplaces, working with machinery and chemicals, electrical shock, and motor vehicle traffic on the roadways. Carpenters, painters, pipe layers, masons, heavy equipment operators, estimators, and engineers are a few of the job categories found within the construction industry.

The 2017 nonfatal occupational injury and illness rate for the construction industry was 2.6 per 100 full-time workers. This seven (7) percent decrease is significant, as it represents the lowest injury and illness rate on record for the Hoosier construction industry. The sub-industry within the construction industry with the highest nonfatal worker injury and illness rate in 2017 was **heavy and civil engineering construction** (3.7). This sub-industry includes workers performing duties such as roadway construction, dam building, dredging, and land drainage. All other construction sub-industries were either tied with or lower than the industry average.

In 2017, Hoosier construction workers experienced approximately 1,500 injuries severe enough to require

at least one day away from work for the worker to rehabilitate. The median number of days away from work in the construction industry in 2016 was 29—two (2) days longer than 2016 and the highest of any other Hoosier industry.

The **specialty trade contractors** sub-industry experienced the highest number of injuries resulting in days away from work (1,000). Employees who suffered injuries resulting in days away from work were most often **male** (98%), **Caucasian** (62%), and between the **ages of 45 and 54** (43%). Common events or exposures resulting in an injury with days away from work in the construction industry in 2017 included **falls, slips, and trips** (43%), **contact with objects or equipment** (32%), and **overexertion and bodily reaction** (17%). Frequent natures of injuries in the industry in 2017 were **fractures** (22%), **soreness and pain** (19%), and **sprains strains and tears** (17%).

In 2017, there were 14 workplace deaths in the Hoosier construction industry, the same number as reported in 2016. According to the Bureau of Labor Statistics (BLS) CFOI, seven (50%) of the 2017 fatalities in the Hoosier construction industry were due to **falls, slips or trips**.

NATIONAL SAFETY STAND-DOWN TO PREVENT FALLS IN CONSTRUCTION

MAY 6-10, 2019



Stop Falls Stand-Down

- Plan a toolbox talk or other safety activity
- Take a break to talk about how to prevent falls
- Provide training for all workers

For more information:

www.osha.gov/StopFallsStandDown

#StandDown4Safety • (800) 321-OSHA (6742)

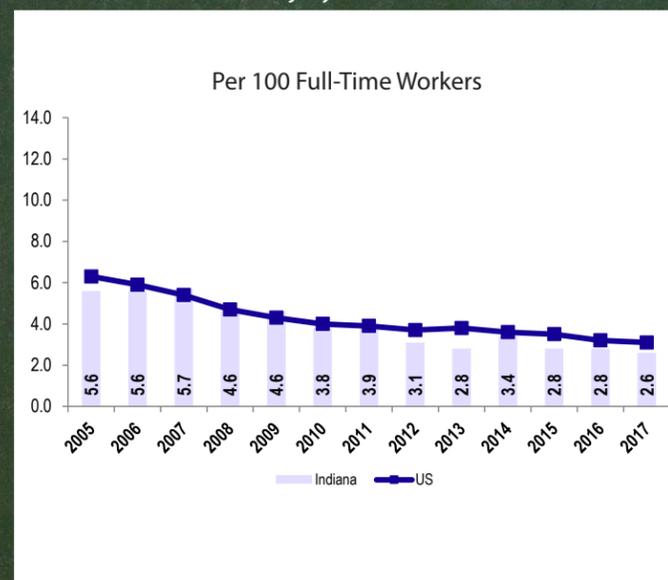


Safety Pays. Falls Cost.

Construction Nonfatal Injury and Illness Rates and Numbers

Year	Employment	U.S.	IN	Number of Injuries and Illnesses	Number of Fatalities
2005	144,600	6.3	5.6	7,500	27
2006	146,600	5.9	5.6	7,600	27
2007	153,100	5.4	5.7	7,700	21
2008	151,600	4.7	4.6	6,300	20
2009	135,300	4.3	4.6	5,600	17
2010	117,600	4.0	3.8	4,000	16
2011	119,100	3.9	3.9	4,300	19
2012		3.7	3.1	3,600	20
2013		3.8	2.8	3,000	15
2014		3.6	3.4	3,700	18
2015		3.5	2.8	3,400	11
2016		3.2	2.8	3,600	14
2017		3.1	2.6	3,400	14

U.S. and Indiana Construction Nonfatal Injury and Illness Rates



A Farewell From Tim Maley



Dear friends and colleagues,

It is with a heavy heart that I have made the decision to part with the Indiana Department of Labor (IDOL) as Deputy Commissioner in 2019. I'm retiring to spend time with family and prioritize the health of my loved ones.

My career in occupational safety and health has been nothing short of extraordinarily rewarding. I've been fortunate to work in safety management at one of Indiana's most notable businesses, Eli Lilly and Company. While there, I worked with a team of committed professionals in great safety improvement initiatives, including significant accident reduction and spearheading certification in Indiana's Voluntary Protection Program (VPP). Lilly is a truly great company that offered significant opportunities for me in my professional life, and I will always be grateful for the lessons learned during my 30 years there. I left the company in 2008 to retire.

Despite my retirement, I spent a couple years consulting in the world of occupational safety and health. I truly enjoy working with Indiana's businesses and organizations in improving proactive safety and health, limiting injuries, and eliminating fatalities. Then, in 2012, I accepted the position of Deputy Commissioner and leader of Indiana's Occupational Safety and Health Administration (IOSHA). I had never envisioned myself being involved with OSHA, let alone managing the whole operation in the Hoosier state. It was an unexpected turn in my career. As a professional from the private industry, government work was very different for me and took some adjusting. Thanks to the wonderful people within the IDOL and a little hard work, I've been able to apply lessons learned at Lilly and wield it for positive influence within government.

Becoming Deputy Commissioner was an unexpected—but irreplaceable—experience.

I've been blessed to oversee significant improvement in IOSHA's performance while I've served as Deputy Commissioner. In the past six years, we've seen front-end response time improve by 649 percent. Overall time to complete a safety investigation has improved by 199 percent. In 2018, IOSHA exceeded its inspection goal for the first time in several years. Recently, IOSHA finished converting paper files to electronic files—effectively transitioning the operation to electronic organization, improving lapse time and transparency, as well as saving money. Indiana is one of the few OSHA state programs to make this switch. IOSHA was also able to demonstrate enforcement power with the largest fine in the state program's history—\$495,500.

Indiana's VPP has accelerated growth and received national recognition for its success in the Hoosier state. It's very exciting that one of our newest participants, Notre Dame University, will potentially be the first university in the United States to achieve VPP certification.

Statewide, from South Bend to Evansville, we witnessed Indiana's companies and organizations creatively and successfully manage their respective workplace safety and health programs. Indiana has 150 Special Government Employees, or SGEs, that work cooperatively alongside IOSHA's team members in managing Indiana's VPP. These SGEs are some of the most dedicated men and women I've had the pleasure of meeting and working with; volunteering their time in the name of improving safety and health in the Hoosier state. They have my ultimate respect and gratitude, and I will miss meeting these incredible individuals.

Last but not least, I will miss my IOSHA team. They will never know how much that they've taught me. The men and women of IOSHA have difficult jobs and face many challenges, but they meet these challenges head-on and put their whole hearts into it. They have exceeded my expectations for 2018, and that's not easy. They believe in and gracefully carry our mission to advance safety, health, and prosperity of all Hoosiers in the workplace.

Although my time serving the state is concluding, there is still much to do in workplace safety and health. One injury is too many. One fatality is too many. These are preventable. My time working with magnificent teams at Eli Lilly and the IDOL have taught me that the impossible is achievable with working cooperatively, leveraging resources, and creative problem solving.

My sincerest thanks,

A large, handwritten signature in black ink that reads "Timothy E. Maley".

Retiring Deputy Commissioner of IOSHA



RUKCO Field Notes

“Trust is never an easy thing to achieve and must always be earned.”

IN 2016, safety leaders overseeing the Community Hospital East Campus Redevelopment Project made a bold decision to re-establish safety performance standards for large-scale construction projects. The team—a unique partnership between Pepper Construction, RUKCO, and the Indiana Department of Labor’s workplace safety and health consultation division, INSafe, believed fostering a work environment with high engagement of tradespeople and strong management commitment would create an interactive, cohesive approach to safety.

Simply put, the team committed to a safety approach executed with the project’s tradespeople, not at them. The ultimate goal – to create a genuine safety partnership between trades personnel and management—it would be challenging, but achievable.

Impactful Partnership

Pepper Construction and RUKCO engaged the Indiana Department of Labor (IDOL) as partners in late 2016. Community Hospital East was at the early stages of a major redevelopment, a four-year master plan consolidating the existing health campus from 727,000 square feet to a more-efficient 535,000 square feet.

The size of the project and multi-year duration provided an ideal opportunity to rethink an approach to safety and truly engage large numbers of tradespeople, which would in turn improve overall safety for years to come in Central Indiana. The partnership with the IDOL emphasizes strategic workforce safety while embracing collaboration among employers, workers, labor representatives, and government.

Early on, leaders agreed to take a different approach and place less focus on the traditional lagging indicators and safety statistics commonly used to measure safety success. Traditional lagging indicators or trailing metrics alone are insufficient measures for development, implementation and management of the safety program. Total recordable case (TRC) and days away, restricted and transferred (DART) rates identify only past negative outcomes that cannot be changed and does not give consideration to current indicators predicting future performance.

The partnership called for a different approach and focused on leading metrics, which proactively identify and ensure potential workforce safety and health hazards are corrected before an injury or illness occurs. The overarching goal is to focus on preventing significant injuries and fatalities (SIF) and places an emphasis on industry recognized high hazard exposures.

Commitment to Transparency

The project team receives daily, weekly, and monthly safety audit information reports documenting a comprehensive listing of all subcontractors’ safety observations recorded. The sharing of the safety observation reports allows all contractors to learn from each other and help them identify potential hazards when performing their own work.

CONTRIBUTOR
Kevin Sullivan
Program Director
RUKCO

Safety observation reports are not used in a disciplinary manner, but rather as a positive tool to show hazards are being actively identified and corrected. No names are included in the reports, as the focus is on the positive—a hazard was identified and corrected. These reports are also shared with our partners from INSafe, who then offer input, references, and resources to improve project safety.

Efforts to ensure transparency also include a tradesman-led Safety Discovery Team comprised of representatives from each contractor on site. This team meets monthly with the project management team and INSafe representatives to review monthly summary reports and project metrics. Safety Discovery Team members provide feedback from their fellow tradesmen and discuss tradesperson ideas to improve the safety of the project. This structure has produced a number of great ideas and also several changes on the jobsite, including improvements to site security and lighting, emergency preparedness and response, and better use of modern technology.

Another example of the Safety Discovery Team’s meaningful impact is the tradesperson recognition program. The program allows for any on-site tradespeople to recognize one another if they see someone going above and beyond to improve the project whether it be safety, quality or productivity. The program has been a tremendous success and generated a noticeable increase in personal ownership of safety.

Engagement + Transparency = Trust

Trust is never an easy thing to achieve and must always be earned. For this project, the safety leadership team engaged both tradespeople and management while operating in the most transparent way possible. It set the stage for the project environment we enjoy today, one in which workers at all levels feel empowered to improve project safety. Near-miss and overall hazard identification reporting has increased significantly. Tradesmen now regularly seek out on-site safety representatives for questions and guidance. They understand representatives will listen to their concerns and offer meaningful, realistic options to accomplish the task safely.

The Community Hospital East Redevelopment Project serves as an example for what is possible given forward-thinking partners committed to meaningful change. Engage employees at all levels. Involve trades personnel in the safety process. Be open, transparent and consistent with communications. Trust your people and empower them to improve.

The result of this partnership with trades personnel has been a safe, productive work site, not a culture of fear and blame.

Kevin Sullivan is Program Director at RUKCO. The Indianapolis-based company partners with companies nationwide to design and implement innovative risk management solutions, specializing in construction and operational safety, quality and productivity.

SAVE THE DATE

SAFE + SOUND



Week

August 12-18, 2019

Safe + Sound Week is a nationwide event to celebrate the successes of businesses that have implemented safety and health programs in the workplace. Throughout the year, businesses show their commitment to safety by focusing on management leadership, worker participation, and a systematic approach to finding and fixing hazards in workplaces. Each August we invite them to celebrate their safety successes and efforts to be **#SafeAndSoundAtWork**.

Why Participate?

Safe workplaces are sound businesses. Successful safety and health programs can proactively identify and manage workplace hazards before they cause injury or illness, improving sustainability and the bottom line. Participating in Safe + Sound Week can help get your program started or energize an existing one.

Who Participates?

Organizations of any size or in any industry looking for an opportunity to celebrate their commitment to safety to workers, customers, the public, or supply chain partners should participate.

How to Participate

Participating in Safe + Sound Week is easy. To get started, select the activities you would like to do at your workplace. You can host an event just for your workers or host a public event to engage your community. After you've completed your events, you can download a certificate and web badge to recognize your organization and your workers.

CELEBRATE YOUR SAFETY SUCCESSES



February 24-26, 2020
Indiana Convention Center, Indianapolis

www.INSafetyConf.com

YOUTH SPORTS AND CONCUSSIONS

October 25, 2006

A high school team captain received a hard, helmet-to-helmet hit during a football game. A CT scan didn't show signs of intracranial injury, but he continued to have headaches. Five days later, the teen returned to practice, where he suffered another hit. Shortly after, he began to have seizures. The teen was diagnosed with Second-Impact Syndrome (SIS). He experiences short-term memory loss and is unable to walk unassisted.

EACH year, the United States Department of Labor's Bureau of Labor Statistics (BLS) conducts the Survey of Occupational Injuries and Illnesses (SOII). This survey estimates the number of injuries and illnesses that befell workers nationwide. According to data from the 2017 SOII, there were an estimated 18,400 intracranial injuries in U.S. workplaces that were identified as concussions. Of these, an estimated 570 (3.1% of the U.S. total) were suffered by Hoosier workers.

While these data show that concussions can happen in numerous workplace settings, they often happen in athletics, as well. The Center for Disease Control (CDC) estimates between 1.6 million and 3.8 million sports-related concussions occur each year, though many go untreated and unreported. These injuries are not limited to only professional athletes, but also to amateur athletes at all levels—including children. A 2016 report by the Aspen Institute estimated that 56.6% of all U.S. children, or roughly 45 million kids, participate in youth sports. Presently, children have options of participating in school-sanctioned athletics or in other public or private youth sports organizations.

Participation in youth sports is a long-standing tradition lauded for providing children opportunities to build character, stay out of trouble and learn to work as a team. While the development of these attributes is positive, the safety of youth contact sports has come into question in recent years, particularly in contact sports such as rugby, hockey and American football where there is a higher risk of concussions.

The Brain Injury Research Institute studied concussions in youth athletes occurring from 2001 through 2005. Data collected from this study and published to their website (www.protectthebrain.org) showed that 135,000 emergency room visits involved youth athletes who had suffered a concussion. They also found that 60% of all concussions treated in youth athletes during this time were suffered by players of American football. Tools and materials which range from screening forms to assess young patients to discharge instructions and recovery tips for parents. These tools and materials are available at www.cdc.gov/HEADSUP. Additional information is available from the Traumatic Brain Injury & Concussion page at the CDC website at <https://www.cdc.gov/traumaticbraininjury/PediatricmTBIGuideline.html>.

Symptoms of an intracranial or concussive injury following hard contact to the head include:

- Confusion
- Forgetfulness
- Glassy eyes
- Disorientation
- Clumsiness or poor balance
- Slowed speech
- Changes in mood, behavior or personality

In sports where participants are at increased risk for concussions, guidelines have been developed to better care for athletes with suspected intracranial injuries. Under these new protocols, such as those adopted by the Indiana High School Athletic Association (IHSAA), athletes who suffer a hard hit to the head or who show possible signs of a concussion are removed from play or practice and observed immediately by qualified medical personnel. Only when the medical personnel have deemed the athlete to be free from intracranial injury will the athlete be allowed to return to practice or active play.

Any athlete, regardless of age, should be examined by a medical professional if any of these symptoms arise after a blow to the head. Youth athletes tend to recover quicker than college or adult athletes; typically in a few weeks. In some cases, however, the effects can be long-lasting and may require longer recovery times and/or treatment.

On September 4, 2018 the CDC Guideline on the Diagnosis and Management of Mild Traumatic Brain Injury among Children was published in JAMA Pediatrics from the American Medical Association. The clinical recommendations in these guidelines are designed to help medical professionals through diagnosis, prognosis, management and treatment of children who have suffered a concussion. The CDC also developed supporting tools and materials which range from screening forms to assess young patients to discharge instructions and recovery tips for parents. These tools and materials are available at www.cdc.gov/HEADSUP. Additional information is available from the Traumatic Brain Injury & Concussion page at the CDC website at <https://www.cdc.gov/traumaticbraininjury/PediatricmTBIGuideline.html>.

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WHAT MAKES THE IDEAL COMPETENT PERSON?



IT HAPPENED HERE
Monroe County

April 25, 2018

Large limestone slabs were being installed as part of the exterior renovation of a large building. A worker was struck on the head and killed by a large piece of falling limestone. During the course of IOSHA's inspection, they found that the competent person onsite failed to identify the hazard of allowing workers to work under a suspended load. IOSHA cited the employer for a number of hazards, including failure to properly train a competent person.

ALL workplaces potentially host a variety of safety and health hazards. Training and procedures can be proactive measures in preventing injuries, illnesses, and fatalities, but there will always be stressful workdays, times of rushed work, and periods of heavy workload. These stressors can lessen the care and attention on safety and health, and eventually lead to lapses in judgment and taking shortcuts in completing tasks and responsibilities. Add in contracted workers and heavy equipment, and you have a fast-paced work environment with unpredictable dangers. This creates the need for a focused eye for potential hazards and incidents. You need an on-site competent person.

WHAT MAKES THE IDEAL COMPETENT PERSON?

As a safety consultant with the Indiana Department of Labor, one of the things I see commonly cited by Indiana's Occupational Safety and Health Administration (IOSHA) is not having a competent person conducting frequent and regular inspections of the job sites. A competent person is not required in every place of employment, but there are competent person requirements in many different situations. General Industry (1910), Shipyard Employment (1915), Longshoring (1918), Gear Certification (1919), and the Construction Industry (1926) all have standards that require a competent person in specific situations.

WHAT DOES A COMPETENT PERSON DO?

A competent person is someone capable of identifying existing and predictable hazards that may be present in the work environment, or identify working conditions that are hazardous, dangerous, or unsanitary to employees. A competent person must also have the authority to promptly stop work and make corrective actions to abate (eliminate) a hazard.

WHAT ARE THE REQUIREMENTS THAT WOULD APPLY TO A PERSON'S HAZARD IDENTIFICATION ABILITY?

A competent person has the knowledge of applicable standards that pertain to his or her work activities and environment. This knowledge can be obtained through training and/or experience, however it can be difficult for an employee to gain knowledge of the standard(s) that apply to his or her workplace without formal training. Similarly, it can be hard for an employee to grasp all of the hazards associated with a task and the ways to correct them without hands-on experience.

Employers should evaluate their employees to decide if the employee has the knowledge needed to follow the Occupational Safety and Health Administration's (OSHA's) standards, but also knows about the hazards associated with the working environment and what corrective actions are available to abate the hazard(s) that may arise.

DOES ANYONE OFFER COMPETENT PERSON TRAINING?

In short, no. There is no one-size-fits-all training plan for a competent person. Training is only one component of what defines a competent person. A person can only be deemed competent when his or her employer has evaluated their training and job knowledge and given the authority to promptly stop work and make corrective actions to abate a hazard. It may be in a company or organization's best interest to develop their own competent person training and/or evaluation. You can never have too many competent persons on-site.

WHAT DOES IT MEAN TO GIVE SOMEONE THE AUTHORITY OF A COMPETENT PERSON?

Another common issue I find is that the employee is often unaware that he or she is designated a competent person. As an employer, make sure your competent persons know that they are a competent person. Let them know that you rely on them to identify hazards and that they have the authority to promptly stop work and correct the hazard. You may know who your competent people are, but do they know that they are?

HOW DOES PROMPTNESS PLAY A PART?

It is not good enough to just give an employee the authority to stop work to address a hazard. The employee must be able to act promptly. If an employee is designated as a competent person, he or she should not be required to call his or her supervisor for permission to stop work. That does not fulfill the authority requirement of the standard. Competent persons should absolutely report situations to his or her supervisor but, if they need to ask for permission, they do not have the authority of a competent person and should not be identified as such.

HOW DO I GET ASSISTANCE STARTING OR ENHANCING MY SAFETY AND HEALTH PROGRAM?

If you want assistance getting your workplace safety and health programs in place and filling your competent person needs, please contact **INSafe** to speak with a safety or health consultant by calling (317) 232-2688 or email insafe@dol.in.gov. Free, confidential workplace safety and health consultation services, including noise and air sampling, are available to Hoosier employers and employees. Learn more about INSafe online at www.in.gov/dol/insafe. To initiate a request for services, please complete and submit the form available at www.in.gov/dol/insafeconsultation.

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Giving Safety A Lift

HOOSIER hospitals, nursing and residential facilities continue to experience higher nonfatal injury and illness rates than many other Indiana industries. Some of the hazards healthcare workers face include exposure to infectious disease, bloodborne pathogens, slips/falls and musculoskeletal injuries. The most frequent injuries in healthcare are musculoskeletal back and shoulder injuries resulting from patient/client handling. These injuries are also often the most debilitating, precluding the injured from performing routine job tasks until the injury heals.

For years, researchers have studied numerous ways to decrease the risk for musculoskeletal injuries. Many of the tasks employees perform include patient/client interactions, which are difficult to control from an ergonomic standpoint. These tasks often involve assisting patients and clients with handling, ambulating or transferring patients/clients. Lifting, turning, guiding or attempting to catch a falling patient or client often results in employee injuries. When compounded with additional factors such as staffing shortages, high turnover, and little employee training, these injuries can easily take a toll on both the individual and the working team.

One of the most effective ways to decrease musculoskeletal injuries in healthcare is to eliminate lifts. Many healthcare facilities have installed mechanical lifts in rooms and purchased additional mobile lifts that can be used in multiple areas. They have also started investing in additional devices such as sliding boards to reduce the need to lift, slip sheets to decrease friction when transferring and shower chairs to eliminate multiple transfers. Other advancements include adjustable tubs and electric beds, toilet seat risers, lean stand assists, and gait belts with handles. Some facilities have implemented lift teams to assist in lifting or transferring patients. Although these approaches may have had some effect on decreasing patient-handling injuries, they have not eliminated them entirely. So what is missing?

While conducting **INSafe consultations** and interviewing employees, we often find employees are not trained in the use of the equipment or, in some cases, do not even know where the equipment is located. Employees have also stated that they do not have enough equipment to share in the facility and/or did not have the time to wait until a lift was not in use or they could find other employees to help with a patient or client transfer. Often, employees believe they can lift more weight than is safe without risk of injury.

During our INSafe consultations, we have found that employee safety culture is the key factor in injury reduction. Although patient/client safety is an important and necessary function in healthcare, it is just as important to instill

employee accountability for safe work practices. Employees need to be held accountable for safe work practices; even if this means adjusting schedules, waiting on equipment etc.

When safety is valued as a top priority, injuries and illnesses decrease. While interviewing a supervisor, we asked, "What was the one thing that made the greatest difference in reducing their injuries?" She stated that employee and management commitment made the difference. When an employee is injured or a near miss incident is reported, a thorough incident investigation is performed. Corrective action is identified and implemented as soon as possible. Management realized that the price of purchasing a mechanical lift was much more important than endangering an employee's health. In other words, they recognized that the employee is the company's most valuable asset.

Too often, employees are not involved in safety committee meetings, and they are left out of important decisions such as purchasing equipment and improving work practices. It is important to involve all employees and get their buy-in to demonstrate that safety is truly a top priority.

There are many ways to earn employee buy-in. Requiring employee representatives from all shifts all departments, including all levels of management, in the company safety committee is one of the most effective ways. Requiring accountability for safe work practices as part of the job expectation and including it in the evaluations for management, supervisors and employees is also very important.

Most importantly, open up a dialog between employees and management. This can be accomplished through suggestion boxes, anonymous employee surveys and open door communication. Additionally, we find that employees rewarded for safety and health suggestions are more inclined to offer suggestions. Some facilities identify employee suggestions in newsletters, bulletin boards, gifts, paid time off, or monetary rewards if the suggestion is adopted.

INSafe is always ready to assist with consultation services. We can help design and implement effective safety and health management systems, review work practices, and offer suggestions for injury/illness reduction. For more information, visit us online at www.in.gov/dol/insafe. If you have a specific workplace safety and health inquiry, feel free to call (317) 232-2688 or email insafe@dol.in.gov.

CONTRIBUTOR
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INSHARP Coordinator

ALL ABOUT LASERS

“LASER” is an acronym for “light amplification by stimulated emission of radiation.” The laser produces an intense, highly directional beam of light. Lasers emit various radiation, visible light, and infrared radiation, all of which produce non-ionizing radiation. They are different than x-ray machines, which produce ionizing radiation that is capable of damaging electrons.

Common Uses for Lasers

Lasers are used for a great many things ranging from home use to on-the-job. Some of these uses include alignment, annealing, balancing, biomedical, communications, construction, cutting, drilling, entertainment, laboratory instruments, meteorology, military, scanning, soldering, and welding. An example of a simple laser is the pointer used during a presentation.

Laser Hazard Classes

Lasers are generally assigned hazard classes. These classes are based on the ability to cause injury. There are four major hazard classes and three subclasses (I-IV) recognized by the Food and Drug Administration (FDA). As the class increases in number, the hazard increases. If used correctly, class I lasers are considered non-hazardous. Class I cannot emit laser radiation at known hazard levels. Class 1A applies to lasers that are “not intended for viewing,” such as supermarket laser scanners. Class II lasers are low-power visible lasers that emit above Class 1 lasers. They typically require limited controls because the blink reflex is usually sufficient for protection. However, laser operators and those who pass by should avoid staring directly at the laser. Class IIIA are intermediate power lasers, only hazardous for intrabeam viewing. Some limited controls are recommended. Class IIIB lasers are moderate power and can cause injury if viewed directly. They are not usually a fire hazard, nor able to produce a hazardous diffuse reaction. Specific controls are recommended. Class IV lasers are high-powered, and are hazardous to view under any condition. They are a potential fire and skin hazard. The use of class IIIB- IV lasers requires the appointment of a laser safety officer (LSO).

Who is the “Laser Safety Officer?”

The American National Standards Institute (ANSI) Z136.1 standard defines an LSO as, “One who has the authority to monitor and enforce the control of laser hazards and effect the knowledgeable evaluation and control of laser hazards.” The LSO has been appointed by management to be responsible for laser safety for the organization. This person has received specialized training concerning every aspect of the laser safety requirements for their respective facility. The LSO has the authority and responsibility to monitor and enforce the control of laser hazards and oversee the laser safety program. The

LSO either performs the stated task, or ensures that the task is performed. ANSI Z136.1 details an LSO’s key responsibilities: classification, hazard evaluation, control measures, procedure approvals, protective equipment, signs and labels, facility and equipment, safety feature audits, training, and medical surveillance.

Laser-related Injury

The most common cause of laser-induced tissue damage is thermal in nature. In this type of injury, the tissue proteins are denatured due to the temperature rise following absorption of laser energy. The eyes and skin are most likely to become injured from the use of lasers.

Non-beam Hazards

There are other potential hazards associated with laser use, including, but not limited to: hazards associated with compressed gases, cryogenic materials, toxic and carcinogenic materials, noise, explosion hazards, non-beam optical radiation hazards, collateral radiation, electrical and flammable hazards, and other damage mechanisms from specific wavelength ranges and/or exposure times.

ANSI and OSHA Standards

ANSI Z136.1 2014 is the most current standard, and is the foundation of laser safety programs for industrial, military, and educational applications nationwide. ANSI Z136.3 is the most current medical laser standard. The ANSI Z136.1 “Safe Use of Lasers” standard provides a detailed description of control measures that can be put into place to protect against potential hazards. The Occupational Safety and Health Administration (OSHA) has developed an alliance with the Laser Safety Institute of America (LSIA). Both OSHA and the LSIA can provide educational materials on laser safety.

More Information

While this article provides some technical insight to safety and health hazards surrounding lasers used in a workplace setting, the subject is very complicated and involves a variety of factors that may pertain to workplaces in different ways. If you have questions and would like additional assistance in the subject of lasers, please contact the **INSafe** division, a consultation and education program within the state of Indiana. INSafe’s health consultants may perform noise and air sampling and on-site audits of your safety program as needed. You may contact insafe by phone at (317) 232-2688 or by email at insafe@dol.in.gov. To request an on-site consultation, please go to www.in.gov/dol/insafeconsultation.

CONTRIBUTOR
Bradley Freeman
INSafe Health Consultant

DEVELOPING THE IOSHA MOCK INSPECTION

IN early 2014, the Associated Builders and Contractors Inc. (ABC) contacted the Indiana Occupational Safety and Health Administration (IOSHA) requesting a presentation to their members describing the OSHA compliance inspection process. During this meeting, the ABC representatives and I agreed on an incredibly effective and beneficial type of presentation for all attending members—something beyond a typical Powerpoint. After ironing out details and reaching a cooperative schedule, coordinators at the ABC and IOSHA finalized a plan to use the ABC’s training facility to perform a mock inspection.



IOSHA’s mock inspection would be a live demonstration of an on-site audit of occupational safety and health compliance. An actual team member from IOSHA would lead the “employer” and his or her “employees” through the fictional worksite, verbally citing and discussing hazardous occurrences discovered along the walkthrough, and perform all necessary aspects through the resolution of the inspection. Before the on-site walk, the team from the Indiana Department of Labor (IDOL) would give a brief classroom-style presentation describing the IOSHA inspection process. The mock inspection would then be opened with a mock opening conference, followed by the on-site walk. Afterwards, the IOSHA team member would demonstrate employee interviews and a closing conference with the employer. To finish the demonstration, the audience would see the employer meet with Deputy Commissioner of IOSHA to reach an agreement on penalties, and also have an opportunity to meet with the Director of the state’s consultation division, INSafe.

Prior to the first mock inspection, IOSHA’s staff walked the ABC’s facility and available resources. The team determined scenarios and incidents that would stand as good examples and common occurrences for an IOSHA compliance officer. Tools and specific equipment were planted in a variety of placements and settings to establish dangerous or hazardous circumstances—again, very typical for construction workplaces.

On August 28, 2014, the first IOSHA mock inspection was performed at the ABC training facility. Participating in the presentation was Deputy Commissioner of IOSHA Tim Maley, Senior Compliance Officer Ellen Osborne, Abatement and Training Officer Kevin Goeden, and me, Construction Supervisor John Grimes. In total, the presentation took about two and a half hours to fully illustrate the process in summarized demonstration. Following the presentation, members of the IDOL were available to directly answer any questions asked by ABC members.

The feedback and response from the audience were overwhelmingly positive. Those who attended indicated that the format was very comprehensive and an excellent way to fully illustrate what to expect when IOSHA shows up at the job. Audience members left with a better idea of how to be prepared to answer IOSHA’s questions and provide any needed information.

Following the first successful run, IOSHA was asked to perform the mock inspection at the 2015 Indiana Safety and Health Conference at the Indianapolis Convention Center. The presentation was well-attended and considered very effective for the audience. The opportunity also provided hefty exposure to Indiana’s network of businesses, human resource representatives, organization leaders, and other stakeholders from across the state.

Another successful mock inspection led to multiple requests being received for a variety of audiences throughout Indiana. Our success, though encouraging, presented a new challenge to IOSHA. How would we, a very small and minimally funded agency, deliver this innovative presentation and answer the needs of our cooperative partners? We had something of a “waiting list” for our performance, like a Broadway show on tour.

In early 2018, IOSHA received a request from the International Brotherhood of Electrical Workers (IBEW) to perform the mock inspection at the Carpenters/Millwrights Training Facility in Greenwood, just a short drive south of the central office in Indianapolis. Deputy Commissioner Maley proposed the idea of professionally recording and producing a complete video by the agency’s Marketing and Communications Assistant Manager, Kirstin Gent. “This is another way that a small agency like IOSHA leverages its limited resources to accomplish big things,” Maley said.

Kirstin and IOSHA management worked cooperatively to create a finished product: a 52-minute demonstration of the IOSHA inspection process, from beginning to end, made available online. This format provides easy access and immediate availability to our partners, stakeholders, and all working Hoosiers who seek insight to IOSHA’s job. The video is now a very valuable outreach tool for the agency. Construction companies and contractors can get a solid understanding of what to expect when we come inspecting, effectively removing apprehension out of an IOSHA inspection.

To view the IOSHA Mock Inspection, please visit https://youtu.be/GxdVGWd_zZI. If you have any questions or comments, please feel free to visit the IOSHA website at www.in.gov/dol/iosha or call (317) 232-2655.

**“RESPONSE FROM
THE AUDIENCE WAS
OVERWHELMINGLY
POSITIVE.”**

CONTRIBUTOR
John Grimes
IOSHA Construction
Safety Supervisor



CONSTRUCTION TOP 10

MOST CITED STANDARDS OF 2019

Citations and penalty calculations for Occupational Safety and Health Administration (OSHA) standards, as cited by Indiana OSHA, were current at the time the data report was generated. For more information about OSHA standards, visit www.osha.gov.

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STANDARD	CITATIONS	INITIAL PENALTIES
Employer's accident prevention responsibilities	364	\$335,275
Duty to have fall protection	163	\$277,050
Scaffolds and fall protection	114	\$177,900
Fall protection training requirements	105	\$50,575
Personal protective equipment (PPE)	71	\$69,075
General Safety and Health Provisions: Safety training and education	67	\$65,425
Scaffold training requirements	58	\$43,225
Operation of aerial lifts	49	\$75,100
Specific excavation requirements	48	\$73,700
General Duty statute	48	\$130,100

GENERAL INDUSTRY TOP 10 MOST CITED STANDARDS OF 2019

Citations and penalty calculations for Occupational Safety and Health Administration (OSHA) standards, as cited by Indiana OSHA, were current at the time the data report was generated. For more information about OSHA standards, visit www.osha.gov.

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STANDARD	CITATIONS	INITIAL PENALTIES
Control of hazardous energy (lockout/tagout)	133	\$482,425
Machine guarding	93	\$368,175
General Duty statute	72	\$285,175
Powered industrial trucks training and requirements	68	\$144,375
Hazard communication and written programs	56	\$67,175
Personal protective equipment (PPE)	45	\$69,825
Respiratory protection	43	\$33,300
Lead exposure limits, remediation, and other requirements	40	\$11,400
Electrical installation, appropriate use, requirements, etc.	34	\$72,050
Walking and working surfaces	26	\$53,975

TAKE SAFETY HOME

V	K	U	H	E	T	T	S	L	L	C	Y	M	R	X
H	R	F	E	K	S	P	R	L	B	M	O	M	E	W
J	O	O	A	V	O	O	A	A	R	V	Y	A	C	X
R	W	O	L	A	A	B	S	B	I	E	Y	Z	C	C
X	M	T	T	H	Y	E	T	T	H	N	K	J	O	H
A	A	B	H	E	B	A	P	E	O	I	I	R	S	Z
E	E	A	L	A	H	N	I	K	K	C	G	N	O	L
J	T	L	L	D	F	N	E	S	D	K	Z	D	G	W
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V	S	A	O	A	I	S	I	B	D	R	A	Z	A	H
O	H	A	F	G	I	U	I	N	D	I	A	N	A	N
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H	R	P	N	E	F	I	E	L	D	B	O	J	O	U
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N	T	L	G	D	V	Y	M	L	B	A	G	E	V	A

WORD BANK

- BASEBALL
- BASKETBALL
- COACH
- FIELD
- FOOTBALL
- GOAL
- HARDHAT
- HAZARD
- HEALTH
- INDIANA
- INSAFE
- JOB
- LEADERSHIP
- OSHA
- SAFETY
- SOCCER
- SOFTBALL
- TEAMWORK
- TENNIS
- TRAINING
- VOLLEYBALL
- WORKER



Horizontal & Vertical Answers



- 3M Company
- Access Branch 134
- AKTube, LLC
- Akzo Nobel Coatings, Inc.
- Ambassador Steel Fabrication
- AstraZeneca
- BAE Systems Controls
- Best Home Furnishings
- BMWC Constructors, Inc.
- Brandenburg Industrial Services Company
- Cardinal IG - Fremont
- CF Industries Sales LLC (Frankfort)
- CF Industries Sales LLC (Huntington)
- CF Industries Sales LLC (Mt. Vernon)
- Cintas Corporation Location 18
- Cintas Corporation Location 314
- Cintas Corporation Location 319
- Cintas Corporation Location 336
- Cintas Corporation Location 338
- Cintas Corporation Location 351
- Cintas Corporation Location 366
- Cintas Corporation Location 370
- Cintas Corporation Location 383
- Cintas Corporation Location 388
- Cintas Corporation Location 529
- Cintas Corporation Location 68F
- Cintas Corporation Location 716
- Cintas Corporation Location G18

- Cintas Corporation Location G64
- Cintas Corporation Location G65
- Collins Aerospace (Booth Veneers)
- Covanta Indianapolis, Inc.
- Cummins Seymour Engine Plant DSM
- Eaton South Bend Vehicle Group North America
- Eli Lilly and Company
- Frito-Lay, Inc. (East)
- Frito-Lay, Inc. (Core)
- GE Aviation, Unison Engine Components
- GE Healthcare Ambassador Medical
- Geocel Corporation
- Gribbins Insulation Company
- Hendrickson International, Truck Suspension Systems, Plant 1 and Plant 3
- Hendrickson Trailer Commercial Vehicle Systems, Inc.
- Inteplast Building Products
- Jasper Engines and Transmissions
- Jasper Engines and Transmissions (Power Drive)
- Jasper Engines and Transmissions (Leavenworth)
- Kimball Electronics Group Jasper
- Kimball Logistic Services
- Kimball National Office Furniture (Jasper)
- Kimball National Office Furniture (Santa Claus)
- Kimball Office Furniture
- Kimball Office Furniture Group

- Kimball Office Salem
- Lawrence County and Worthington Generation
- LSC Communications US, LLC North Plant and South Plant
- Manchester Tank & Equipment (Elkhart)
- Marathon Petroleum Company
- Marathon Petroleum Company (MPC) LP
- Marathon Pipe Line
- Marathon Pipe Line Company, LLC
- Matthews Aurora Casket Assembly
- Mead Johnson Nutrition
- Monsanto (Windfall)
- Monsanto (Remington)
- Monsanto Company (Evansville)
- Monsanto Company Lebanon Corn Research Station
- NIBCO, Inc. (Charlestown)
- NIBCO, Inc. (Goshen)
- Nucor Building Systems
- Nucor Fasteners
- Nucor Steel
- OFS Brands Plant #5
- Owens Corning Roofing and Asphalt, LLC
- Raytheon Company
- Raytheon Intelligence Information and Services (IIS)
- Robert Bosch Corporation
- SABIC Innovative Plastics
- Schlage Lock Company, LLC
- Sullair Corporation Buildings 1, 2 and 4
- Toray Resin Company
- Total Safety Griffith District Office
- Vulcraft
- Whitesville Mill Services

- Acument Global Technologies
- American Licorice Company
- American Service Group
- Ampacet Corporation
- ATI, Inc.
- Atlas Die, LLC
- BioConvergence, LLC
- Cascade Asset Management
- Cerro Wire
- City of Jasper
- Closure Systems International, Inc.
- Electro Spec, Inc.
- First Chance Centers
- First Chance Industries
- First Chance Tot-To-Tot Program
- Fishers Pediatric Dentistry
- Formwood Industries, Inc.
- George Koch and Sons, LLC
- Hewitt Molding Company

- Indiana Furniture
- Lafayette Steel and Aluminum
- McGill Manufacturing
- Mitchell Plastics
- Mitsubishi Heavy Industries Climate Control
- OFS Brands Plant #4
- OFS Brands Plant #6
- OFS Brands Plant #9
- Olon Industries
- Olon Industries Jeffersonville
- Oscar Winski Company Blue Arrow Trucking
- Oscar Winski Company E-Scrap
- Quadrant EPP
- Regal Beloit (Emerson Industrial Automation)
- Rise, Inc.
- River Metals Recycling, LLC



- RKO Enterprises
- Southern Indiana Resource Solutions
- Stanley Black & Decker
- Summit Brands
- Tell City Concrete Supply
- The Arc of La Grange County
- USALCO Michigan City Plant, LLC
- Wagner-Meinert, LLC



STOP

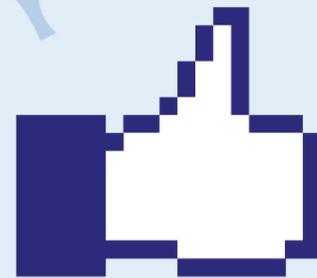
HAZARDS IN THEIR TRACKS

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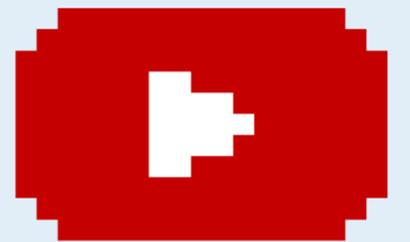
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