

Director's Corner

Bart Pickelman, CIH, Director



How loud is too loud? Each year, 22 million workers are at risk of losing their hearing from workplace noise hazards, while businesses pay an estimated \$242 million in workers' compensation costs due to hearing loss disability, according to the federal Occupational Safety and Health Administration (OSHA).

While noise in the workplace is prevalent, exposure is preventable. Engineering and administrative noise controls, as well as hearing protection devices and an effective hearing conservation program can go a long way in reducing worker exposure to occupational noise.

To combat these hazards, OSHA and other agencies have launched the "Hear and Now – Noise Safety Challenge" to encourage inventors and entrepreneurs to submit technological solutions to workplace noise exposure and related hearing loss.

Ten finalists were invited to Washington, D.C. on October 27, 2016 to pitch their ideas to a panel of judges that included investors and representatives from the National Institute for Occupational Safety and Health (NIOSH) and the U.S. Patent and Trademark Office. For more information, please visit <https://www.dol.gov/featured/hearing>.

To ensure protection from potentially damaging noise, see MIOSHA standards for noise exposure for [general industry](#) and [construction](#).



MIOSHA Targets Blight Removal Projects to Protect Workers from Asbestos and Other Hazards

Tanya Baker, MIOSHA Communications Specialist

In September 2016, MIOSHA launched a state emphasis program to increase MIOSHA presence on blight removal projects across the state to address hazards such as asbestos and lead that pose health threats to workers.

In 2010, the U.S. Department of the Treasury provided assistance to states most severely impacted by the foreclosure crisis. Michigan received additional funding for blight removal in 2016, predominantly in the cities of Detroit and Flint.

During the year-long program, MIOSHA will inspect blight removal jobsites for hazards associated with asbestos, lead and cadmium, as well as all other serious hazards. The agency will work to ensure employees involved in blight cleanup are properly trained, protected and equipped to work with hazardous materials in a safe manner.

Blight reduction hazards include materials within structural members such as lead, asbestos, cadmium, silica and other chemicals or heavy metals requiring special material handling. During each inspection, the agency will work with employers to assist them in identifying hazards that are associated with these hazardous work operations.

MIOSHA's Asbestos Program ensures that people working with asbestos are properly trained and the individuals performing asbestos removal comply with rules governing the work activity. Contractors performing friable asbestos removal or encapsulation work in Michigan must provide project notifications indicating the start and end dates and other job-related information to the Asbestos Program within a specified time frame.

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Changes to Injury and Illness Reporting Requirements

Tanya Baker, MIOSHA Communications Specialist

Effective January 2017, Michigan employers must follow new injury and illness reporting requirements intended to modernize data collection, make injury and illness data publicly accessible, and encourage employers to increase efforts to prevent work-related injuries and illnesses.

The new rule requires establishments with 250 or more employees in industries covered by the recordkeeping regulation to submit information from Forms 300A, 300 and 301 beginning in 2018, and only form 300A in 2017. Establishments with 20-259 employees in certain [high-risk industries](#) must submit information from Form 300A. While employers are already required to collect this data, now they must submit the information electronically to federal OSHA for posting on the agency's website. By making a wealth of injury and illness data available, OSHA hopes to enable researchers to better study injuries, identify new workplace safety hazards, and evaluate the effectiveness of injury and illness prevention efforts.

The rule also requires employers to inform workers of their right to report work-related injuries and illnesses and clarifies that an employer must have a reasonable procedure for reporting work-related injuries that does not deter or discourage employees from reporting.

As a State Plan state, Michigan must adopt requirements that are substantially identical to the federal OSHA requirements in the final rule within six months after its publication.

Best Practices

Doug Kimmel, Michigan Voluntary Protection Program (MVPP) Specialist, Consultation Education and Training (CET) Division and Victor Lynch, Senior Safety and Health Engineer, DTE Corporate Safety

The DTE Energy Fermi 2 nuclear power generation station has been a MIOSHA MVPP Star site since 2004. The MVPP Star is the highest safety award available from MIOSHA and is given to sites that have demonstrated an exemplary safety and health management system.

The identification of best practices is an integral part of the MVPP continuous improvement process. Recently, DTE has made significant improvements to its safety and health management, many of which may be considered best practices.

One of the major changes relates to the focus on "leading indicators." Previously, DTE's safety and health management system, like many companies, was focused on the reduction of MIOSHA recordable injuries and illnesses. While recordable rates have long been a standard measure of industrial safety, many operations like DTE, are realizing that recordable injury rates only show part of the picture. They can be used to track past performance and as Fermi 2 Senior Safety and Health Engineer Victor Lynch says: "You might even say they track past luck. Injury and recordable rates do little to make connections between corrective actions and outcomes."

Lynch goes on to say that "leading indicators are gaining popularity" and references nationally renowned safety speaker Todd Conklin, who stated: "safety is not the absence of incidents; it's the presence of controls and defenses."

To facilitate the changes to its safety and health management system, DTE has implemented a Safety Maturity Model (SaMM). This is a process model referred to as the "playbook." SaMM is utilized in the evaluation of the implementation and progress of the new system, which is based on leading indicators and their influencers. Through the implementation of SaMM, DTE's plan is for all of its business units to reach and sustain top decile metrics for safety and health in their industry.



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Best Practices (Continued)

Doug Kimmel, MVPP Specialist, CET Division and Victor Lynch, Senior Safety and Health Engineer, DTE Corporate Safety

The safety playbook contains 30 “plays” that align to 30 SaMM attributes in six categories:

- Safety engagement
- Risk assessment and planning
- Implementation and operations
- Compliance
- Monitoring, analysis and corrective action
- Management review

SAMM 2.0 Risk Assessment and Planning

Every work task has its own level of risk to personal health and safety. Questions in a risk assessment are used to determine the risk of a work activity. Risk is determined by combining the chance that a hazard could happen (probability) and the seriousness of the event (severity level). Below are the SaMM definitions for the four levels of severity.

Level	Name	Description
4	Catastrophic	A hazard that has the potential to cause death, an explosion, a fire beyond the incipient stage, or a release of hazardous chemicals offsite.
3	Serious	A hazard that has the potential to cause a lost time accident, an incipient stage fire, or a release of hazardous chemicals outside of containment.
2	Significant	A hazard that has the potential to cause a regulatory-required recordable accident or a release of hazardous chemicals inside containment.
1	Nominal	A hazard that has the potential to cause only minor first aid injuries or a release of hazardous chemicals in concentration that are non-hazardous.

Risk level is where severity and probability intersect on the chart below.

Hazard Severity Level	Probability Level			
	Very Likely	Likely	Unlikely	Very Unlikely
Catastrophic	Very High 100	Very High 95	Very High 80	High 60
Serious	Very High 90	High 70	Medium 45	Medium 30
Significant	High 75	Medium 55	Low 20	Low 10
Nominal	Medium 50	Low 25	Low 5	Low 1

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Best Practices (Continued)

Doug Kimmel, MVPP Specialist, CET Division and Victor Lynch, Senior Safety and Health Engineer, DTE Corporate Safety

Below are the definitions of the final risk levels for a particular task.

Risk Level	Required Action
Very High	<p>The planned activity can only proceed, provided that:</p> <ul style="list-style-type: none"> a. The risk level has been reduced to as low as reasonably achievable using the hierarchy of risk controls. b. The risk plan has been reviewed and approved by the Company Officer (Vice President). c. The Contingency Plan has been reviewed and approved by the Company Officer (Vice President).
High	<p>The planned activity can only proceed, provided that:</p> <ul style="list-style-type: none"> a. The risk level has been reduced to as low as reasonably achievable using the hierarchy of risk controls. b. The risk plan has been reviewed and approved by the Organizational Leader (Director and above). c. The Contingency Plan has been reviewed and approved by the Organizational Leader (Director and above).
Medium	<p>The proposed activity can proceed, provided that:</p> <ul style="list-style-type: none"> a. The risk level has been reduced to as low as reasonably achievable using the hierarchy of risk controls. b. The risk plan has been reviewed and approved by the Organizational Unit Head (Manager and above).
Low	<p>Managed by routine procedures or work instructions, and:</p> <ul style="list-style-type: none"> a. The work should be monitored periodically to ensure situational changes have not occurred.

For instance, if a work task was deemed unlikely to happen, but had a severity of serious if an event happened, the overall risk of the task would be considered medium.

Evaluating work task risk this way allows DTE to measure something that would otherwise be difficult to measure. With these measures, it can identify ways (countermeasures) to reduce the risks associated with tasks that employees perform.

Each of the plays within the SaMM model allow the organization to implement or improve processes or procedures and to better leverage existing safety processes, which improves safety performance. DTE also understands the importance of measuring the progress toward each stated safety and health goal. To determine how well the plays are being put into action, each DTE workgroup is assessed bi-annually utilizing SaMM.

The SaMM evaluation incorporates a 0-5 scale to rate the workgroup's safety and health maturity on the 30 attributes within each of the six categories. The same scale is used with its Continuous Improvement Maturity Model (CIMM). SaMM assessments are often conducted in conjunction with CIMM assessments.

DTE cautions its business units about being too focused on scores and numbers and emphasizes that "the key is to use the plays to make work safer for everyone. But the fact is, if an organization does a good job putting the plays to work, it should see improved safety and it should receive a good score when it's assessed."

Fatality Alert – Six Michigan Tree Trimmers Killed This Year

By Richard A. Pfander, Jr., Safety Supervisor, General Industry Safety and Division (GISHD)

As of October 4, 2016, six tree trimmers in Michigan have died due to falls and other work-related injuries. That makes tree trimming one of the deadliest jobs in the state. Based on the U.S. Census Bureau count of 13,389 employees in the landscaping services industry in Michigan (NAICS 561730), the fatality rate among tree trimmers in 2016 is 37 per 100,000 workers. This rate is more than 10 times the state average, which is 3.2 fatalities per 100,000 workers per year (from 2014).

Over the last five years, an additional seven tree trimmers in Michigan have suffered fatal injuries. The types of injuries that resulted in the fatalities include falls, struck by falling trees, branches, and passenger vehicles, and electrocution after contact with power lines.



Here are brief descriptions of the six fatalities in 2016, based on the original reports to MIOSHA:

On February 29, 2016, a 28-year-old tree trimmer fell to his death while performing tree trimming operations. He was ascending a tree to trim branches and to install a cable between two trees for support. While ascending the rope bridge of the fall harness positioning saddle broke. The employee fell approximately 20 feet and struck the edge of the house roof and then fell another approximate 20 feet to a wood deck below. The MIOSHA investigation determined that components of the positioning saddle were worn, torn and frayed. The investigation also determined that the positioning saddle was not inspected prior to use. A serious citation was issued for GI Part 53, Tree Trimming and Removal, Rules 408.15311(b) & 408.15313(3).

On March 21, 2016, a 65-year-old owner/operator died as a result of injuries sustained after a fall. The owner was operating an articulating boom truck, moving cut limbs attached to the boom truck by rope over to the wood chipper when the bucket tipped forward. He fell approximately 15 feet to the ground. The MIOSHA investigation determined fall protection was not utilized by the operator of the aerial work platform. A serious citation was issued for GI Part 58, Aerial Work Platforms, Rule 408.15836(1).

On August 15, 2016, the torso of a 24-year-old owner/operator was struck and squeezed by rigging rope that was attached to the tree he was topping causing his death. He was approximately 30 feet aloft while making the cut when his saw became stuck. He asked a helper to back up the S-10 pickup truck that the tree was rigged to when the trunk snapped falling on the opposite side of him. The MIOSHA investigation into this fatality is ongoing.

On September 19, 2016, a 46-year-old journeyman tree trimmer fell to his death while performing line clearance duties in a residential subdivision. He fell approximately 35 feet to the ground when his climbing rope came untied from his climbing saddle. The MIOSHA investigation into this fatality is ongoing.

On September 21, 2016, a 75-year-old owner fell to his death while performing tree trimming operations. He fell approximately 20 feet to the ground after attempting to climb higher in the tree. The 4-inch branch that his climbing rope line was tied around broke at the crotch of the tree. The MIOSHA investigation into this fatality is ongoing.

On October 3, 2016, a 49-year-old owner was approximately 55 feet up in the air attempting to trim a large oak tree from a private residence. The owner tied a rope around the limb that was approximately 6-8 inches in diameter and tied the other end to the bucket truck. While cutting the limb, the limb split and struck the bucket causing the owner to fall from the bucket to the ground. The MIOSHA investigation into this fatality is ongoing.

Note: the information in this article is current as of October 4, 2016.

Tree Trimming—Hazards to Look For

Workers engaged in tree trimming operations are exposed to serious safety hazards on a daily basis. These hazards include falls from elevation, being struck or crushed by falling tree limbs, struck by flying particles from chipping and chain saw operations, caught or pulled into the chippers, struck by motor vehicles, and electrocution from contact with power lines. Employees are at risk from these hazards when they do not follow safe work practices. Many of these unsafe work practices are easily observable and are violations of MIOSHA regulations.

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Fatality Alert (Continued)

By Richard A. Pfander, Jr., Safety Supervisor, GISHD

Unsafe work practices encompass:

- Employees lacking proper personal protective equipment, such as hard hats, safety glasses, and high-visibility vests next to roadways.
- Missing or inadequate signs on the road warning approaching vehicles of the roadside tree-trimming operations ahead.
- Employees working aloft in a tree without proper fall protection.
- Employees in the bucket of an aerial lift without fall protection or not anchored or tied off to the bucket.
- Employees working too close to electrical wires.
- Employees standing under, in the path of, or in close proximity to limb cutting, limb dropping, or tree felling.
- Poor limb or tree felling procedures that could cause employees to fall from trees or employees to be struck by falling tree or limbs.
- Inadequate guarding on the wood chipper.
- Employees too close to the feed end of a chipper.

Safety hazards are addressed in the MIOSHA Fact Sheet on the [Tree Care Industry](#) and OSHA publications: [Tree Trimming and Removal](#), [Tree Care Industry](#), [Hurricane eMatrix](#), [Waste/Debris Removal and Reduction](#), and [Using Aerial Lifts](#).

Health hazards also endanger tree trimmers, including exposure to chemicals, noise and heat. Exposure to high noise levels can lead to hearing loss. Working outdoors under the sun in hot weather can produce a variety of heat-related illnesses like skin rashes, fainting and even death. These hazards are addressed in the MIOSHA Fact Sheet on [Health Hazards in the Green Industry](#).

This summer, MIOSHA's GISHD revised an internal instruction on tree trimming operations to increase awareness and provide guidance to field staff for doing inspections of tree trimmers. MIOSHA field staff are encouraged to look out for tree trimming operations during their travels and observe the operation from a safe distance. If the compliance officer observes serious hazards, an inspection may be conducted.

MIOSHA Standards

Many MIOSHA standards apply to this industry. The applicable General Industry Safety Standards include Parts 1, 7, 33, 38, 53, 58, 85, 86 and 92. The Occupational Health Standards include Parts 380, 430, 433, 472, 474, and 554. These standards, and publications related to the hazards, are located on the [MIOSHA website](#).

MIOSHA's [Consultation, Education and Training \(CET\) Division](#) is available to employers so they may take steps voluntarily to correct hazards and comply with current safety and health regulations and practices. Employers can contact CET at 517-284-7720 for a free evaluation of their workplace.

Significant Case Study – Residential Property Manager

Eric Allen, Safety Manager, Construction Safety and Health Division (CSHD)

On April 27, 2015, a laborer working for a residential property manager was assigned to paint the newly installed spindles on a second story deck. The deck had a perimeter railing which was between 36 and 42 inches in height. The employee painted portions of the deck, then climbed over the railing to access the exterior side of the deck. The employee was not protected with a personal fall arrest system, guardrail system or safety net system. While holding onto a spindle, the piece broke on a knot. The employee fell 21 feet to the concrete driveway below.

Rules cited:

Part 1, General Rules, Rule 114(1) – “Accident Prevention Program;” The employer did not develop, maintain, and coordinate with employees an accident prevention program.

Continued on next page

Significant Case Study (Continued)

Eric Allen, Safety Manager, CSHD

Part 45, Fall Protection, Rule 1926.501(b)(13) – “Residential Construction;” Each employee engaged in residential construction activities 6 feet (1.8 m) or more above lower levels shall be protected by guardrail systems, safety net system, or personal fall arrest system unless another provision in paragraph (b) of this section provides for an alternative fall protection measure. Exception: When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer shall develop and implement a fall protection plan which meets the requirements of paragraph (k) of 1926.502.

Part 45, Fall Protection, Rule 1926.503(a)(1) – “Training Program;” The employer shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.

Fatal Falls on the Rise

Tanya Baker, MIOSHA Communications Specialist

Of the 29 [Michigan worker deaths](#) that occurred between January and September this year, 14—nearly half—were fall-related.

Falls are one of the leading causes of fatalities in the construction industry both in Michigan and the nation, which is why MIOSHA is strongly urging employers and workers to take the appropriate safety measures to prevent incidents caused by falls.

MIOSHA rules for both construction and general industry employers require that they address the variety of fall hazards in their workplace. Proper training can reduce accidents and related costs, as well as prevent MIOSHA citations and penalties.

Employees must be trained on the following issues:

- Use of the appropriate safety equipment (barriers, safety belts and lanyards, safety harnesses, etc.) whenever employees are exposed to a fall hazard.
- Survey the workplace before working and audit regularly.
- Guard or cover any floor openings or holes immediately.
- Use of fall prevention and/or fall protection systems, and any alternative fall protection measures.



Paul Wrzesinski of the AGC of Michigan providing employee training on fall protection awareness including a demonstration on the proper use of fall protection equipment.

Diligent application of proper safety and health practices that comply with MIOSHA standards can stop these fall incidents from occurring.

FAQ

Q: What can I do if I think there is an occupational hazard in my workplace?

A: Discuss the situation with your supervisor and employee representatives (if you are represented or have a health and safety committee process) to help determine if there is a hazard or if an occupational safety or health standard is not being followed. If the hazard exists and is not resolved by internal efforts, you can contact the nearest MIOSHA office to discuss the matter with a MIOSHA representative. You may file a written complaint with MIOSHA.

Partnerships, Alliances and Awards

PARTNERSHIP

A MIOSHA Cooperative Program

Pioneer Construction and MIOSHA Partner to Ensure Worker Protections During Construction of Mixed-Use Project in Grand Rapids

Pioneer Construction, the Department of Licensing and Regulatory Affairs (LARA) and MIOSHA signed a formal partnership in August with the goal of zero worker injuries, accidents and near misses during the construction of Diamond Place, a mixed-use project in Grand Rapids.

MIOSHA Renews Alliance to Protect Workers with Operating Engineers Local 324 Journeyman and Apprentice Training Fund, Inc.

In August, the Operating Engineers Local 324 Journeyman and Apprentice Training Fund, Inc. (OE 324 JATF) and MIOSHA renewed an alliance to improve the safety and productivity of Michigan workers.



Marathon Petroleum Terminal Transport & Rail in North Muskegon Awarded Michigan's Highest Workplace Safety Award

The Marathon Petroleum Company LP's Terminal Transport & Rail facility located at 3005 Holton Rd. in North Muskegon received the Michigan Voluntary Protection Program (MVPP) Star Award from MIOSHA in August for workplace safety and health excellence.

Michigan Companies Recognized by MIOSHA for Excellent Safety and Health Performance

Four Michigan companies, including Shape Corp., Comstock Facility; LightCorp of Grand Haven; Kerkstra Precast of Grandville; and Roush Performance Products of Plymouth were awarded by MIOSHA in September for achieving outstanding safety and health records and implementing effective safety and health management systems.

Standards Update

Recently revised MIOSHA Standards:

- GI Part 5 Scaffolding - effective August 18, 2016
- GI Part 21 Powered Industrial Trucks – effective August 17, 2016
- CS Part 12 Scaffolds and Scaffold Platforms – effective August 17, 2016
- CS Part 25 Concrete Construction – effective August 17, 2016
- OH Part 315 Chromium (VI) in General Industry – effective August 18, 2016
- OH Part 604 Chromium (VI) in Construction – effective August 18, 2016

The revised standards can be viewed on our [standards web page](#).

The following MIOSHA Standards are in the process of being revised:

- CS Part 6 Personal Protective Equipment
- CS Part 8 Handling and Storing of Materials
- CS Part 13 Mobile Equipment
- CS Part 19 Tools
- CS Part 30 Telecommunications for Construction
- CS Part 91 Process Safety Management of Highly Hazardous Chemicals
- GI Part 14 Conveyors
- GI Part 24 Mechanical Power Presses
- GI Part 25 Manlifts
- GI Part 33 Personal Protective Equipment
- GI Part 50 Telecommunications for General Industry
- GI Part 51 Logging
- GI Part 90 Permit Required Confined Spaces
- GI Part 91 Process Safety Management of Highly Hazardous Chemicals
- OH Part 301 Air Contaminants for General Industry
- OH Part 310 Lead in General Industry
- OH Part 380 Occupational Noise Exposure in General Industry
- OH Part 490 Permit Required Confined Spaces
- OH Part 590 Silica in General Industry
- OH Part 591 Process Safety Management of Highly Hazardous Chemicals
- OH Part 601 Air Contaminants for Construction
- OH Part 690 Silica in Construction
- ADM Part 11 Recording and Reporting of Occupational Injuries and Illnesses

Watch the MIOSHA [standards web page](#) for final versions once they are approved.



The mission of the MIOSHA Program is:

To protect the safety and health of Michigan workers.

The MIOSHA News is a publication of the MIOSHA program.

Its purpose is to educate Michigan employers and employees about workplace safety and health; we encourage reprinting.

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