SAFETY MANUAL



LANDSCAPING & HORTICULTURAL

Updated: 1/1/2021

Instructions to User

The Michigan Horticulture Industries Self-Insured Workers’ Compensation Fund provides this manual to assist members in developing their own safety, health and accident prevention program. For information on the Fund and how it may save you money on your workers’ compensation costs, please call 517-664-2770 or visit the website at www.mhifund.org.

Because every company is different in terms of their trades and safety exposures, each member must customize this manual and possibly develop additional safety procedures and rules. This manual is only a sample and should not be used as is. Failure to customize this manual or implement the elements of a written safety program specific to your operation may result in potential liability, including but not limited to MIOSHA violations.

To start the customization process, you will first need to replace the sample MHI COMPANY used throughout the manual with your firm’s name. The easiest way to do this in Microsoft Word is to open the file and perform a “Find” and “Replace”. The following step-by-step process is provided to assist members in this effort and applies to pre-2007 versions of Microsoft Word. In Microsoft Word 2007, the “Find” and “Replace” functions are found within the “HOME” ribbon.

Select **Edit** from the top menu bar.

Next select “**Replace”.**

In the **“Find What”** box enter: **MHI COMPANY.**

In the **“Replace with”** box enter the name of your firm.

Select **“Replace All”** button located at the side of the box.

Microsoft Word will now search the entire document and anywhere it locates MHI COMPANY will be replaced with the name of your firm.

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# Safety Policy Statement

The policy of **MHI COMPANY** is to provide a safe and healthy workplace, free from recognizable hazards for all of our employees. It is also the policy of **MHI COMPANY** to comply with federal, state and local regulations governing construction safety and health in the execution of our program.

In support of these policies, **MHI COMPANY** will use its resources to complete our projects with a primary concern for safety and health. We will focus our safety efforts on preventing recognizable hazards, including unsafe acts and unsafe conditions which are the primary causes of accidents, injuries, illnesses, fatalities and property damage.

We will pursue these commitments in the following ways:

* Employee safety and health training
* Regular and frequent safety inspections
* Safety enforcement
* Accident investigations

This manual describes each element of **MHI COMPANY’s** safety and health program, explaining the methods to be used when implementing the program. All supervisors and employees shall perform their duties in accordance with applicable safety and health codes, standards, and this Safety and Health Manual.

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President of **MHI COMPANY**

Date

# Safety Responsibilities

**Executive Level**

1. Provide a safe and healthy workplace.
2. Establish and maintain a health and safety program.
3. Ensure that workers are properly trained.
4. Report accidents and injuries to authorities as required by law.
5. Provide access to medical/first aid facilities.
6. Provide workers with health and safety information through appropriate training.
7. Inspect projects and meet regularly with supervisors to monitor the program and take corrective action.
8. Provide the motivation and resources necessary to make the program work.
9. Ensure that operations comply with both the law and the program.
10. Demonstrate commitment to accident prevention.
11. Consider accident prevention and safety performance when evaluating employees, especially supervisors.

**Management Level**

1. Ensure that employee safety training including, new hire orientation and periodic safety meetings are conducted.
2. Ensure that unsafe conditions and behaviors are corrected promptly.
3. Ensure a thorough investigation is performed of all accidents and injuries resulting in root cause being identified and corrective action implemented to prevent recurrence. Prepare a final written report with recommendations to management.
4. Enforce safety policies by issuing the appropriate level of discipline to employees for violations.
5. Stop work any time situations are observed which poses an immediate danger to any employee or has the potential for serious damage.
6. Plan work to include the necessary safety equipment such as safety glasses, hearing protection, fall protection harnesses, lifelines, etc.
7. Plan work to include the necessary safety procedures such as confined space entry, material handling equipment operation, equipment maintenance and repair using lockout, etc.
8. Continuous inspections for unsafe practices and conditions.
9. Maintaining good housekeeping.
10. Hold regular safety meetings as necessary (i.e., weekly, monthly, etc.).
11. Establishing proper attitudes towards safety and health.

**Employee Level**

All employees must be familiar with applicable regulations and with the requirements of the **MHI COMPANY** Safety Program. They must know what their responsibilities are and have the required ability and training to fulfill them.

**Health and safety is not something *added* to an employee's job. It is an *inherent, central part* of that job – a full-time component of each individual's responsibilities.**

Employees shall be held responsible for performing their work in a safe manner, in accordance with the safety training received from MHI COMPANY. They must also be on the alert at all times and either report or correct unsafe conditions immediately. Employees must also report all work-related near misses, accidents, injuries, or illnesses immediately to their supervisor. Specific employee responsibilities include:

1. Use required safety and health equipment.
2. Inspect work area for unsafe conditions.
3. Ensure tools are in good repair and do not use any that need repair. Tag, remove from service and notify MHI COMPANY management of any defective tool(s) or equipment.
4. Use tools safely and in the manner for which they are designed.
5. Follow all workplace safety rules, jobsite safety rules and perform work in a safe manner in accordance with safety training received from MHI COMPANY as a condition of employment.
6. Be aware of their physical limitations and are responsible for working within them. Employees are expected to ask for help in performing tasks, which the employee believes will cause overexertion. Alternative methods may be available for making the work task easier such as using equipment.
7. Lift correctly by positioning the body in such a way as to keep the back straight, bend the knees and lift with the leg muscles. The load should be kept close to the body. Twisting at the waist should not be done while lifting. Turn by moving your feet.
8. Use two people to setup scaffolding and install planks due to their size and weight. Muscle strains can happen easily with one person trying to move planks due to their weight and length.

# Incident/Injury Management

**First Aid & Medical Procedures**

1. First aid kits are provided and available in the following locations:
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. All work-related accidents, injuries and illnesses must be reported and documented using the company’s Incident Report Form. The company will not authorize medical treatment and/or evaluation for any injury or illness unless it has been documented as work-related and reported to the company.
3. Employees must receive authorization from MHI COMPANY before seeking medical treatment and/or evaluation for a work-related injury or illness except in emergency situation. Employees are responsible for notifying MHI COMPANY of all work-related injuries. Unreported injuries and illnesses that later result in a compensation claim will be questioned and investigated by the workers’ compensation carrier.
4. Employees with minor work-related injuries may treat themselves using materials provided in the gang boxes or trucks and must report the injury to their supervisor.
5. Cases involving exposure to blood or other body fluids shall be handled in accordance with the Bloodborne Pathogens policies.
6. Employees who refuse medical treatment and/or evaluation for a work-related injury or illness shall only return to work if it is determined that they can continue to work safely without further aggravation.

### Serious Accidents

All accidents are to be reported; however, special reporting procedures are required with serious accidents involving internal injuries, multiple fractures, amputations, hospitalization, multiple injuries or fatalities.

MHI COMPANY must be notified as soon as possible whenever a serious accident occurs. MIOSHA requires they be notified by calling 1-800-858-0397 within 8 hours of a fatality. MIOSHA requires they be notified by calling 844-464-6742 within 24 hours of an in-patient hospitalization, amputation, or loss of an eye.

### Accident Report

An Incident Report Form shall be completed by MHI COMPANY supervision for any incident involving a work-related injury or illness to a MHI COMPANY employee. This report shall be completed immediately after receiving medical treatment or transporting the injured worker for medical treatment and/or evaluation. Remember that a delay in getting medical treatment can likely cause additional medical problems.

### MIOSHA 300 Log

If an injury results in medical treatment beyond first aid, or involves lost time or restricted days, an entry must be made on the MIOSHA 300 log. A blank MIOSHA 300 log and information on how to complete the log can be found at the following links:

* <http://www.michigan.gov/documents/miosha300form2004_84615_7.xls>

## <http://www.michigan.gov/documents/CIS_WSH_form300A_33843_7.pdf>

### Required MIOSHA Posters

The following links provide information on the required MIOSHA posters. They shall be displayed in a way that makes them readily available to all employees during working hours.

## <http://www.michigan.gov/documents/cis/wsh_whistleblowers_203828_7.pdf>

## <http://www.michigan.gov/documents/dleg/wsh_cet2106_219991_7.pdf>

# Inspections

**Jobsite Inspections**

Safety inspections are a primary means of identifying unsafe acts and conditions in the field. Safety inspections also help determine the level of compliance with safety requirements by supervisors and workers.

* MHI COMPANY will conduct regular and frequent safety inspections of all work areas at each MHI COMPANY location and jobsite. A checklist or form should be developed depending on the jobsite conditions and activities taking place.
* Safety inspections will be documented and shall include what was inspected, any hazards identified, and any corrective actions taken or required.
* Unsafe conditions identified during a safety inspection shall either be corrected immediately or work in the area should be suspended until the condition can be corrected.
* Willful or repeat violations by individuals will result in a written disciplinary notice being issued.

**MIOSHA Inspections**

Under normal circumstances, MHI COMPANY will cooperate with MIOSHA Compliance Officers requesting permission to inspect an MHI COMPANY worksite. The credentials of all Compliance Officers should be verified as soon as possible after their arrival or during the opening conference, at the latest. MHI COMPANY management should be notified about the inspection as soon as possible after becoming aware of the inspection.

Other persons from the company that need to be notified about an imminent MIOSHA inspection include the following:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A MIOSHA inspection will always begin with an opening conference. The Compliance Officer should state the reason for the inspection at this conference. Reasons for a MIOSHA inspection include regularly scheduled inspection, an accident/injury investigation, or an employee complaint. Request a copy of any employee complaint being used as a reason for the inspection.

The Compliance Officer shall be allowed to review documents that are specifically requested. Refusal to provide requested records could result in a warrant being issued for the records. Care shall be taken not to offer anything that was not requested. The Compliance Officer should not be given copies of any MHI COMPANY records without permission of MHI COMPANY management. Only copies shall be given to the Compliance Officer. MHI COMPANY shall retain all originals, with a copy going into an inspection file set up at MHI COMPANY offices under the date of the inspection.

During the actual inspection of the workplace or jobsite by the Compliance Officer, the person representing MHI COMPANY should:

* Take comprehensive notes.
* Take photos that are identical to any taken by the Compliance Officer.
* Immediately correct any observed violations, if possible.
* Not allow employees to recreate or demonstrate unsafe acts or conditions.
* Answer questions truthfully.

A MIOSHA inspection will usually end with a closing conference. During this closing conference the Compliance Officer should identify all conditions and practices that may constitute a safety or health violation which may result in a citation and provide copies of the appropriate standards. Make sure the Compliance Officer has noted any corrective action already taken.

The compliance officer may schedule a follow-up inspection to verify that any corrective action not taken immediately has been completed. This follow-up inspection should be conducted like any other inspection, including the opening and closing conferences. Persons contacted for the original inspection should also be contacted for any follow-up inspections.

##

## Safety Training

**Orientation**

Newly employed, promoted and/or transferred MHI COMPANY employees shall be fully instructed in the safe work practices of their assignments and the hazards typically present at the workplace or jobsite prior to starting work. This training will also include the material covered in this manual.

**Safety Meetings/Safety Talks**

**MHI COMPANY** will conduct periodic safety meetings for the entire crew. The subject(s) of this meeting will cover specific safety procedures pertinent to the crew’s activity. This meeting will also provide an opportunity to point out any hazardous conditions or unsafe work practices that have been noticed.

### Other Safety & Health Topics

Additional safety-related training would be conducted for employees depending upon the nature of their work, exposures encountered on the jobsite and requirements of the customer or general contractor. All safety training will be documented with a sign-up sheet that includes the training topic, the instructor, the date, and the employee names and signatures.

**Skid Steer Loaders**

When training employees to operate skid steers and the hazards associated with this equipment be sure to discuss specific operating hazards for the areas where your employees are using skid steer loaders. Some examples are pedestrians, uneven terrain, overhead power lines, slopes and ditches. Perform this training while your employees are gathered around a skid steer loader. Use the loader as part of the demonstration to show your employees the hazard areas of a skid steer loader. This training session should be performed for both skid steer loader operator and those who are required to work around skid steer loaders. The following list includes safe operating procedures:

* MIOSHA/OSHA requires employees to READ AND UNDERSTAND THE OWNER’S MANUAL before using this machinery.
* Familiarize yourself with warning devices, gauges and controls. Review the specific controls on your skid steer loaders. If you have loaders with different set-ups, make sure that you review each type of loader separately.
* Always operate the skid steer from inside the operator’s compartment. DO NOT operate from the outside.
* Stay seated while using the skid steer loader controls.
* Only operate with the seat belt fastened and safety bar in place.
* Keep arms, legs and head inside while operating.
* Try to plan to load, unload and turn only on level ground.
* Check for obstacles such as drop-offs or soft soil spots.
* Check for overhead hazards such as power lines. It is illegal to operate a skid steer loader with power lines closer than 10 feet.
* Riders should NEVER be permitted.
* Adjust speed to suit working conditions and terrain.
* Never use the loader as a work platform.
* Travel and turn with the bucket low to the ground.
* Never exceed the load capacity.
* Face in the direction of travel.
* DO NOT modify or bypass safety devices.

**Power Lawn Mowers**

A power lawn mower can be dangerous and cause serious injuries. A rotary mower blade whirls at 2,000 or 4,000 revolutions per minute, or at 100 to 200 miles per hour. For safety reasons, it is important to know how to quickly disengage the clutch and stop the engine. Make sure that all operators are trained on the equipment to be operated.

### Operation Tips

* Begin by reading the operator's manual.
* Before mowing check the area and remove debris from the lawn.
* Wear protective, close fitting clothing.
* Start mower from a firm stance with feet in a safe position.
* Take self-propelled mowers out of gear before starting.
* Keep both feet on the footrests of a riding mower.
* Adjust cutting height before starting mower.
* Keep all guards and safety shields in place before starting and during operation.
* Never fill the gasoline tank on the mower if the engine is running or hot.
* Store gasoline in an approved, properly labeled container.
* Turn off the motor before dismounting or removing a foreign object
* Disconnect the spark or electric plug before repairing mower.
* Never use an electric mower on wet grass.
* Provide routine maintenance.
* No extra riders are allowed on self-propelled mowers
* The operator-presence switch should stop the mower immediately when you release the control. Test this to make sure it stops the mower.

### Mowing Hazards

* A mower can tip over easily.
* Push the mower away from the body during a fall.
* Never leave a running mower unattended.
* Take rest periods as needed as heat stress can occur.
* Foreign objects can fly from the mower, so make sure the mowing area is clear of people and pets.

**Power-Take-Off (PTO)**

The power-take-off (PTO) driveline can cause severe injury and death. Listed are safety tips for avoiding injuries from PTO contact.

* Keep all PTO shielding (including the master shield) in place.
* Repair or replace damaged or missing shields.
* Stay safely away from unshielded moving parts.
* Watch your step when walking or working around a running machine.
* Wear work clothing with no loose ends or strings to catch on or be caught by machinery.
* Keep long hair under a cap or tied back to prevent it from being caught by the machinery.
* Keep children and non-workers out of the danger zone.
* Stop the PTO when dismounting from the tractor.

### Proper Mowing Directions

* When mowing on a slope with a riding mower, you should mow **down** the slope.
* When mowing on a slope with a push mower, you should mow **across** the slope.

### Proper Dress for Mowing

* Sturdy shoes. Bare feet, sandals, and sneakers are NOT ALLOWED during equipment operation.
* Long pants and long sleeve shirts.
* Safety glasses or goggles when mowing near solid objects.
* Hearing protection.

**Four Types of Power Lawn Mower Accidents**

* **Contact with rotating blade.**
* **Propelled objects.** Rocks, glass and wire are hurled at initial speeds above 170 miles per hour. Objects maybe thrown 50 feet or more, causing death and injuries ranging from blindness to severe bruising.
* **Overturning.** This occurs primarily when riding mowers are used on steep slopes or embankments. Victims may be pinned under the mower or come into contact with the blade.
* **Riding mowers running over the victim.** Accidents occur if the operator fails to look when backing a riding mower. Playing children are seriously injured. Or, an operator pulls a power mower backward over his or her foot.

**Chainsaws**

* Each year many people are injured through chainsaw accidents. Most of these injuries could have been avoided. The hands, knees, feet and head are most vulnerable to being cut by the chainsaw chain.
* If you use a chainsaw often, there are also other health risks. For example the noise of the chainsaw can lead to permanent hearing loss. Vibration can cause permanent damage to the hands.
* The carbon monoxide exhaust gases from the chainsaw can cause poisoning if it is used in enclosed spaces.
* The fire risk from fuel spillage or hot sparks can cause burns to chainsaw operators.

These hazards mean that chainsaws are potentially one of the most dangerous pieces of equipment. However, with the use of modern equipment, correct personal protective equipment, and proper work practices, they can be used safely.

### General Safety Precautions

* Read the owner's manual for your particular model. It will tell you the safety features of your chainsaw and the correct way of operating it.
* Check your chainsaw thoroughly before use. Make sure that your bar, chain and sprocket are in top condition and that all safety devices are working.
* Regularly service your chainsaw.
* Always wear suitable protective clothing.
* Do not start cutting until you have a clear work area, secure footing, and a planned retreat path from the operating area.
* Keep other people and animals well away from the working area.
* Do not operate the chainsaw beyond your ability.
* Use the chainsaw to cut wood only.
* Do not become distracted. Stop the chainsaw if somebody starts speaking to you.
* If tired, take time to rest. Operating a chainsaw requires your constant attention. Tired operators have more accidents.

### Personal Protective Equipment

Approved safety helmet with visor or goggles, ear muffs, protective leggings such as leg chaps and steel capped safety boots must be worn to protect you from chainsaw injury. Gloves should also be worn.

### Preparing for Cutting

### Clear Your Work Area

Make sure there are no nails in the wood or loose objects in the area where you are cutting, such as twigs, brush, leaves and stones.

### Check Your Chain's Condition and Sharpness

* Follow the instructions in your manual and use the proper maintenance tools.
* Sharpness - a sharp chain make the chainsaw easier to use.
* Tension - if the chain is too loose, it may derail and cause a severe injury; but if it is too tight, it may bind and also cause an accident or damage to the chainsaw.
* Idle speed - prevents the chain from rotating when the controls are in the idle position.
* All nuts and screws should be tight.
* Everything should be well lubricated.

### Fuel the Chainsaw in a Safe Place

Completely wipe off any spilled fuel and move the chainsaw to a new location before starting the engine.

### Check the Conditions in Which You Are Cutting

If you are felling a tree, make sure you consider which way the wind is blowing in deciding which direction the tree should fall. Also look for a lean in the tree and a heavy imbalance if several large limbs are all on one side of the tree.

IN EVERY CUTTING SITUATION you must make sure you have secure footing. If the ground is slippery from rain, snow or ice, then you should not cut there.

Always look for broken limbs or other trees caught in the tree you want to cut.

### Plan Your Escape Route

Make sure there are no obstacles that can cause you to trip. Then, after you have made your cut, you will be able to move rapidly at least 25 feet away from the tree at a 45-degree angle without any hazard. If you have an electric saw, be careful not to trip over the cord.

### Assess Your Own Physical Condition

Cutting with a chain saw is physically demanding, even for strong persons, so do not use a chain saw if you are not physically able to handle it. Take plenty of rest breaks before you get tired. BE ALERT! Otherwise you put yourself at a severe risk.

Under NO circumstances should you be under the influence of ANY substance -- this includes drugs, alcohol AND cold medicines -- that can impair your vision, dexterity or judgment.

### Preventing Kick Back

Kick back is a sudden upward and backward movement of the chainsaw. It occurs when the tip of the bar nose contacts a log, branch or nail. It can cause serious injury. To prevent injury from kick back:

* Ensure your machine is fitted with a chain brake (preferably inertia activated).
* Ensure the brake mechanism is clean and operates effectively
* Use low kick back types and avoid lowering the depth gauges too much when sharpening
* Hold the chainsaw firmly, making sure that the left hand encircles the top handle with the thumb underneath
* Avoid bringing the upper quadrant of the guide bar into contact with any foreign object
* Wear correct head protection and safety pants at all times
* Don’t cut above shoulder height
* Never hold the chainsaw in one hand or by one handle only
* Always begin your cut at peak revs

### Safety Rules to Remember

* BEFORE starting the engine, make sure the chain is not contacting anything.
* DO NOT let the saw rest on your leg or knee while you start the engine.
* Do not drop start the chainsaw.
* ALWAYS maintain control by standing securely holding the saw firmly and taking your hand off the trigger between cuts.
* DO NOT work when you are fatigued.
* Keep the handles dry and clean and free from the oil and fuel mixture.
* Whenever you are cutting, be sure your body is clear of the natural path the saw will follow when the cut goes through.
* NEVER straddle the log to make a cut.
* ALWAYS shut off the engine before setting the chain saw down: even when you are retreating from a falling tree.
* Make sure the saw is off and the chain has stopped before making any adjustments or repairs.
* Do not run the saw indoors.

### Limbing

* Stand on the opposite side of the tree whenever possible, using it as a barrier between yourself and the limb you are cutting. Do not overstretch yourself to do this because you are less stable.
* Do not face the limb you are cutting squarely -- stand at a 45-degree angle to prevent the saw from striking your leg if it slips.
* If you are on a hill, stand on the upside of the hill.
* NEVER cut limbs above mid-chest height.
* Do not cut limbs that are supporting the log.

**String Trimmer/Weed Whips**

As with any power tool, string trimmers/weed whips are capable of causing injury if not used in a safe manner. String trimmers/weed whips will last longer and give more trouble-free service if used and maintained properly. Never pour gasoline into a hot engine, always allow the engine to cool first.

**Protective Clothing**

* Always wear long trousers and sturdy shoes such as high-top boots.
* Always wear safety glasses, goggles or a face shield when using a string trimmer. It can throw objects with considerable force. Keep bystanders away, also.
* Hearing protection is needed since the trimmer engine is very close to your ear.
* Gloves are useful to damp out vibrations when using a string trimmer.

**Brush-Cutting Head**

A brush blade is far more dangerous than plastic line and must be treated with great respect. Use a brush blade only with a heavy-duty trimmer having a "bicycle-type" handle and keep both hands on the handle. Be sure no bystanders are nearby. Don’t try to cut trees larger than recommended by the operator’s manual.

**Cutting Head Maintenance and Safety**

Straight-shaft trimmers have a gearbox on the head. This gearbox contains grease and must be checked and refilled occasionally. Check your operator’s manual for timing and instructions. Most trimmers use a centrifugal clutch to allow the head to stop when you idle the engine down. Always shut the engine off before servicing the head on centrifugal clutch models.

**Replacement Line**

Your operator’s manual will tell you what size of line to use. You have a choice of round line, square line or X-shaped line. Round line is generally more abrasion-resistant, and it wears longer, but the square and X-shaped lines are more aggressive and cut tough weeds better. When winding new line onto the trimmer’s spool, be sure to wind it the right way or it won’t feed properly; consult your operator’s manual. Spools can also come with pre-wound line.

A string trimmer/weed whip can be a useful tool, but it must be maintained properly, especially if it has a gasoline engine. String trimmers (unless equipped with a brush blade) are not as dangerous as lawnmowers or chainsaws, but they can injure if not used correctly. Be sure to wear protective clothing and safety glasses.

##

## Confined Spaces

A confined space shall not be entered until an authorized person evaluates the space and authorizes entry. Confined spaces are:

1. A space that is not designed for continuous employee occupancy (manhole, process tank, pits deeper than 4 feet, etc.) and
2. Is large enough that a person can enter the space and perform work and
3. Has limited or restricted means for exit (smaller than a normal doorway) and
4. May have a possible hazardous atmosphere such as:
5. Flammable gas
6. Airborne combustible dust
7. Oxygen deficiency or enrichment
8. A toxic atmosphere
9. Danger of engulfment (sand, grain, water)
10. Danger of entrapment (inward sloping walls, etc.)
11. Any other hazards, such as moving unguarded parts, exposed energized components

This link provides the MIOSHA regulations for this topic:

<http://www.michigan.gov/documents/CIS_WSH_part490_55724_7.pdf>

##

## Hazard Communication

Information and training is required to be provided to all employees who work with or have the potential to be exposed to hazardous chemicals on the jobsite. It is the responsibility of the Safety Coordinator to:

* Assemble all Safety Data Sheets and make them available to all jobsite employees.
* Compile an index of all hazardous chemicals used throughout the company.
* Conduct training for all employees who are exposed or have the potential to be exposed to hazardous chemicals while working. Be sure to document this training.
* Ensure that all containers of hazardous chemicals are labeled at all times.
* Updating and posting the New or Revised SDS and List of Hazardous Chemicals when new SDS are received.
* Complete and post the SDS Location form.
* Ensure employees are aware of hazards presented by other contractors.

SDS Location form: <http://www.michigan.gov/documents/dleg/wsh_cet2105_219990_7.pdf>

This link provides the MIOSHA regulations for this topic:

<http://www.michigan.gov/documents/CIS_WSH_part_42__47164_7.pdf>

##

## Lockout/Tagout (Control of Hazardous Energy)

Locking out of equipment is required to assure that employees are protected from unintended machine or equipment startup or movement while work is being done which would cause injury.

### General

The power source of any equipment, machine, tool or process to be set up, adjusted, repaired, serviced, installed or where maintenance work is to be performed and unintended motion or release of energy could cause personal injury should be locked out by each employee doing the work. Sources of energy include:

Springs Air Hydraulic

Steam Chemical Electrical

Gravity

### Procedure

1. Notify the equipment operator of the work to be performed and that they are releasing control of the equipment to you.
2. Locate all sources of energy and place them in a neutral (off) position.
3. Secure each with a safety lockout device and retain the key.
4. Make sure the machine cannot be restarted by trying the controls.
5. Return controls to off or neutral position.
6. After work is completed, all tools and equipment removed and guards reinstalled, each employee removes their own lockout device.
7. Notify operator that work is complete and control of machine is returned to them.

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/CIS_WSH_part85_51275_7.pdf>

## Personal Protective Equipment

Personal protective equipment, including clothing and all other work accessories, are designed to be protective barriers for employees against workplace hazards. Whenever possible, hazards should be reduced or eliminated using engineering, work practice, and/or administrative controls. Personal protective equipment should not be used as a substitute for those other control methods. Using the right personal protective equipment (PPE) for the hazard can reduce the number and severity of landscape and horticulture (greenhouse and nursery) related injuries and illnesses.

### Hardhats

Hardhats shall be worn at all times when on sites requiring them or when there is the potential for the following:

* Falling objects striking the head
* Collisions with objects
* Exposed electrical conductors
* Working on scaffolds or elevations

Wear a hard hat when performing construction work, trimming trees, repairing machinery, and doing other jobs with head injury risks.

### Safety Glasses

Safety glasses shall be worn at all times when on sites requiring them or when there is the potential for objects or particles to fly into the eye. Face shields must be worn with safety glasses during operations that produce sparks, airborne particles or when handling or working with certain hazardous chemicals. Goggles shall be used, as required, to provide eye and face protection when safety glasses are insufficient and face shields are impractical.

Use appropriate safety eyewear (safety glasses, goggles, face-shields) when applying pesticides, fertilizers, working in the shop, or in heavy dust conditions.

### Hand Protection

Gloves are recommended for any employee whose hands are exposed to the possibility of cuts, chafes, burns, splinters and/or irritations.

Protect your hands from everyday abuse hazards and exposure to moisture with job-matched gloves and barrier creams.

**Foot Protection**

Employees are required to wear acceptable work boots/shoes at all times. Acceptable work boots/shoes must protect the employee’s feet from falling objects, sharp objects and spills. Tennis or athletic shoes are not an acceptable means of foot protection and are therefore not allowed on job sites.

For landscape or horticulture work protect your feet with construction or steel-toed safety shoes or boots with non-slip soles and heels.

### Protective Clothing

Employees are required to wear clothing that is appropriate for their assigned task. Minimum requirements include full-length pants and a T-shirt that covers the shoulders and trunk. Employees who report to work not properly dressed will be sent home, without pay, to change. Clothing for protection against hazardous processes shall be provided by MHI COMPANY.

Use a sun safety hat (one with a wide brim and neck protection) and sunscreen to protect against the sun’s harmful rays to assist in the prevention of skin cancer. In addition protect your skin with impervious garments when using toxic or irritating chemicals such as in the application of pesticides.

### Hearing Protection

MHI COMPANY will furnish appropriate hearing protection equipment for employees when engineering controls are not practical or available to reduce the noise level below MIOSHA’s limits. Hearing protection is required in any work area with high levels of noise (more than 90 decibels). In general, hearing protection should be worn whenever employees work in areas where they have to shout to be heard.

Use earmuffs or ear plugs when operating noisy equipment such as mixing equipment, grinders, older tractors, chippers, leaf blowers, chainsaws, or during the continuous operation of gasoline powered engine equipment etc.

**Respirators**

Employees are required to use respiratory equipment (dust masks, cartridge respirators, gas masks, air pacts) when working in dusty or moldy conditions, spray painting, applying chemicals such as pesticides and insecticides, working in bins, tanks, silos, and manure storage places. The type of respirator used is specific to the atmospheric air contaminant involved. Make sure that the correct respirator is chosen for the hazard.

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/CIS_WSH_part33_34779_7.pdf>

## Personal Fall Protection

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**Work on Roofs**

For residential housing, MIOSHA requires employees working six feet or more above a lower level to use guardrails, safety nets, or a personal fall arrest system. When conventional fall protection is not feasible, or creates a greater hazard, a written site-specific plan may be used.

Stop work on roofs when storms, high winds or other adverse weather conditions create unsafe conditions.

### General

* Holes shall be covered, secured or labeled, or have a guardrail system installed around all unprotected sides or edges.

### Conditions where fall protection is required:

* When a person is exposed to a fall hazard of six feet from the perimeter of a structure or from unprotected sides and edges of a retaining wall. Fall protection is also required when trimming trees.
* A person exposed to a fall of six feet or more is required to be protected by either a guardrail, safety net system or a personal fall arrest system.
* A full body harness and lanyard are required when using boom lifts for tree trimming or pruning.

### Fall Protection Types

* One of the following three types of fall protection systems will be used when our employees are exposed to fall hazards in excess of six feet:
1. Fall restraint systems
2. Personal fall arrest system
3. Positioning devices

**Guardrail System**

* A standard guardrail system consists of a top rail, midrail and vertical supports and is considered a fall restraint system.
* Top rails shall be installed at 42” above the walking/working level and be able to withstand a 200-pound force applied in any downward or outward direction. If wire rope is used as a top rail, it shall not deflect to less than 39” above the walking/working level and shall be flagged at not more than 6-foot intervals with high-visibility material.
* Midrails shall be installed halfway between the top rail and the working/walking level and shall be able to withstand a 150-pound force in any downward or outward direction.
* Toe boards with screen or mesh shall be installed as part of a guardrail system when persons working or passing below the guardrail may be exposed to falling objects. Screens and mesh, when used shall extend from the top rail to the walking/working level and along the entire opening between top rail supports.
* Guardrail systems used on ramps and runways shall be erected along each unprotected side or edge.

### Personal Fall Arrest Systems

Personal fall arrest systems consist of a full body harness and a shock absorbing lanyard attached to suitable anchorage. They an effective means of preventing fall accidents. The system does not actually stop you from falling, but catches you and safely stops you from hitting the level below. Fall arrest systems are the preferred means of protection when standard guardrails, safety cables, or covers are not practical.

* A personal fall arrest system consists of an anchorage, connectors, a body belt or harness, and may include a lanyard, deceleration device, lifeline, or a suitable combination of these items.
* Body belts and non-locking snap hooks for fall arrest are not allowed.
* Personal fall arrest systems shall limit falls to less than 6 feet
* A horizontal lifeline shall be designed and installed to maintain a safety factor of at least two.
* When vertical lifelines with rope grabs are used, a separate lifeline shall protect each employee.
* A personal fall arrest system shall not be attached to a guardrail system unless a qualified person designs the guardrail system for this use and the guardrail is capable of safely supporting the load.
* Independent vertical lifelines with a rope grab are required for each employee working off a suspended scaffold.
* Employees are also required to be tied-off when working from an aerial work platform.
* Harnesses, lanyards, and other components shall be used only for employee protection as part of a personal fall arrest system and not to hoist materials.
* Anchorage points for safety harness lanyards and lifelines must be able to withstand a force of 5,000 pounds per person.
* Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.

### Positioning Device Systems

Positioning device systems are designed to allow employees to work with both hands free at elevated locations. By their very nature, they provide some level of fall protection. They are not as effective as railings or fall arrest systems. Positioning device systems may be used together with a fall arrest system for greater safety.

* A positioning device system means a body belt or harness rigged to allow a person to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning. A positioning device system shall limit falls to less than two feet.
* Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration and defective components shall be removed from service.
* Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.
* The use of non-locking snap hooks is prohibited.
* Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

### Rescue Plan

MHI COMPANY fully intends to provide prompt rescue of any employee who has fallen and is suspended by a fall arrest system. This will be accomplished using the local fire department rescue service. Any employee who uses fall protection will be trained in this procedure and what to do in the event of a fall.

## Excavations

Landscaping activities may include the construction of retaining walls, irrigation systems or ponds, that occasionally require our employees to work in trenches and excavations. Each year construction workers die in trench cave-ins. To prevent this from occurring, the following precautions are required when employees work in trenches or excavations that are 5 feet deep or greater. These precautions apply even if we did not dig the trench. Employees are not allowed to enter an excavation unless the proper precautions have been taken in advance to prevent cave-ins.

### General Precautions

* All trenching and excavation activities will be conducted in accordance with MIOSHA/OSHA regulations.
* All trenching and excavation work or entry will be supervised by a competent person with the skills, training, and experience to recognize hazards and implement corrective action.
* All trenches and excavations 5 feet deep or greater will be protected from cave-ins by sloping, shoring, benching, or shields.
* No employee is permitted to work in any trench or excavation that is not safe. Work will stop until the hazard is corrected.
* All trenches and excavations will be inspected prior to the start of work and at least daily by the competent person.
* Suitable access and egress will be maintained at all times.

### Prior to Digging

* The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation. Locate utilities by calling MISS DIG.

### While Digging

* When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.
* Contact with live electrical lines and gas mains can cause death or serious injury. Extra care should be taken in these areas. If you are unsure, ask your supervisor, or contact MISS DIG.
* While the excavation is open, underground installations shall be protected, supported, or removed as necessary to safeguard employees.
* All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.
* No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.
* Adequate barriers or physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and other similar operations, temporary wells, pits, shafts, etc., shall be back filled.

### Open Trenches and Excavations

* Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rain storm or other hazard increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated.
* Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.
* A stairway, ladder, ramp or other safe means of egress shall be located in trenches and excavations that are 4 feet or more in depth and must be placed no more than 25 feet apart.
* Equipment and excavated piles must remain at least two feet back from the edge of the excavation or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations.
* Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or ventilation.
* Water must be removed from and controlled in all excavations, before employees are allowed to enter by the qualified person at the job site.
* If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operation.

**Trenching Hazards**

Cave-ins are perhaps the most feared trenching hazard. But other potentially fatal hazards exist, including asphyxiation due to lack of oxygen in a confined space, inhalation of toxic fumes, drowning, etc. Electrocution or explosions can occur when workers contact underground utilities. MIOSHA requires that workers in trenches and excavations be protected, and that safety and health programs address the variety of hazards they face.

**Competent Person Responsibilities**

1. Evaluate soil conditions and select appropriate protective systems.
2. Make sure that protective systems meet MIOSHA standard requirements.
3. Contact the utilities (gas, electric etc.) or MISS DIG if the area to be excavated was not previously marked.
4. Test for low oxygen, hazardous fumes and toxic gases, especially when gasoline engine-driven equipment is running, or the dirt has been contaminated by leaking lines or storage tanks. Insure adequate ventilation or respiratory protection if necessary.
5. Provide safe access into and out of the excavation.
6. Provide appropriate protection if water accumulation is a problem.
7. Inspect the site daily before construction begins, at the start of each shift, as needed throughout the shift, following a rainstorm, or after any other hazard-increasing event.
8. Keep excavations open the minimum amount of time needed to complete operations.

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/lara/lara_miosha_CS_9_3-18-2013_414603_7.pdf>

## Scaffolds

Scaffolds must be built and erected to OSHA standards, which includes:

* All scaffold erection and teardown must be done under the supervision of the competent person.
* Fully planked work deck secured to the bearing portion of the staging by cleating or wiring. Planking must be visually checked before use. Do not use planking that is split/cracked or not designed for staging use.
* All planking shall be Scaffold Grade or equivalent. The maximum permissible span for full thickness undressed 2” X 10” or wider planks used for light duty (25 psf) scaffolds is 10 feet. Eight feet maximum span for nominal thickness lumbar.
* The working deck of a scaffold must be at least 18” wide (two planks). Scaffold planking shall be overlapped a minimum of 12” or secured from movement. Scaffold planks shall extend over their end supports not less than 6” nor more than 12”
* The poles, legs, or uprights of scaffolds shall be plumb and securely and rigidly braced to prevent swaying and displacement. Where uplift may occur on tubular frame scaffolds, the panels shall be locked together vertically by pins or other equivalent means.
* Tubular welded frame scaffolds and tube and coupler scaffolds shall be secured to the building or structure at intervals not to exceed 30 feet horizontally and 26 feet vertically.
* A complete guardrail system including top rails, mid rails and toe boards are required on all open sides of work decks over 10 feet high and on work decks from 4 to 10 feet high when the minimum width is less than 45 inches.
* Access ladders must be provided to the work deck. Access ladders must be tied off to prevent slipping where applicable.
* Scaffolds shall be erected on sound, rigid footing and shall be capable of carrying the maximum intended load without settling or showing signs of displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.
* Scaffolds and their components shall be capable of supporting, without failure, at least four times the maximum intended load.
* There shall be a screen with maximum ½-inch openings between toe board and the guardrail where persons are required to work or pass under the scaffold.

### Mobile/Rolling Scaffolds

* The height of a freestanding mobile scaffold shall not exceed four times the minimum base dimension.
* Mobile scaffolds shall have proper cross and diagonal bracing.
* Platforms on mobile scaffolds shall be tightly planked and secured. Platforms more than 10 feet above the ground or floor shall be protected with guardrails and toe boards on all open sides and ends.
* A ladder or stairway shall be provided for proper access and exit.
* The wheels shall be locked to prevent any movement when any employee uses a rolling scaffold.
* Employees may not ride a rolling scaffold unless special conditions are met as listed in the MIOSHA standards.

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/lara/lara_miosha_part5_408589_7.pdf>

## Ladders

Ladders shall be inspected for damage before they are set for use. Employees shall immediately tag, remove from service and notify their supervisor of any ladder they find damaged. The ladder must either be repaired or destroyed.

All ladders purchased by MHI COMPANY shall be Class I Heavy Duty Industrial Grade ladders. Straight ladders and extension ladders shall be purchased with safety feet installed.

General safety guidelines for ladders are:

* Inspect each ladder before use. Inspections shall include examining the ladder for split side-rails, broken or split steps or rungs, uneven legs, broken extension brackets, and hardware deficiencies. Ladders that are defective or damaged shall be taken out of service for repair or disposal.
* The pitch of a ladder shall be set up at approximately 4:1 (vertical: horizontal). For every four feet the ladder goes up, the base must be one foot from the vertical support.
* Ladders placed in any location where they can be struck by traffic such as in doorways, driveways or passageways shall be secured to prevent accidental tip over or a barrier erected to keep traffic away from the ladder.
* Know the capacity (load) of the ladder and do not overload it.
* Job built ladders have special requirements for construction and placement. Do not build one unless you understand these requirements.
* Straight ladders must be set up so they are stable. The top and/or bottom shall be secured as required to prevent slipping. Ladders with slip-resistant feet shall be used whenever possible. Ladders with plain feet or those with slip-resistant feet on slippery surfaces shall have their bottom and top secured as necessary to keep them from moving.
* Straight ladders shall extend at least three feet above the level being accessed. Use a ladder of the proper length to do the job safely.
* The top and top step of a ladder shall not be used. If tempted – get a longer stepladder.
* Proper use of ladders includes:
	+ Facing the ladder when climbing
	+ Using three points of contact while climbing the ladder
	+ Making sure shoes are clean of oil and grease
* Stepladders are not to be used in the folded closed position (as a straight ladder).
* Metal ladders shall not be used in areas where exposed electrical wires are present

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/CIS_WSH_part4_51032_7.pdf>

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## Aerial Lifts & Work Platforms

Self-actuated aerial lifts and work platforms are to be used by authorized employees only. MHI COMPANY will provide training on the specific aerial lift or work platform that employees are authorized to use. **Do not operate an aerial lift unless you have been authorized to do so and have been trained.**

* Employees must work with their feet on the floor of the lift and are not allowed to climb on the handrails, use ladders, planks, or other extensions to reach higher.
* Fall protection is required with tie-off to an approved anchorage point on the lift or basket
* Aerial lifts shall not be moved when the boom is elevated except as specifically allowed by the manufacturer and the jobsite conditions. A lift cannot be moved with the basket raised unless the operator can see all wheels and surrounding terrain. Extreme caution must be exercised when moving a lift with the basket raised to prevent tip-over.

**Scissor Lifts**

Only trained and authorized personnel may operate a scissors lift. The operator must have a permit verifying that the operator is trained on this equipment and understands the hazards associated with elevated work. **Do not operate a scissor lift unless you have been authorized and trained to do so and have a valid operators permit.**

Follow these safety rules for safe operation:

* Read all decals and stencils placed on the machine. If they become illegible, see that they are replaced.
* Examine the machine carefully before each use for physical damage to the structural members, tires, electrical cables, etc. This examination should be complete and all potential deficiencies corrected before further use.
* Do not use the machine if physical damage occurs or if the controls are not functioning properly.
* Uniformly distribute loads placed on the platform; don't overload the rated lifting capacity.
* Hang the control box on the guard rail or in position before connecting the plug.
* Do not ever lay the control box on the lift as controls could be accidentally activated.
* Turn off the main power switch before connecting the plug.
* Ride on the lift when it's moving. If this is not possible, stand to the side - never walk in front of or behind the lift.
* Connect the control panel plug (with power switch off) to the cannon connector located under platform.
* Secure loads to prevent their movements when machine is started and stopped.
* When elevating platform, care should be exercised to prevent the machine contacting obstructions, as severe damage could result; use outriggers as a safety measure.
* Adjust travel speed to suit operating conditions. Always clear area before any movement of machine vertically or horizontally.
* Do not allow overhanging loads outside the work platform, or alter the maximum working height by use of scaffolding or ladders on the platform.
* Do not tow the work platform. For longer distance moves the lift should be transported by truck or trailer, instead of driven, to avoid battery failure.
* Do not work under or perform any maintenance on the lift while the machine is in a raised position unless a safety bar is in position.

## Hand & Power Tools

### General

All hand and power tools and similar equipment shall be maintained in a safe condition. Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts of equipment shall be guarded, if such parts are exposed to contact by employees or otherwise create a hazard.

Portable power tools must be grounded or double insulated. Do not cut the grounding lug off electrical plugs.

All hand-held powered tools shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Defective tools and extension cords should be removed from service, tagged with a defective note and your supervisor notified.

Use a Ground Fault Circuit Interrupter on every extension cord that is tied into a sites temporary wiring system and/or used in a location subject to moisture.

### Powder-Actuated Tools

* Powder-actuated tools operate like a loaded gun and must be treated with extreme caution.
* Only persons who have been trained and issued a permit are authorized to operate powder-actuated tools.
* Employees must wear suitable ear, eye and face protection.
* The correct powder level – high or low velocity – that is appropriate for the powder-actuated tool and necessary to do the work without excessive force shall be used.
* The muzzle end of the tool must have a protective shield or guard centered perpendicular to and concentric with the barrel to confine any fragments when the tool is fired.
* All powder-actuated tools shall be inspected daily before use with defects being corrected prior to use.
* Tools shall not be left unattended and shall not be loaded until ready to use.
* If the tool misfires, the user must hold the tool in the operating position for at least 30 seconds before trying to fire it again. If the tool still will not fire, the user must hold the tool in the operating position for another 30 seconds and then carefully remove the load in accordance with the manufacturer’s instructions. The bad cartridge should then be put in water immediately after removal.
* Powder-actuated tools must not be used in explosive or flammable atmospheres.
* When using powder-actuated tools to apply fasteners, several additional procedures must be followed:
* Do not fire fasteners into material that would allow the fastener to pass through to the other side.
* Do not drive fasteners into very hard or brittle material that might chip or splatter, or make the fasteners ricochet.
* Always use an alignment guide when shooting fasteners into existing holes.
* When using a high-velocity tool, do not drive fasteners more than three inches from an unsupported edge or corner of material such as brick or concrete.
* When using a high velocity tool, do not place fasteners in steel any closer than ½ inch from an unsupported corner edge unless a special guard, fixture, or jig is used.

**Abrasive Wheels & Tools**

* Grinder guards shall be kept in place. Employees must not remove guards unless the wheel of the grinder is protected by some other means.
* The operator must wear safety glasses or goggles and a face shield while operating this equipment.
* Cutting stone, retaining wall blocks or cement can throw sharp-edged debris. Protect your face and eyes from injury by using PPE and following safe work practices for this equipment.

**Woodworking Tools**

* All powered circular saws are required to be guarded, unless a jig or fixture protects the operator. Guarding is required above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts. The lower guard shall cover the saw to the depth of the teeth, except the minimum arc required to allow proper retraction and contact with the work. When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position.
* Portable power saws must have a momentary switch that will release and shut off the tool when the operator releases the switch. The power control for table saws and crosscut saws must be within reach of the operator.
* Use safety glasses when operating power woodworking equipment.
* Do not wear gloves while operating power saws or equipment with rotating parts.

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/lara/lara_miosha_GI_38_4-3-2013_416585_7.pdf>

## Electrical Safety

* Employees, unless under the supervision of a licensed electrician, are required stay at least 10 feet away from all live exposed electrical circuits above 50 volts.
* Portable power tools must be grounded or double insulated. Do not cut the grounding lug off electrical plugs.
* Defective tools and extension cords are to be removed from service, tagged with a defective note and your supervisor notified.
* Do not tamper with temporary electric panels or attempt to splice into any cable.
* MHI COMPANY has elected to use Ground Fault Circuit Interrupters (GFCI) to ensure grounding adequacy.
* Every extension cord that is used in a location subject to moisture or used outdoors shall be connected through a GFCI.
* If an extension cord is tied into a site’s permanent wiring system, the receptacle on the end of the extension cord must be the GFCI-type.
* GFCI’s shall be tested periodically to determine if they are functioning properly. They may be tested by pushing the test button and verifying that the power has been cut off.
* Portable extension cord sets must have a third wire ground and must have a heavy duty jacket that is capable of resisting chafes and cuts and rated for outdoor use.

## Housekeeping

Keep stored material out of walkways and stored at the sides of work areas. Do not store excessive amounts of material in the immediate work area.

Clean up scrap in the work area daily.

Scrap wood should be removed from a job site promptly to reduce fire hazards.

## Pesticide and Fertilizer Usage

Pesticides are poisonous and must be used with caution. Read the label carefully before opening a container. Precautions and directions must be followed exactly. Note if special protective equipment must be used. Pesticides and insecticides are to be handled and applied only by trained and authorized employees.

*Storage:* Keep all pesticides in original containers only. Store all pesticides separately in a locked shed or other secured area. Keep all pesticides out of the reach of children, unauthorized personnel, pets and livestock. Do not store with foods, feeds, or fertilizers. Post warning signs on pesticide storage areas.

*Use:* The suggestions given in this safety manual are based upon best current information. Follow directions:

* Measure accurately to avoid residues exceeding tolerances
* Use exact amounts as indicated on the label or other amounts recommended by the Department of Agriculture
* Use a pesticide only on plants or pests listed on the label

*Container Disposal:* Do not transport pesticides in vehicles with foods, feeds, clothing, or other materials, and never in a closed cab with a vehicle driver.

*Responsibility:* (Insert title of responsible person) is responsible for the proper use of pesticides and insecticides, including drift to other properties, and for excessive residues. This person monitors the program and is responsible for making sure that pesticides and insecticides are used properly and applicators are properly trained and protected. Pesticides should not be applied over streams, rivers, ponds, lakes, run-off irrigation, or other aquatic areas except where specific use for that purpose is intended.

All employees will be provided training on the following elements relating to the use, storage and neutralization of pesticides, insecticides, and fertilizers used at XYZ COMPANY.

1. Methods of storage
2. Proximity of storage to groundwater supplies
3. Condition of equipment used for application
4. Emergency detoxification procedures \*
5. Disposal procedures
6. PPE requirements

\* Absorptive clay, hydrated lime or sodium hypochlorite will be on hand for emergency detoxification of spills or leaks.

(Insert title of responsible person) will also ensure proper certification and training of all workers applying “restricted use” pesticides. This person is knowledgeable with EPA Part 170 Worker Protection Standard (WPS) on pesticide regulation and EPA, Department of Agriculture, and MIOSHA/OSHA regulations on the specific products and work methods being used.

**Lyme Disease**

Work associated with increased risk of exposure to infected ticks include: construction work, landscaping, forestry, brush clearing, land surveying, farming, railroad work, oil field work, utility line work, and park/wildlife management.

Some areas around the Great Lakes are at a higher moderate risk to Lyme Disease. Consult the local health department or Center for Disease Control ([www.cdc.gov](http://www.cdc.gov) ) for current information on your area or the area in which work is to be done.

**Signs and Symptoms**

It is very important that Lyme disease be diagnosed and treated with antibiotics, since untreated Lyme disease may result in symptoms (i.e.,arthritis, muscle pain, heart disease, brain and nerve disorders) that are severe, chronic, and disabling. Common signs and symptoms include:

* “Bulls-eye” rash (20-40% of persons who have the disease do not have a rash).
* Flu symptoms (e.g., fever, lymph node swelling, neckstiffness, generalized fatigue, headaches, migratingjoint aches, or muscle aches).

**Prevention of Lyme Disease**

Decrease the probability of tick bites by doing the following:

* Avoidance of tick habitat (brushy, overgrown grassy, and woody areas) particularly in spring and early summer when young ticks feed.
* Remove leaves, tall grass, and brush from areas around work areas or residential areas to decrease tick as well as host (deer and rodent) habitat.
* Application of tick-toxic chemicals to surrounding work or residential areas in accordance with federal, state, and local regulations and community standards.

**Personal Protection**

* Wearing light-colored clothing (to more easily see ticks).
* Wearing long-sleeved shirts, tucking pant legs into socks or boots (delays ticks from reaching skin so they can be more easily found before attaching).
* Wearing high boots or closed shoes covering entire foot.
* Wearing a hat.
* Using appropriate insect repellants on non-facial skin and permethrin on clothes (kills ticks) in accordance with Environmental Protection Agency guidelines.
* Showering and washing/drying clothes at high temperature after outdoor exposure.
* Doing a careful body check for ticks, prompt removal with tweezers and skin cleansing with antiseptic.

**West Nile Virus**

The most common way West Nile Virus (WNV) is transmitted is through the bite of an infected mosquito. Workers at risk of WNV exposure include those working outdoors when mosquitoes are actively biting—farmers, foresters, landscapers, groundskeepers and gardeners, painters, roofers, pavers, construction workers, laborers, mechanics, and other outdoor workers.

**Protecting Outdoor Workers**

These controls are recommended regardless of other controls that may be in place, such as local mosquito control programs. Implement the control measures listed below where needed:

* When possible, schedule work to avoid having workers outdoors when mosquitoes are most active and biting, most often from dusk to dawn.
* Make insect repellents available to workers.
* Outdoor workers should wear long-sleeved shirts, long pants, and socks when possible.
* Eliminate as many sources of standing water as possible to eliminate mosquito breeding areas. Mosquitoes may be produced in any puddle or water that stands for more than four days.

Take the following steps to decrease mosquito populations:

* Change the water twice a week in animal drinking troughs, birdbaths, and other water containers.
* Add an aerator to ponds and water gardens to keep the water circulating or add fish that will eat the mosquito larvae or adults.
* Remove discarded tires from the worksite.
* Turn over, cover, or remove equipment such as tarps, buckets, barrels, wheel barrows and containers that accumulate water.
* Discard tires, buckets, cans, and containers in the area.
* Place drain holes in containers that collect water and cannot be discarded.
* Clean out rain gutters to get rid of standing water.
* Remove debris—leaves, twigs, trash—from ditches.
* Fill in or drain ruts and other areas that accumulate water.

**Safety Practices for Workers**

Workers should take the following steps when working at sites where mosquitoes may be actively biting:

* Wear long-sleeved shirts, long pants, and socks when possible.
* Spray exposed skin with an insect repellent.
* READ AND FOLLOW LABEL DIRECTIONS FOR REPELLENT USE.
* Do not apply pump or aerosol products directly to the face. These products should be sprayed onto the hands and then carefully rubbed over the face, avoiding the eyes and mouth.
* DEET (N,N-diethyl-m-toluamide or N,N-diethyl-3-methylbenzamide) is the most effective insect repellent available.
* The more DEET a repellent contains the longer time it will be effective.
* DEET concentrations higher than 50% do not increase the length of protection.
* Use repellents at the lowest effective concentration.
* Do not apply repellents to cuts, wounds, or irritated skin.
* When needed, reapply repellents according to label directions.
* Wash treated skin with soap and water after returning indoors.
* Spray clothing with products containing DEET or permethrin, as mosquitoes may bite through thin clothing.
* Permethrin should only be used on clothing; do not apply it directly to skin.
* Wash treated clothing before wearing it again.
* Do not apply repellent to skin that is under clothing.

**Heat Stress**

Summer sun and heat can be a danger if you do not take the proper precautions. The sun’s ultraviolet (UV) radiation can cause premature aging of the skin, cataracts and skin cancer. The following strategies will help reduce your exposures to UV radiation from the sun:

* Cover up; wear tightly woven clothing that will protect your skin.
* Use a sunscreen with a sun protection factor of 15 or better. Heavy sweating will require more frequent applications.
* Wear a wide brim hat to protect your neck, ears, eyes, nose and forehead.
* Use UV absorbent sunglasses. Read the label before buying the glasses, they should block 99 to 100% of UVA and UVB radiation. Wrap around shades offers the best protection.

Know how to protect yourself from heat stress by doing the following:

* Learn the signs and symptoms of heat-induced illnesses and how to respond.
* Train your employees on the these symptoms and actions to be taken for heat-induced illnesses
* Perform the heaviest work during the coolest part of the day.
* Slowly build up tolerances to heat in hard work environments. It usually takes about two weeks.
* Use the buddy system with people working in pairs.
* Drink plenty of cool water, about a cup every 15 to 20 minutes to prevent dehydration.
* Wear light loose-fitting, breathable clothing such as cotton.
* Take frequent short breaks in cool shaded areas to allow the body to cool down.
* Avoid eating large meals before working in hot environments.
* Avoid alcohol or beverages with caffeine. These make the body lose water and increase the risk for heat illnesses.
* Check with your health-care provider or pharmacist to see if medicines you are taking affect you when working in hot environments.
* Personal protective equipment such as respirators and protective suits can increase your risk to heat related illnesses.

**Heat Exhaustion Symptoms**

* Headaches
* Dizziness
* Weakness
* Mood changes such as confusion and irritability
* Upset stomach
* Vomiting
* Decreased or darkened urine
* Fainting or passing out
* Pale, clammy skin.

**Heat Exhaustion Actions to Take**

* Remove the victim to a cool shaded area to rest. Do not leave the person alone. If dizziness or light-headedness occurs lay the person on his or her back and elevate their legs six to eight inches. If they are sick to their stomach, lay him or her on their side.
* Loosen and remove heavy clothing.
* Have the person drink cool water, a cup every 15 minutes.
* Cool the body by fanning or applying a wet cloth to the person’s skin.
* Call 911 for emergency help if the person does not feel better in a few minutes.

**Heat Stroke Symptoms**

* Dry pale skin with no sweating
* Hot, red skin that looks sun burned
* Mood changes such as confusion or the inability to think straight
* Seizures or fits
* Unconsciousness with no response

**Heat Stroke Actions to Take**

* **Call 911 for emergency help immediately**
* Move person to a cool shaded place.
* Lay the victim on is or her back. Remove objects from the area that could hurt them if they have seizures or fits. If nausea or upset stomach, lay the person on his or her side.
* Loosen and remove heavy clothing.
* Have the person drink cool water (about a cup every 15 minutes) if alert enough to drink something, unless sick to stomach.
* Cool the person’s body by fanning and spraying with a cool mist of water or wiping the victim with a wet cloth or covering him or her with a wet sheet.
* Place ice packs under the arm pits and groin area.

## Respiratory Protection

When required, dust masks and respirators will be made available to employees who are capable of wearing them. MHI COMPANY controls respirator issue.

Prior to being allowed to wear a respirator, employees must be medically cleared to wear one. MHI COMPANY will pay for this medical evaluation.

After being medically cleared, employees will receive training in the proper selection of respirators, putting them on, proper adjustments, fit testing, use, maintenance, and limitations.

If your employee uses a respirator voluntarily where it is not mandated in the workplace, that employee needs to understand that they are responsible for properly cleaning, maintaining, and storing the respirator.

Before any respirator is used make sure that all instructions provided by the manufacturer are read and followed on the use, maintenance, cleaning and care, and warnings regarding the respirator’s limitations.

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/CIS_WSH_part451_54075_7.pdf>

## Bloodborne Pathogens

Bloodborne pathogens are microorganisms present in human blood that can cause disease in humans. These include, but are not limited to, the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV).

**Exposure Control Plan**

The purpose of this Bloodborne Pathogen Exposure Control Plan is to eliminate or minimize work-related employee exposure to blood or other potentially infectious materials.

**Exposure Determination**

MHI COMPANY has evaluated all job classifications and determined that no employees within the company currently have responsibilities where they may incur work-related exposure to blood or other potentially infectious materials at MHI COMPANY jobsites. This determination was made without regard to personal protective equipment.

**Methods of Compliance**

Any employee who incurs an exposure to their skin or mucous membranes shall wash or flush those areas with water as appropriate and as soon as feasible following contact.

**Post-Exposure Evaluation and Follow-up**

All work-related exposure incidents involving blood or other potentially infectious material must be reported to MHI COMPANY.

The source individual’s blood shall be tested and documented after consent has been obtained in writing. If consent is not obtained, MHI COMPANY shall document that the legally required consent cannot be obtained. MHI COMPANY will also immediately offer a confidential medical evaluation and follow-up to any employee involved in the exposure incident who had contact with blood or other potentially infectious material. This evaluation and follow-up shall include:

* Documentation of the routes of exposure and the circumstances under which the exposure occurred
* Identification and documentation of the source individual
* Collection and testing of the exposed employee’s blood
* Post-exposure protective and preventative medical treatment
* Counseling
* Evaluation of reported illnesses

MHI COMPANY will ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

* A copy of the MIOSHA Bloodborne Pathogens regulation
* A description of the exposed employee’s duties
* Documentation of the routes of exposure and the circumstances under which the exposure occurred
* Results of the source individual’s blood test, if available

MHI COMPANY shall obtain and provide the exposed employee with a copy of the evaluating healthcare professional’s written opinion within 15 days of the completion of the evaluation.

This link provides the MIOSHA regulations for this topic: <http://www.michigan.gov/documents/CIS_WSH_part554_35632_7.pdf>

# Disciplinary Action

**MHI COMPANY** is committed to providing our employees with a safe and healthy workplace. In order to enforce compliance with jobsite safety rules, regulations and procedures and to ensure that each employee is treated fairly, **MHI COMPANY** has established an employee disciplinary program.

Each **MHI COMPANY** employee will be informed and trained regarding general and project specific safety requirements. This information will be communicated through employee meetings and new hire orientation.

As a condition of employment, each **MHI COMPANY** employee will be expected to perform their assigned duties and tasks in a manner consistent with the project safety requirements. Observed violations by **MHI COMPANY** employees will be verbally corrected as a minimum. Written disciplinary notices and disciplinary actions up to and including termination will also be used for willful or repeat safety violations.

**Procedure**

Any **MHI COMPANY** employee observed violating a project safety rule, regulation or procedure will immediately be given a verbal warning and clearly instructed to correct the violations.

**MHI COMPANY** will determine if the safety violation committed by the employee was due to ignorance, a misunderstanding or was a willful or repeat action. If it is determined that the violation was committed due to ignorance or a misunderstanding, then retraining and other instruction shall be given and the matter closed without a written safety violation.

For willful and repeat violations, a determination will be made as to the seriousness of the violation and a written disciplinary notice will be issued. The disciplinary action will vary depending on the seriousness of the violation.

A minor violation is defined as an unsafe act that is not likely to result in serious injury or significant property damage. Disciplinary actions for minor violations are as follows:

* First Notice – Retraining and instruction
* Second Notice – Three-day suspension without pay
* Third Notice – Termination

A major violation is defined as an unsafe act that is likely to result in serious injury or property damage. Disciplinary actions for major violations are at the discretion of **MHI COMPANY** and may involve retraining, suspension without pay, or termination depending on the circumstances. A major violation that is willful and premeditated or a second major violation shall always result in termination of the employee.

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# Drug Testing

**MHI COMPANY** has implemented a policy on alcohol and substance abuse testing for all employees following an accident or based on reasonable cause.

**Post-Accident**

This policy requires drug testing following an accident that involves medical treatment beyond first aid of any person. Employees who have been sent by **MHI COMPANY** for medical treatment other than first aid will be tested. Employees who cause, or may have caused, an injury to another person as a result of their actions will be tested. Guidelines similar to those used in OSHA record keeping shall be used in distinguishing medical care from first aid.

**Reasonable Cause**

This policy requires alcohol and drug testing in situations where based on physical, behavioral, or performance indicators, a reasonable person would suspect the person is using drugs, alcohol or is otherwise unfit for duty as determined by **MHI COMPANY** management.

**Incident Report Form**





## Employee Acknowledgement Form

I acknowledge receipt of this handbook. Furthermore, I have read, understand and agree to abide by all the instructions provided in it in order to provide a safe work environment for myself as well as my co-workers.

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Printed Name

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature Date