



MIOSHA Fact Sheet

General Industry Safety and Health Division

Health Hazards in the Green Industry

What is the Michigan green industry?

The green industry does **NOT** refer to businesses involved in renewable sources of energy, the reduction of carbon dioxide in the environment, or recycling of materials. The green industry includes businesses engaged in landscape installation and maintenance; irrigation; tree trimming and removal; nursery and garden; golf course design, installation and maintenance; utility line clearance services and retail or wholesale garden centers.

What health hazards are often found in the green industry?

- Potential heat and cold stress.
- Ergonomic or cumulative trauma.
- Noise exposure.
- Exposures to hazardous chemicals.
- Bloodborne infectious diseases.
- Animal bites, insect stings, or allergic reactions.
- Lack of available toilet or washing facilities.
- Lack of readily available shower/eyewash or medical treatment.

What MIOSHA health standards may be applicable to the green industry?

- Act 154, Section 11, Rule 11(a).
- Part 380, Occupational Noise.
- Part 301, Air Contaminants Standard.
- Parts 42, 92, & 430, Hazard Communication.
- Part 433, Personal Protective Equipment
- Part 451, Respiratory Protection.
- Part 472, Medical Services & First Aid.
- Part 474, Sanitation (toilet and handwashing facilities).
- Part 554, Bloodborne Infectious Diseases.

[Act 154, Section 11\(a\) – the “General Duty Clause”](#)

This regulation requires employers to provide employees with a safe and healthy workplace free from hazards that are likely to do serious physical harm. There are no specific MIOSHA Standards that address heat or cold stress, ergonomic hazards, animal bites, insect stings or allergic reactions. Protection from these serious hazards is afforded to employees by the general duty clause. MIOSHA has a variety of informative publications on heat/cold stress and ergonomic hazards that may be used to obtain additional information. They can be found on at www.michigan.gov/mioshapublications.

[Part 380, Occupational Noise](#)

Much of the equipment used in the green industry generates noise levels well above 90 decibels (dB); i.e. leaf blowers, chain saws, trimmers, mowers, wood chippers and a variety of motorized equipment. Repeated exposures to noise above 90 dB will result in loss of hearing. If an employee is exposed above 85 decibels (dBA) of noise based on an 8-hour time-weighted-average (TWA), then the employer must implement a hearing conservation program that addresses elements such as training and audiograms. If employees are exposed to noise above 90 dBA based on an 8-hour TWA, employees must be required to wear hearing protection.

[Part 301, Air Contaminants Standard.](#)

This standard lists permissible exposure limits (PELs) for a large number of hazardous air contaminants. Employees may not be exposed to these air contaminants above the PELs. Many pesticides or herbicides are not listed in Part 301; however, they are regulated under Federal Insecticides, Fungicide, and Rodenticide Act (FIFRA) and Michigan Department of Agriculture and Rural Development pesticide regulations. Additional information can be found on the MDARD website at www.michigan.gov/mda.

Part 451, Respiratory Protection

If employees are required to wear respirators (due to requirements under MDARD or because they are over-exposed to hazardous chemicals), the employer must comply with all other requirements in Part 451, Respiratory Protection Standard. Part 451 requires the development and implementation of an effective written respiratory protection program that address elements such as medical evaluations, fit-testing, employee training, and proper maintenance/storage of respirators.

Parts 42, 92, and 430, Hazard Communication

If employees use or are exposed to hazardous chemicals, employers are required to develop and implement a written hazard communication program that includes the following: providing material safety data sheets (MSDSs), employee training, and container labeling. These requirements supplement MDARD (FIFRA) labeling requirements for pesticides and also apply to hazardous chemicals such as compressed gases used for welding, hydraulic fluid and other chemicals used during maintenance, etc.

Part 433, Personal Protective Equipment (PPE)

All employers are required to perform a hazard assessment to determine if the use of PPE is required. Employees must be provided with and trained on the use of all PPE. Examples of PPE include gloves, steel-toed shoes, hard hats, and safety glasses.

Part 554, Bloodborne Infectious Diseases

If an employee has a designated job duty that involves actual or potential exposure to blood or other potentially infectious materials (OPIMs), they would be considered category A and are covered by the standard. A written exposure control plan, Hepatitis B vaccinations, follow-up procedures in the event of an exposure incident, and

employee training are among the main requirements for an employer who has category A employees. Employees who are required to provide first aid to co-workers are considered category A. If management relies on 911 or an occupational health clinic that is within 10 minutes of travel, instead of designating company employees as first aid providers, the company would not be covered under this standard.

Part 472, Medical Services & First Aid

This standard requires employers to provide a suitable eyewash or shower when employees are potentially exposed to corrosive or injurious material. Acids, bases, or other chemicals such as pesticides are examples of such materials. It also requires employers to make medical consultation readily available. The availability of a 911 response or a medical clinic within 3-4 minutes in areas where a serious accident could occur would satisfy this requirement.

Part 474, Sanitation (toilet and handwashing facilities)

This standard requires employers to provide handwashing and toilet facilities. When employees are moving around to multiple work locations during a day, having bottled hand sanitizers and allowing time for employees to go to public restrooms would satisfy this requirement.

Additional Information

Please note that additional MIOSHA Safety and Health Standards may also be applicable.

For additional information, please contact the MIOSHA Consultation, Education and Training (CET) Division at (517) 322-1809 or visit the MIOSHA website at www.michigan.gov/cet.