Safety Lines

Dangers of working in hot conditions: Steps, tools to prevent heat illness

Extreme heat is the deadliest weather-related hazard and, in the United States, causes more deaths than flooding, tornadoes and hurricanes combined, according to the Minnesota Department of Health. Although heat-related illness is preventable, thousands of workers become ill each year while working in hot or humid conditions and some cases are fatal. Nearly three out of four fatalities from heat illness happen during the first week of work because new and returning employees have not built a tolerance to the heat gradually, known as acclimatization.

Signs and symptoms – take action

A range of heat illnesses can affect anyone, regardless of age or physical condition. Furthermore, exposure to heat can occur in a variety of outdoor and indoor environments, such as construction, agriculture, bakeries and kitchens with heat-

generating appliances, foundries and warehousing. Below are a few common types of heat illnesses and their signs and symptoms.

- Heat stroke: confusion, slurred speech, unconsciousness, seizures, heavy sweating or hot and dry skin, very high body temperature and rapid heart rate.
- Heat exhaustion: fatigue, irritability, thirst, nausea or vomiting, dizziness or lightheadedness, heavy sweating, and elevated body temperature or fast heart rate.
- Heat cramps: less serious than heat exhaustion or stroke; marked by muscle spasms or pain (usually in legs, arms or trunk).

If heat stroke is suspected based on symptoms, call 911 right away – this is a medical emergency!

For any case of heat illness, cool the employee off by following first aid recommendations provided on federal OSHA's Heatrelated Illnesses and First Aid webpage. Never leave a worker with heat illness alone and, when in doubt, call 911.

- Take the affected worker to a cooler area (such as in the shade or in air conditioning).
- Immerse the worker in cold water or an ice bath this is the best method to cool the worker rapidly.
- Remove the worker's outer layers of clothing, especially heavy gear.
- Place ice or cold wet towels on the worker's head, neck, trunk, armpits and groin.

Employer's responsibility to protect workers

Under the Occupational Safety and Health Act, employers are responsible for providing workplaces free of known safety hazards. This includes protecting workers from heat-related hazards. It is the employer's responsibility to:

- provide workers with water, rest and shade;
- allow new or returning workers to gradually increase workloads and take more frequent breaks during the first week of work (acclimatizing);





- plan for emergencies and train workers about prevention; and
- monitor workers for signs of illness.

For indoor workplaces in Minnesota, employers must also adhere to Minnesota Rules 5205.0110, subpart 2, Heat conditions.

Creating a heat illness prevention plan

Federal OSHA's Heat Illness Prevention Campaign was designed to educate employers and workers about the dangers of working in the heat and to provide resources for developing a heat illness prevention plan, which may include the following components:

- planning and supervision explaining who will develop and manage the plan;
- protection of new workers by establishing a culture of acclimatization;
- recognition of heat hazards, including environmental monitoring; and
- determination of engineering controls, work practices and personal protective equipment (PPE).

Methods of reducing heat stress

Employers should always follow the "hierarchy of controls" when determining how to eliminate and reduce hazards. Engineering controls should be used first, followed by work practices and then PPE.

Engineering controls

- Install air conditioning, increased ventilation or cooling fans.
- Use reflective shields to redirect radiant heat.
- Insulate hot surfaces and eliminate steam leaks.
- Use cooled seats or benches and misting fans.

Work practices

- Modify work schedules and schedule shorter shifts for unacclimatized workers (gradually increasing shifts over one to two weeks).
- Follow the "rule of 20%," where new employees work only 20% of the normal duration on their first day and then increase work duration by 20% on subsequent days until the worker is performing a normal schedule.
- Require mandatory rest breaks in a cooler environment.
- Consider scheduling work at cooler times of the day, such as early morning or late afternoon.
- Reduce physical demands as much as possible and rotate job functions to minimize worker exertion.





Personal protective equipment

- Provide insulated suits, reflective clothing, face shields and cooling neck wraps.
- For extreme heat, provide cooling vests or jackets with reusable ice pack inserts.

See a comprehensive list of controls from federal OSHA.

Other helpful tools and information

Minnesota OSHA Compliance

The MNOSHA Compliance: Heat stress webpage contains information, links to helpful resources and contact information.

Minnesota Department of Health

Recently, the Minnesota Department of Health launched the Stay Cool MN campaign, which provides information about and resources for staying hydrated, informed and cool on its Extreme Heat webpage. Vulnerable groups most at risk of heat-related illnesses include adults older than 65, young children, people with disabilities, people with certain health conditions and pregnant people. The Extreme Heat Toolkit contains flexible heat safety strategies and guidance to meet unique needs of Minnesota communities.

OSHA-NIOSH heat safety tool app

- Allows workers and supervisors to calculate the heat index for their worksite.
- Displays a risk level to outdoor workers and has reminders about protective measures.
- Available in English and Spanish for Android and iPhone devices.

Federal OSHA proposed rulemaking

Federal OSHA has initiated the rulemaking process for a standard for heat injury and illness prevention in outdoor and indoor work settings. Updates regarding the rulemaking process and current status, including links to the proposed rulemaking, are available online.

National Weather Service

The National Weather Service "HeatRisk" webpage shows a color-numeric-based index that provides a forecast risk of heat-related impacts over a 24-hour period.

Other resources, links

The majority of the information provided here was obtained from federal OSHA's Heat Illness Prevention Campaign webpage; federal OSHA also provides an Additional Resources webpage.



Walz signs bill to protect Minnesota commercial scuba divers in lakes

Gov. Tim Walz signed the Brady Aune and Joseph Anderson Safety Act bill into law Thursday, May 1, establishing safety requirements for aquatic plant management companies whose employees use scuba gear. The bill was proposed

following the deaths of Aune and Anderson, who drowned while performing lake weed removal using scuba equipment without proper training.

"Brady and Joseph were two remarkable young men whose tragic, preventable deaths are a stark reminder that workplace safety cannot be an afterthought," said Gov. Walz. "With this bipartisan legislation, we're preventing future tragedies and making Minnesota a safer place to work. I applaud the strength, courage and dedication of the families who have tirelessly advocated to ensure every Minnesotan who goes to work returns home safely."



Gov. Tim Walz is joined by Department of Labor and Industry representatives, legislative staff members and family members of Brady Aune and Joseph Anderson for the signing of the Brady Aune and Joseph Anderson Safety Act bill, Thursday, May 1, at the Capitol. The new law established safety requirements for the aquatic plant management companies whose employees use scuba gear.

The bill includes additional

occupational safety and health requirements for those conducting scuba diving at a place of employment. It requires any diver be scuba certified, mandates specific equipment for all dives, requires an employer to provide certain equipment upon the request of an employee, necessitates the presence of a standby diver, and requires first aid and CPR training.

• Read the legislative update from Minnesota OSHA

Results from federal annual audit of Minnesota OSHA program

In February, federal OSHA performed its Federal Annual Monitoring Evaluation (FAME) audit of Minnesota OSHA's (MNOSHA's) state-plan program.

The federal OSHA fiscal-year 2024 comprehensive report, including Department of Labor and Industry Commissioner Nicole Blissenbach's response, will soon be available at osha.gov/stateplans/famereport/MN.



Through federal-fiscal-year 2024 (Oct. 1, 2023, through Sept. 30, 2024), Minnesota OSHA:

- investigated 30 fatalities and 23 serious injuries that occurred under its jurisdiction;
- conducted 1,144 inspections (4.8% at public-sector employers), with 2,813 hazards identified 74% serious;
- handled 240 total on-site complaint inspections, with the response time to these complaints at 3.23 days;
- issued citations within 43 days (safety) and 54 days (health);
- reduced the inspection in-compliance percentage from 43% to 35% for health, and from 35% to 31% for safety;
- increased the average number of serious, willful and repeat violations from 2.07 to 2.45 per inspection; and
- increased the average current penalties for serious violations from \$1,223.06 to \$2,286.50.

MNOSHA staff members attend electrical standards training

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Twenty-eight Minnesota OSHA (MNOSHA) Compliance and **MNOSHA Workplace Safety Consultation staff members** recently attended a two-week federal OSHA electrical standards course conducted by the OSHA Training Institute (OTI) at the **International Brotherhood of** Electrical Workers (IBEW) Local 110 facility in St. Paul, Minnesota. MNOSHA staff members typically attend this required course at the OTI facility in Arlington Heights, Illinois – the course itself is free, but employee expenses and lodging are paid by MNOSHA. By planning a year in advance with OTI and finding a local facility, **MNOSHA** saved by instead paying only the expenses and lodging for the two OTI instructors to come to Minnesota to conduct the training.

The main goal of this electrical course is to ensure MNOSHA compliance officers and consultants have the knowledge and skills necessary to document electrical hazards. This course is designed to provide the learner with an in-depth study of OSHA's electrical standards and the hazards associated with electrical installations and equipment in **OSHA** general industry and construction standards. **Emphasis is placed on electrical** hazard recognition and OSHA policies and procedures through workshops and field demonstrations.

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MNOSHA Compliance continues hiring, training new investigators

Minnesota OSHA (MNOSHA) Compliance continues to focus on securing knowledgeable and well-trained staff members to ensure all employees in the state of Minnesota have a safe and healthy place to work.

New MNOSHA Compliance investigators have a wide variety of safety and health backgrounds and experiences. After being hired, investigators are sent through MNOSHA's extensive training curriculum, with classroom instruction, federal and state standards review, and investigative observation and participation. In addition, newly hired employees attend a variety of in-depth courses through the OSHA Training Institute and are partnered with seasoned, knowledgeable staff members and mentored throughout a sixmonth training period, being followed closely by trainers and supervisors. Investigators also attend continuing education courses throughout their career with MNOSHA Compliance.

MNOSHA Compliance has increased hiring and training new safety investigators and industrial hygienists during the past two years. The COVID-19 pandemic created new and unique challenges for investigators, for hygienists and for MNOSHA as a whole. In addition, MNOSHA Compliance experienced the loss of longtime investigators and hygienists to retirement, in-house promotions and transfers to other agencies. Throughout all of this, MNOSHA Compliance remains committed to maintaining a strong, welltrained workforce to protect Minnesota workers.

How to find open positions and apply

If you are interested in a position with MNOSHA, visit the state's Minnesota Careers Website at mn.gov/mmb/careers.

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Minnesota OSHA rulemaking updates

MNOSHA proposes to adopt technical corrections to the federal amended hazard communication standard

On May 20, 2024, federal OSHA published a final rule in the *Federal Register* to amend the hazard communication standard to conform to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals. The modifications to the standard include, but are not limited to: revised criteria for classification of certain health and physical hazards to better capture and communicate the hazards to downstream users; revised provisions for updating labels; new labeling provisions for small containers (including provisions addressing the labeling of small containers and the relabeling of chemicals that have been released for shipment); new provisions related to concentrations or concentration ranges being claimed as trade secrets; technical amendments related to the contents of safety data sheets; and related revisions to definitions of terms used in the standard.

On Oct. 9, 2024, federal OSHA published a final rule in the *Federal Register* with corrections and technical amendments made to the original amended hazard communication standard, which had been published as final rule in the *Federal Register* May 20, 2024. The changes consist of two corrections to the regulatory text involving mis-numbered portions of paragraph (d) in the final rule and removing a phrase regarding the transmission of labels by electronic or other technological means, which had been inadvertently included in paragraph (f)(11). Other updates to the document include corrections to errors in the appendices of the document. In particular, OSHA added a correction involving hazard statements for aerosols, updating them to reflect chemicals under pressure in appendix C.

Minnesota OSHA (MNOSHA) has proposed to adopt the updated final rule correction and technical amendment as published in the *Federal Register* Oct. 9, 2024. See the notice published in the *State Register* on June 30.

MNOSHA proposes to adopt revision to federal personal protective equipment in construction standard

On Dec. 12, 2024, federal OSHA published in the *Federal Register* a revision to its personal protective equipment (PPE) standard for construction to explicitly require that the equipment must fit, which became a final rule Jan. 13, 2025. The revision amends 29 CFR 1926.95, Criteria for Personal Protective Equipment in Construction, to make explicit the existing requirement that employers in the construction industry must ensure PPE worn by employees fits. This update states employers must ensure all employee PPE is of safe design and construction for the work being performed and the PPE is selected to ensure it properly fits each affected employee.

Minnesota OSHA proposes to adopt the final rule amendment as published in the *Federal Register* Dec. 12, 2024. See the notice published in the *State Register* on June 30.

MNOSHA to enforce safety requirements for employers engaged in commercial diving operations for the purpose of harvesting or destroying aquatic plants

On May 1, 2025, MNOSHA received the following policy from bill H.F. 1355, written by the House and Senate committees and signed by Minnesota Gov. Tim Walz, concerning safety requirements for employers harvesting or destroying aquatic plants using commercial diving operations and equipment.

The Brady Aune and Joseph Anderson Safety Act (Minnesota Statutes 182.679) requires employers making improvements to land, including aquatic weed removal using scuba-diving equipment to implement employee scuba-diving training and certification, and provide standardized required and optional equipment to safeguard employees from diving hazards.

This statute also requires the Minnesota Department of Natural Resources (DNR) to deny annual permits to aquatic weed removal contractors issued one or more willful citations by MNOSHA Compliance in the previous two years or that have contested one or more willful violation during the pendency of the contested cases. Additionally, this statute requires DNR to verify employers have conducted third-party, on-site, hazard surveys prior to being permitted to conduct mechanical aquatic weed removal.

MNOSHA WSC presents at safety event to prevent falls in construction

Michelle Smith, Minnesota OSHA (MNOSHA) Workplace Safety Consultation, provided one of four 15-minute "toolbox talks" to 200 workers at a May 7 event in observance of the National Safety Stand-down to Prevent Falls in Construction.

The Pike Construction Safety Day event was at the Walmart Distribution Center Expansion Project in Mankato, Minnesota. Smith gave a MNOSHA update, while other talks were given by representatives from a Caterpillar distributor, the Mankato Fire Department and United Rentals. Vendors were also on site for workers to visit and a box lunch was provided.

The annual National Safety Stand-down to Prevent Falls in Construction aims to raise awareness among employers and workers about



Michelle Smith, Minnesota OSHA (MNOSHA) Workplace Safety Consultation, provides a MNOSHA update during a fall-prevention safety event May 7 in Mankato, Minnesota.

preventing falls, which account for the highest number of deaths in the construction industry. During the stand-down, employers and workers are asked to pause their workday to talk about fall prevention in construction and discuss topics such as ladder safety, scaffolding safety and roofing work safety.

MNOSHA fatality, serious-injury investigations summaries online

Each month, Minnesota OSHA (MNOSHA) Compliance publishes current, updated summaries of its fatality investigations and serious-injury investigations.

For the federal-fiscal-year that began Oct. 1, 2024, MNOSHA Compliance has investigated 13 fatalities as of June 25.

The information provided about each investigation is: the inspection number, date of incident and worksite city; the type of business and number of employees; a description of the event; and the outcome of the MNOSHA Compliance investigation.

The summaries, plus other helpful workplace safety and health information from MNOSHA, are available on the MNOSHA Compliance: Resources for all industries webpage.



Dates announced: 2025/2026 Construction Seminar season

Minnesota OSHA (MNOSHA) Compliance offers free Construction Seminars every other month – September through May – that feature a presentation about a specific construction safety or health topic, with time for questions, answers and input. MNOSHA Compliance also provides a general update about what's happening regarding investigations.

The Construction Seminars are set up for interaction with the audience, leading to better understanding of the topic and more practical learning, and providing a safe environment for participants to ask real worksite questions and get real worksite safety and health solutions.



2025/2026 dates

All dates are Tuesdays. The seminars are 7 to 8:30 a.m. Topics for each seminar are currently being determined.

• Sept 16 • Nov. 18 • Jan. 20 • March 17 • May 19

The Construction Seminars are now being offered in person, virtually or both. The in-person location is the Minnesota Department of Labor and Industry, 443 Lafayette Road N., St. Pau, MN (get directions, maps to free visitor parking). Mark your calendar now and subscribe to the Construction Seminar email list to receive notice about each event.

Be a part of Workplace Rights Week 2025

The Minnesota Department of Labor and Industry (DLI) has started planning the second annual Workplace Rights Week, taking place Sept. 21-27, 2025. The week is an opportunity to educate both workers and employers across Minnesota about their rights and responsibilities on the job. Safe and healthy workplaces make our economy and



communities strong and it is important Minnesotans know and are empowered to assert those rights.

In 2024, DLI launched the first-ever Workplace Rights Week, during which DLI staff members visited 1,243 businesses in 29 cities, hosted webinars with partners and joined Lt. Gov. Peggy Flanagan at a worksite event to increase awareness of workplace rights in Minnesota. The first year was a success and 2025 is expected to be even bigger.

We invite you to join us in this effort. DLI is looking to partner with organizations to host webinars, distribute educational materials or host other events. If you want to collaborate with us or plan your own event during Workplace Rights Week 2025, email Diana Salas at diana.salas@state.mn.us.

To see what is already planned, visit dli.mn.gov/rights-week.

Apply now: Ergonomic safety grant funds available until June 2026

The Department of Labor and Industry (DLI) received additional one-time funding to administer a safety grant program specifically designed to aid employers covered under Minnesota Statutes section 182.677, Ergonomics, as part of the 2023 legislative session. More than \$1 million in ergonomics safety grant funds are available until June 30, 2026.

Minnesota OSHA (MNOSHA) Workplace Safety Consultation administers the program, which provides matching funds up to \$10,000 for qualifying employers to make ergonomic improvements recommended by an on-site safety survey. Funds are available to the following.

- Health care facilities, meaning hospitals having a North American Industry Classification System (NAICS) code of 622110, 622210 or 622310; an outpatient surgical center with a NAICS code of 621493; and a nursing home with a NAICS code of 623110.
- Warehouse distribution centers, meaning a site in Minnesota with 100 or more employees and a NAICS code of 493110, 423110 to 423990, 424110 to 424990, 454110 or 492110.
- **Meatpacking sites**, meaning a site in Minnesota with 100 or more employees and a NAICS code of 311611 to 311615, except 311613.

Designated employers covered by workers' compensation insurance and those approved as self-insured employers are eligible to apply for safety and health matching grants to abate ergonomic-related hazards in their workplace. The safety and health hazards must have been identified in an on-site survey conducted by one of the following:

- a MNOSHA Compliance safety or health investigator;
- a MNOSHA Workplace Safety Consultation safety or health consultant;
- an in-house employee safety and health committee;
- a workers' compensation insurance underwriter;
- a private safety and health consultant; or
- a person under contract with the Assigned Risk Plan.



The on-site safety and health survey must have resulted in specifically recommended safety or health practices, or equipment, training for purchased equipment or tuition reimbursement designed to reduce the risk of musculoskeletal disorders to employees. Costs eligible for program participation are all or part of the cost of purchasing and installing recommended equipment intended to prevent musculoskeletal disorders, training required to operate recommended equipment, tuition reimbursement related to identifying ergonomic-related issues, the cost of operating or maintaining the equipment, or the cost of purchasing or renting real property, if necessary, to meet criteria established by the on-site safety and health survey.

Since the inception of the program, MNOSHA Workplace Safety Consultation has received 95 ergonomics safety grant applications and approved funds for 89 employers making ergonomics improvements, which reduces the risk of musculoskeletal disorders.

For more information, contact MNOSHA Workplace Safety Consultation at dli.grants@state.mn.us or 651-284-5060, or visit the Safety Grant Program – ergonomics webpage.

Changes to Safety Grant Programs effective July 1

Legislation was enacted in Laws of Minnesota 2025, chapter 39, section 40, requiring the Minnesota Department of Administration's Office of Grants Management (OGM) to update its "Use of Grant Contract Agreements and Grant Award Notifications" policy and corresponding grant contract agreement templates.

OGM provides more information in its FAQs document about the updates.

Training: OSHA recordkeeping basics offered online Friday, Sept. 26

Classifying cases

Maintaining logs

Privacy cases

The Department of Labor and Industry is offering a free, online introductory- level training seminar about OSHA recordkeeping requirements on Friday, Sept. 26, from 8:30 to 11:30 a.m. Maintaining an accurate OSHA log of recordable work-related injuries and illnesses is an important skill that benefits employers, workers, safety professionals and government agencies.

Reporting log data to OSHA

Topics

- Recordability of injuries and illnesses
- Counting time
- How many logs to keep
- Creating a log summary
- Recording COVID-19 cases
- Differences between OSHA cases and workers' compensation claims

More information

Learn more about the session and how to register to attend (required) on the MNOSHA Compliance: Recordkeeping standard webpage.



Minnesota OSHA Workplace Safety Consultation offers free consultation services, where employers can find out about potential hazards at their worksites, improve safety management systems and apply for grants to abate safety standards. The program targets small, high-hazard businesses. It is separate from Minnesota OSHA Compliance inspection activities and no citations are issued as part of a consultation visit.



Web: dli.mn.gov • Email: osha.consultation@state.mn.us • Phone: 651-284-5060 or 800-657-3776

Translated materials, webpages, Language Line available via DLI website

The Department of Labor and Industry (DLI) posts its available translated materials online at dli.mn.gov/ translations. It has documents available in Chinese, Hmong, Karen, Somali and Spanish. A few other documents throughout the website are available in additional languages.



Also, the DLI website now provides Google Translate near the upper left corner of all webpages on its site, allowing visitors to choose the language for the website text.

In addition, DLI has access to Language Line, a free language translation phone service for limited-English speakers. If DLI help is needed, view the contact information at dli.mn.gov/about-department/about-dli/contact-us, call and a DLI employees will get in touch with an interpreter in the needed language.



MNOSHA Compliance signs safety, health partnerships

Minnesota OSHA (MNOSHA) Compliance signed three Level 3 Cooperative Compliance Partnerships with four construction companies. Level 3 is the peak level of these compliance partnerships, with applicants striving to be an industry leader with very comprehensive safety and health programs.

The three partnerships were signed under the Construction Health and Safety Excellence (CHASE) Minnesota initiative between MNOSHA Compliance and Associated General Contractors (AGC) of Minnesota.

Worksites recently recognized

• Adolfson and Peterson Construction and Carl Bolander and Sons Company

The Craftsman Office Building in Edina, Minnesota Project end date: Sept. 1, 2026

• J.E. Dunn

Scott County Behavioral Center in Shakopee, Minnesota Project end date: Jan. 14, 2026

• Knutson Construction

Prospect Utility Plant in Rochester, Minnesota Project end date: March 19, 2026

The partnerships acknowledge the importance of providing a safe, healthful work environment in construction and seek a working relationship that creates mutual trust and respect among all parties – including project owners and construction workers – involved in the construction process.

The MNOSHA Compliance partnership programs aim to reduce the number of injuries, illnesses and fatalities on construction sites, with a focus on eliminating injuries and fatalities resulting from the hazards that are the four leading causes of death on construction sites: fall; struckby; caught in or between; and electrocution.

Through the partnership programs, contractor managers and supervisors work together to develop safety and health management systems that go beyond basic compliance with all applicable OSHA standards and result in immediate and long-term prevention of job-related injuries and illnesses.

View complete information on the MNOSHA Compliance: Partnership programs webpage.



Adolfson and Peterson Construction and Carl Bolander and Sons Company
The Craftsman Office Building
• Edina, Minnesota



J.E. Dunn • Scott County Behavioral Center • Shakopee, Minnesota



Knutson Construction • Prospect Utility PLant • Rochester, Minnesota

Minnesota OSHA's calendar of events*

August 2025

Aug. 8Occupational Safety and Health Review Boarddli.mn.gov/about-department/boards-and-councils/occupational-safety-and-health-review-board

September 2025

- Sept. 5Occupational Safety and Health Review Board
dli.mn.gov/about-department/boards-and-councils/occupational-safety-and-health-review-board
- Sept. 16Construction Seminar: Topic to be determined
dli.mn.gov/business/workplace-safety-and-health/mnosha-compliance-construction-seminars
- Sept. 21-27 Workplace Rights Week dli.mn.gov/rights-week
- Sept. 26Training: OSHA recordkeeping basics
dli.mn.gov/business/workplace-safety-and-health/mnosha-compliance-recordkeeping-standard

November 2025

Nov. 18 *Construction Seminar: Topic to be determined* dli.mn.gov/business/workplace-safety-and-health/mnosha-compliance-construction-seminars

December 2025

- Dec. 5
 Occupational Safety and Health Advisory Council

 dli.mn.gov/about-department/boards-and-councils/occupational-safety-and-health-advisory-council
- Dec. 5 Occupational Safety and Health Review Board dli.mn.gov/about-department/boards-and-councils/occupational-safety-and-health-review-board

*All dates subject to change.

See more at dli.mn.gov/about-department/about-dli/events-minnesota-osha