

Michigan Office of Administrative Hearings and Rules

Administrative Rules Division (ARD)

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**REGULATORY IMPACT STATEMENT
and COST-BENEFIT ANALYSIS (RIS)**

Agency Information:

Department name:

Labor and Economic Opportunity

Bureau name:

MIOSHA

Name of person filling out RIS:

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Rule Set Information:

ARD assigned rule set number:

2020-67 LE

Title of proposed rule set:

General Industry Safety Standard Part 74. Fire Fighting

Comparison of Rule(s) to Federal/State/Association Standard

1. Compare the proposed rules to parallel federal rules or standards set by a state or national licensing agency or accreditation association, if any exist.

These proposed rules do not have any parallel federal rules or standards, as Federal Occupational Safety and Health Administration (OSHA) does not have jurisdiction over state, county, or municipal employers. These rules will be similar but not always as restrictive as National Fire Prevention Association (NFPA) consensus standards.

A. Are these rules required by state law or federal mandate?

Yes, as a state plan program, Michigan Occupational Safety and Health Administration (MIOSHA) is obligated to cover public sector employers.

Public Act 143 of 2020 amends the Michigan Occupational Safety and Health Act 154 of 1974 by amending section 14 and adding section 14r. The director shall promulgate rules in General Industry Safety and Health Standard Part 74. Firefighting, to include rules for best practices regarding proper use, handling, and storage of firefighting foam containing Polyfluoroalkyl Substances (PFAS).

Public Act 291 of 1966, The Fire Fighters Training Council Act, was amended on October 6, 2020. As a result of these changes, the State Fire Marshal requested that MIOSHA update General Industry Safety and Health Standard Part 74. Firefighting to adopt by reference NFPA 1403: Live Fire Standard.

B. If these rules exceed a federal standard, please identify the federal standard or citation, describe why it is necessary that the proposed rules exceed the federal standard or law, and specify the costs and benefits arising out of the deviation.

These proposed rules do not have any parallel federal rules or standards, as Federal OSHA does not have jurisdiction over state, county, or municipal employers. These rules will be similar but not always as restrictive as NFPA consensus standards.

2. Compare the proposed rules to standards in similarly situated states, based on geographic location, topography, natural resources, commonalities, or economic similarities.

Pre-employment physical - R 408.17411(1)(a)

Illinois and Indiana do not appear to have a requirement for pre-employment physicals.

Ohio's Section 124.42 requires passage of a physical examination.

Wisconsin's Code Department of Safety and Professional Services (SPS), Chapter SPS 330 (SPS 330.15) requires fire fighters to be physically capable of performing assigned duties.

Hose loading – R 408.17421(3)

Illinois, Indiana, and Ohio do not appear to have requirements for performing hose loading operations on moving fire apparatus.

Wisconsin's Chapter SPS 330.09 has similar requirements as MIOSHA for hose loading operations on moving fire apparatus with the following two exceptions: (1) Wisconsin limits the fire apparatus direction of travel to forward only whereas MIOSHA does not. (2) Wisconsin does not require the use of a travel restraint system or appropriate fall protection by an employee in the hose bed whereas MIOSHA does.

Life safety rope & equipment – R 408.17463(1)

Illinois and Indiana do not appear to have requirements for ladder belt systems, life safety rope, harnesses, or auxiliary equipment.

Ohio's Rule 4123:1-21-02 requires a ladder belt, life safety rope, harness, and auxiliary equipment to meet the requirements of NFPA 1983: "Standard on Life Safety Rope and Equipment for Emergency Services," 2012 edition whereas MIOSHA requires the 2001 edition.

Wisconsin's Chapter SPS 330.10 requires life safety ropes, harnesses, and hardware to meet the requirements of NFPA 1983: "Standard on Life Safety Rope and Equipment for Emergency Services," 2017 edition whereas MIOSHA requires the 2001 edition.

Portable ladders – R 408.17426

Illinois, Indiana, Ohio, and Wisconsin do not appear to require portable ground ladders used in structural firefighting or training to meet the requirements of NFPA 1931: "Standard for Manufacturer's Design of Fire Department Ground Ladders," 1994 edition or NFPA 1932: "Standard on Use, Maintenance, and Service Testing of In-service Fire Department Ground Ladders," 2015 edition.

PFAS –Proper use, handling, storage, and containment of firefighting foam concentrate - R 408.17430

Illinois, Indiana, and Ohio do not appear to have any requirements for the containment and handling of materials contaminated by foam containing PFAS.

Wisconsin Act 101 of 2019 implemented measures that mitigate the discharge of PFAS-containing firefighting foam into the environment.

Protective ensemble – R 408.17432

Illinois and Indiana do not appear to have requirements for a protective ensemble for structural firefighting.

Ohio Rule 4123: 1-21-02 Personal Protective Clothing and Equipment for Structural Firefighting requires that NFPA 1971: “Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting,” 2013 edition be followed.

Wisconsin Rule SPS 330.11 requires that NFPA 1971: “Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting,” 2018 edition be followed for new equipment. Existing protective clothing and equipment shall meet the NFPA standard that was current when the protective clothing or equipment was purchased or obtained by the fire department.

Respiratory protection (SCBA & PASS) – R 408.17436 & R 408.17440

Illinois and Indiana do not appear to have additional requirements for self-contained breathing apparatus ("SCBA") related to firefighting.

Ohio requires that SCBA's be approved by the National Institute for Occupational Safety and Health (NIOSH) and the National Fire Protection Association (NFPA). However, specific editions are not identified in Rule 4123: 1-21-02 Personal Protective Clothing and Equipment for Structural Firefighting.

Ohio Rule 4123: 1-21-02 Personal Protective Clothing and Equipment for Structural Firefighting requires that NFPA 1982: “Standard on Personal Alert Safety Systems (PASS),” 2013 edition be followed.

Wisconsin Rule SPS 330.12(3) requires that NFPA 1981: “Standard on Open Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services,” 2013 edition, be followed.

Wisconsin Rule SPS 330.13 requires that NFPA 1982: “Standard on Personal Alert Safety Systems (PASS),” 2013 edition be followed.

First Aid, Cardiopulmonary Resuscitation and Automated External Defibrillator Training – R 408.17464

Illinois, Indiana, Ohio, and Wisconsin do not appear to have firefighter-specific requirements for first aid, cardiopulmonary resuscitation, and automated external defibrillator training beyond what may be required if an employee is a licensed emergency medical services provider.

NFPA 1403: Live Fire Training – R 408.17464

Indiana and Illinois do not appear to have a requirement for live fire training.

Ohio has a Live Fire Certification Program (administrative code 4764-21-03). They also require the following of NFPA 1403: Standard on Live Fire Training Evolutions be followed during live fire training.

Wisconsin requires NFPA 1403: Standard on Live Fire Training Evolutions be followed.

A. If the rules exceed standards in those states, please explain why and specify the costs and benefits arising out of the deviation.

Pre-employment physical – R 408.17464 Training and education program.

The proposed rules for pre-employment physicals exceed the standards in Illinois and Indiana because those states do not appear to require pre-employment physicals. A typical cost for a physical would be \$65.00 per employee. Physicals are required to ensure that firefighters are healthy enough to perform their duties.

Hose loading – R 408.17421 Fire apparatus generally.

The proposed rules for hose loading exceed the standards in Illinois, Indiana, and Ohio because those states do not appear to have requirements for hose loading. See the response to question 13 below for a cost breakdown associated with R 408.7421(3). The proposed rules would protect firefighters from falls from elevation during hose loading operations.

Life safety rope & equipment – R 408.17421 Aerial apparatus.

The proposed rules exceed the standards in Illinois and Indiana because those states do not appear to have requirements for ladder belt systems, life safety rope, harnesses, and auxiliary equipment. See the response to question 13 below for a cost breakdown associated with R 408.17463. The proposed rules would protect firefighters while working from a fixed position, from an aerial apparatus ladder and while supporting personnel during emergency operations or training for these operations.

Portable ladders – R 408. 17426 Portable ladders.

The proposed rules exceed the standards in Illinois, Indiana, Ohio, and Wisconsin because those states do not appear to require portable ground ladders used in structural firefighting or training. See the response to question 13 below for a cost breakdown associated with R 408.17426(1)(a) and (b). The proposed rule would ensure the ladders firefighters use are in accordance with NFPA 1931 and 1932.

PFAS –Proper use, handling, storage, and containment of firefighting foam concentrate – R 408.17430.

The proposed rules exceed the standards in Illinois, Indiana, and Ohio because those states do not appear to have any requirements for the containment and handling of materials contaminated by foam containing PFAS. See the response to question 13 below for a cost breakdown associated with R 408.17430. The proposed rule would reduce and protect firefighters from occupational exposure to PFAS.

Protective ensemble –Protective ensemble for structural firefighting - R 408.17432.

The proposed rules exceed the standards in Illinois and Indiana because those states do not appear to have requirements for a protective ensemble for structural firefighting. See the response to question 13 below for a cost breakdown associated with R 408.17432. The proposed rule would ensure firefighters' protective ensembles meet or exceed a more recent version of NFPA 1971.

Respiratory protection (SCBA & PASS) –Respirator protection devices - R 408.17436 and R 408.17440.

The proposed rules exceed the standards in Illinois and Indiana because those states do not appear to have additional requirements for self-contained breathing apparatus ("SCBA") related to firefighting. See the response to question 13 below for a cost breakdown associated with R 408.17436. The proposed rule would ensure firefighters' respiratory protection devices meet or exceed a more recent version of NFPA 1981 and 1982.

First Aid, Cardiopulmonary Resuscitation and Automated External Defibrillator Training – R 408.17464.

The proposed rules exceed the standards in Illinois, Indiana, Ohio, and Wisconsin because those states do not appear to have firefighter specific requirements for first aid, cardiopulmonary resuscitation, and automated external defibrillator training beyond what may be required if an employee is a licensed emergency medical services provider. See the response to question 13 below for a cost breakdown associated with R 408.17464. The proposed rule would ensure that firefighters are capable of providing first aid and cardiopulmonary resuscitation to fellow firefighters.

NFPA 1403: Live Fire Training –Training and education program - R 408.17464.

The proposed rules exceed the standards in Indiana because Indiana does not appear to have a requirement for live fire training. See the response to question 13 below for a cost breakdown associated with R 408.17464(2). The proposed rule would ensure all live fire training evolutions are conducted according to NFPA 1403.

3. Identify any laws, rules, and other legal requirements that may duplicate, overlap, or conflict with the proposed rules.

There is minimal duplication since Public Act 291 of 1966, The Fire Fighters Training Council Act refers to MIOSHA General Industry Safety and Health Standard Part 74 Firefighting.

Public Act 291 of 1966 references the following MIOSHA GI Part 74. Firefighting rules:

- R 408.17401 Scope
- R 408.17411 Duties of employer

Proper use, handling, storage, and containment of firefighting foam concentrate

- R 408.17430(1)
- R 408.17430(2)
- R 408.17430(3)
- R 408.17430(5)

Training and education program

- R 408.17464
- R 408.17464(2)

A. Explain how the rules have been coordinated, to the extent practicable, with other federal, state, and local laws applicable to the same activity or subject matter. This section should include a discussion of the efforts undertaken by the agency to avoid or minimize duplication.

Public Act 132 of 2020 amends the Natural Resources and Environmental Protection Act 451 of 1994. Section(s) 324.14701, 14703, and 14705 overlap with GI Part 74 Michigan Rule R 408.17430 that requires a fire department to report the use of intentionally added PFAS firefighting foam. MIOSHA has decided to leave this requirement in our rules to emphasize this requirement for the fire departments.

4. If MCL 24.232(8) applies and the proposed rules are more stringent than the applicable federally mandated standard, provide a statement of specific facts that establish the clear and convincing need to adopt the more stringent rules.

MCL 24.232(8) does not apply to the proposed rules because there is no federally mandated standard for public sector firefighting.

5. If MCL 24.232(9) applies and the proposed rules are more stringent than the applicable federal standard, provide either the Michigan statute that specifically authorizes the more stringent rules OR a statement of the specific facts that establish the clear and convincing need to adopt the more stringent rules.

MCL 24.232(9) does not apply to these rules because there is no federally mandated standard for public sector firefighting.

Purpose and Objectives of the Rule(s)

6. Identify the behavior and frequency of behavior that the proposed rules are designed to alter.

The behavior and frequency of behavior that the proposed rules are designed to alter include the following:

Pre-employment physical – R 408.17411(1)(a)

The behavior the proposed rule is designed to alter is to ensure prospective firefighters receive a pre-employment physical conducted by a physician or other licensed healthcare professional to ensure they have the ability to perform assigned emergency operations. The frequency of the behavior is required anytime a prospective firefighter is hired.

Hose loading – R 408.17421(3)

The desired behavior/practice is to ensure that any employee riding on or in a fire apparatus shall be safely secured by a seat belt or safety harness any time the apparatus is in motion. If the operation occurs while the apparatus is in motion several conditions must be met, as outlined in the proposed rule.

Life safety rope & equipment – R 408.17463(1)

The behavior the proposed rule is designed to alter is to ensure that firefighters' life safety ropes and equipment comply with a newer version of the NFPA 1983 standard. This would be for existing equipment already possessed by a department or future equipment purchases. The frequency of the behavior is anytime a firefighter uses life safety rope and equipment that is covered by the NFPA standard.

Portable ladders – R 408.17426

The behavior the proposed rule is designed to alter is to ensure that portable ladders used in structural firefighting or training comply with NFPA standards 1931 and 1932. This would be for existing equipment already possessed by a department or future equipment purchases. The frequency of the behavior is anytime a firefighter uses a portable ladder for structural firefighting or training.

PFAS – R 408.17430

The behavior the proposed rule is designed to alter is to ensure the following:

- (1) An employer must follow the specific, manufacturer provided safety data sheets (SDSs) for all firefighting foam concentrate that employees may be exposed to and follow best practices regarding the proper use, handling, and storage information.
- (2) An employer must prevent intentionally added PFAS containing foam concentrate or foam solution from entering groundwater, surface water, or storm drains as soon as possible.
- (3) An employer must dispose of materials contaminated by foam containing PFAS pursuant to the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.101 to 324.90106.
- (4) An employer must ensure the decontamination of a firefighter's body and equipment.
- (5) An employer must prohibit the use of firefighting foam concentrate containing intentionally added PFAS, by a firefighter, for training purposes.
- (6) An employer must prohibit the use of firefighting foam concentrate containing intentionally added PFAS, by a firefighter, for equipment calibration purposes (unless required by law or facility where the calibration takes place has implemented appropriate measures). The frequency of these behaviors occurs anytime a firefighter uses firefighting foam concentrate.

Protective ensemble – R 408.17432

The behavior the proposed rule is designed to alter is to ensure that the firefighters' protective ensemble complies with a newer version of the NFPA 1971 standard. This would be for existing protective ensembles already possessed by a department or future purchases. The frequency of the behavior is anytime a firefighter is performing structural firefighting.

Respiratory protection (SCBA & PASS) – R 408.17436 & R 408.17440

The behavior the proposed rule is designed to alter is to ensure that the firefighters' respiratory protection devices comply with a newer version of NFPA 1981 and 1982. This would be for existing respiratory protection already possessed by a department or future purchases. The frequency of the behavior is anytime a firefighter is required to wear an SCBA or PASS.

Training & Education – R 408.17464

The behavior the proposed rule is designed to alter is to ensure firefighters receive and maintain certification in first aid, cardiopulmonary resuscitation, and automated external defibrillator. The frequency of the behavior is initial and continual training to maintain certifications.

Live Fire Training – R 408.17464

The behavior the proposed rule is designed to alter is to ensure all live fire training must meet or exceed the requirements of the NFPA 1403. The frequency of the behavior is anytime a department is going to participate in live fire training evolutions.

A. Estimate the change in the frequency of the targeted behavior expected from the proposed rules.

The frequency of the targeted behavior for first aid, cardiopulmonary resuscitation and automated external defibrillator training is expected to increase to maintain certifications. There are no other expected changes in frequency for the other proposed rules.

B. Describe the difference between current behavior/practice and desired behavior/practice.

Pre-employment physical – R 408.17411(1)(a)

The difference between the current behavior/practice and the desired practice is that a pre-employment physical must be conducted by a physician or other licensed health care professional.

Hose loading – R 408.17421(3)

The current behavior practice allows employees to be unsecured on the moving apparatus while loading hoses. The desired behavior/practice is to ensure the following:

Any employee riding on or in a fire apparatus shall be safely secured by a seat belt or safety harness any time the apparatus is in motion. No employee may stand or ride on the tail steps, sidesteps, running boards, or other exposed part of a fire apparatus while the apparatus is in motion, except when certain conditions are met as provided in this section.

Life safety rope & equipment R 408.17463(1)

The difference between the current behavior/practice and the desired behavior/practice is that firefighters' life safety ropes and equipment must comply with a newer version of the NFPA 1983 standard.

Portable ladders – R 408.17426

The current behavior/practice is for portable ladders to be in compliance with General Industry Safety and Health Standard Part 2. "Walking-Working Surfaces." The desired behavior/practice is for portable ladders used in structural firefighting or training to comply with NFPA standards 1931 and 1932.

PFAS

There is no current behavior/practice for this rule. The desired behavior/practice is to ensure the following:

- (1) An employer must follow the specific, manufacturer provided safety data sheets (SDSs) for all firefighting foam concentrate that employees may be exposed to and follow best practices regarding the proper use, handling, and storage recommendations.
- (2) An employer must prevent intentionally added PFAS containing foam concentrate or foam solution from entering groundwater, surface water, or storm drains as soon as possible.
- (3) An employer must dispose of materials contaminated by foam containing PFAS pursuant to the natural resources and environmental protection act, 1994 PA 451, MCL 324.101 to 324.90106.
- (4) An employer must ensure the decontamination of a firefighter's body and equipment.
- (5) An employer must prohibit the use of firefighting foam concentrate containing intentionally added PFAS, by a firefighter, for training purposes.
- (6) An employer must prohibit the use of firefighting foam concentrate containing intentionally added PFAS, by a firefighter, for equipment calibration purposes (unless required by law or if the facility where the calibration takes place has implemented appropriate measures).

Protective ensemble – R 408.17432

The difference between the current behavior/practice and the desired behavior/practice is that the firefighters' protective ensemble complies with a newer version of the NFPA 1971 standard.

Respiratory protection (SCBA & PASS) – R 408.17436 and R 408.17440

The difference between the current behavior/practice and the desired behavior/practice is that the firefighters' respiratory protection devices comply with newer versions of NFPA 1981 & 1982.

Training & Education – R 408.17464

There is no current behavior/practice for this rule. The desired behavior/practice is to ensure firefighters receive and maintain certification in first aid, cardiopulmonary resuscitation, and automated external defibrillator.

Live Fire Training – R 408.17464

There is no current behavior/practice for this rule. The desired behavior/practice is to ensure all live fire training meets or exceeds the requirements of NFPA 1403.

C. What is the desired outcome?

The desired outcome is for affected employers to comply with the proposed rules so that the desired behaviors/practices outlined above in question 6B are met.

7. Identify the harm resulting from the behavior that the proposed rules are designed to alter and the likelihood that the harm will occur in the absence of the rule.

Firefighting is an inherently dangerous occupation. The proposed rules are designed to protect the health and safety of Michigan firefighters. In the absence of the proposed rules, Michigan firefighters will face an increased risk of serious injuries that could result in death or serious physical harm.

A. What is the rationale for changing the rules instead of leaving them as currently written?

Public Act 143 of 2020 amends the Michigan Occupational Safety and Health Act 154 of 1974 by amending section 14 and adding section 14r. The director shall promulgate rules in General Industry Safety and Health Standard Part 74. Firefighting, to include rules for best practices regarding proper use, handling, and storage of firefighting foam containing Polyfluoroalkyl Substances (PFAS).

Public Act 291 of 1966, The Fire Fighters Training Council Act, was amended on October 6, 2020. As a result of these changes, the State Fire Marshal requested that MIOSHA update General Industry Safety and Health Standard Part 74. Firefighting to adopt by reference NFPA 1403: Live Fire Standard.

The remainder of the proposed rule changes will include new requirements for pre-employment physicals, hose loading, life safety rope and equipment, portable ladders, protective ensemble, respiratory protection, and training and education. The proposed rules are consistent with the recommendations agreed upon by the Advisory Committee (AC), which was made up of industry representatives from both management and labor.

8. Describe how the proposed rules protect the health, safety, and welfare of Michigan citizens while promoting a regulatory environment in Michigan that is the least burdensome alternative for those required to comply.

The proposed rules include best practices for the proper use, handling, and storage of firefighting foam containing PFAS. The rules will help limit the amount of PFAS contamination while protecting Michigan citizens and the environment.

The proposed rule changes will include new requirements for live fire training, pre-employment physicals, hose loading, life safety rope and equipment, portable ladders, protective ensemble, respiratory protection, and training and education programs pertaining to firefighting to improve the health and safety of Michigan firefighters. In some instances, the proposed rules referencing updated NFPA standards did not adopt the most recent version, which would have been more burdensome for some employers. In addition, some of the proposed rules have a delayed compliance date of January 1, 2025, to be less burdensome.

9. Describe any rules in the affected rule set that are obsolete or unnecessary and can be rescinded.

The following rules are being rescinded because they are being redefined in other added or amended sections of the new proposed rules: R 408.17434 – Foot and leg protection, R 408.17435 – Hand protection, R 408.17437 – Hearing protection.

Fiscal Impact on the Agency

Fiscal impact is an increase or decrease in expenditures from the current level of expenditures, i.e. hiring additional staff, higher contract costs, programming costs, changes in reimbursements rates, etc. over and above what is currently expended for that function. It does not include more intangible costs for benefits, such as opportunity costs, the value of time saved or lost, etc., unless those issues result in a measurable impact on expenditures.

10. Please provide the fiscal impact on the agency (an estimate of the cost of rule imposition or potential savings for the agency promulgating the rule).

Printing and distribution of the rules is estimated to be \$200, the cost to purchase the NFPA consensus standards is \$453.50. In addition, in-house training for MIOSHA staff is estimated to be \$1,000.

11. Describe whether or not an agency appropriation has been made or a funding source provided for any expenditures associated with the proposed rules.

The MIOSHA agency has a training budget that includes purchasing any newly required NFPA Standards for educating our employees on revisions to standards.

12. Describe how the proposed rules are necessary and suitable to accomplish their purpose, in relationship to the burden(s) the rules place on individuals. Burdens may include fiscal or administrative burdens, or duplicative acts.

The proposed rules are consistent with the recommendations agreed upon by the Advisory Committee, which was made up of industry representatives from both management and labor. The committee weighed the benefits versus the fiscal burdens that would affect all sizes of fire departments and determined that the proposed rules are needed to ensure the safety and health of firefighters.

A. Despite the identified burden(s), identify how the requirements in the rules are still needed and reasonable compared to the burdens.

The proposed rules are consistent with the recommendations agreed upon by the Advisory Committee, which was made up of industry representatives from both management and labor. The committee weighed the benefits versus the burdens and determined that the proposed rules are needed to ensure the safety and health of firefighters.

Impact on Other State or Local Governmental Units

13. Estimate any increase or decrease in revenues to other state or local governmental units (i.e. cities, counties, school districts) as a result of the rule. Estimate the cost increases or reductions for other state or local governmental units (i.e. cities, counties, school districts) as a result of the rule. Include the cost of equipment, supplies, labor, and increased administrative costs in both the initial imposition of the rule and any ongoing monitoring.

The cost to purchase the NFPA consensus standards updated in R 408.17405 is \$453.50. However, many municipalities already maintain the latest version of all NFPA consensus standards. The NFPA consensus standards are also available for inspection at the Department of Labor and Economic Opportunity, MIOSHA Standards & FOIA Section.

On July 30, 2021, MIOSHA sent out a GI Part 74 Regulatory Impact Statement (RIS) survey to an extended list of Advisory Committee members and to the list of contacts provided by the State of Michigan Fire Marshal. The RIS survey was used to gather information regarding the new proposed rules and the impact the changes will have on small, medium, large, very large and “unknown” (no responses)-sized fire departments. Altogether, MIOSHA received 159 responses.

The fire department’s size was divided up based on the annual operating budget intake. The small fire departments reflect an annual operating budget of \$10,000-\$500,000. The medium-sized fire departments reflect an annual operating budget of \$500,001-\$3,000,000. The larger fire departments reflect an annual operating budget of \$3,000,001-\$8,000,000, and the very large fire departments reflect an annual operating budget of \$8,000,001 and above. The "unknown" size is data where fire departments responded but did not provide an annual operating budget, so MIOSHA could not place them amongst the others.

No. of Fire Dept./Size Avg. No. of employees Avg. Annual Operating Budget

Small	7620	\$182,890
Med.	4829	\$1,543,396
Large	2038	\$4,816,888
V Large	7224	\$36,200,000
Unknown	819	No responses

Below are the results of the data received:

New subrule R 408.7421(3) - According to the GI Part 74 RIS survey results, 30% of small, 9% of medium, 0% of large, 0% of very large, and 0% of “unknown” fire departments currently have a travel restraint system.

Average estimated cost for compliance to new subrule R 408.7421(3): (small, medium, large, very large and “unknown” fire departments):

- Small: \$3,457 (No. of respondents: 7 out of 76)
- Medium: \$3,388 (No. of respondents 8 out of 48)
- Large: \$8,750 (No. of respondents 2 out of 20)
- Very large: \$30,000 (No. of respondents 2 out of 7)
- “unknown”: \$8,750 (No. of respondents 1 out of 8)

Rule R 408.7424 (2) According to the GI Part 74 RIS survey results, 45% of small, 80% of medium, 95% of large , 100% of very large, and 43% of “unknown” fire departments' current belt systems meet or exceed NFPA 1983, 2001 edition.

Average estimated cost for compliance to amended subrule R 408.7424(2): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$1,500 (No. of respondents 1 out of 76)
- Medium: \$1,133 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17426(1)(a) According to the GI Part 74 RIS survey results, 94% of small, 95% of medium, and 100% of large, and 100% of very large and 100% of “unknown” fire departments meet or exceed NFPA 1931, 1994 edition.

Average estimated cost for compliance to amended subdivision R 408.17426(1)(a): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$10,520 (No. of respondents 5 out of 76)
- Medium: \$3,550 (No of respondents 2 out of 48)
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

Rule 408.17426 (1)(b) According to the GI Part 74 RIS survey results, 94% of small , 97% of medium, 100% of large, 100% of very large, and 100% of “unknown” fire departments are in compliance with NFPA 1932, 2015 edition.

Average estimated cost for compliance to amended subdivision R 408.17426(1)(b): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$2,100 (No. of respondents 2 out of 76)
- Medium: No responses
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

New Rule 408.17430. Proper use, handling, storage, and containment of firefighting foam concentrate. According to the GI Party 74 RIS survey results, 96% of small, 89% of medium, 93% of large, 100% of very large, and 86% of “unknown” fire departments are in accordance with SDS’s and already practicing appropriate storage measures.

Average estimated cost for compliance to new rule R 408.17430: (small, medium, large, very large and “unknown” fire departments):

- Small: \$150 (No. of respondents 1 out of 76)
- Medium: \$7,675 (No. of respondents 2 out of 48)
- Large: No responses
- Very large: No responses
- “Unknown”:: \$1,000 (No. of respondents 1 out of 8)

New Rule 408.17430(2) Containment and handling of materials contaminated by foam containing PFAS. According to the GI Part 74 RIS survey, 96% of small, 96% of medium, 100% of large, 100% of very large and 86% of “unknown” fire departments do not use intentionally added PFAS.

According to the GI Part 74 RIS survey, 75% of small, 100% of medium, 0% of large, 0% of very large, and 100% of “unknown” fire departments have appropriate containment materials, equipment, and/or devices.

New Rule 408.17430(4) prohibits the use of firefighting foam concentrate intentionally added PFAS for training, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam concrete for training purposes: 1% of small, 0% of medium, 0% of large, 0% of very large and 0% of “unknown”.

New Rule 408.17430(5) prohibits the use of firefighting foam concentrate containing intentionally added PFAS for equipment calibration purposes, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam for equipment calibration purposes: 1% of small, 0% of medium, 0% of large, 0% of very large, and 0% of “unknown”.

Rule 408.17432 According to the GI Part 74 RIS survey results, 89% of small, 88% of medium, 95% of large, 71% of very large and 86% of “unknown” fire departments are in compliance with NFPA 1932, 2015 edition.

Average estimated cost for compliance to amended rule R 408.17432: (small, medium, large, very large, and “unknown” fire departments): –

- Small: \$8,313 (No. of respondents 8 out of 76)
- Medium: \$72,333 (No. of respondents 6 out of 48)
- Large: \$36,500 (No. of respondents 2 out of 20)
- Very Large: \$477,500 (No. of respondents 2 out of 7)
- “Unknown”: \$125,000 (No. of respondents 1 out of 8)

Rule 408.17436 According to the GI Part 74 RIS survey results, 77% of small, 92% of medium, 95% of large, 100% of very large, and 86% of “unknown” fire departments meet or exceed NFPA 1981, 2007 edition.

Average estimated cost for compliance to amended rule R 408.17436: (small, medium, large, very large, and “unknown” fire departments): –

- Small: \$110,846 (No. of respondents 13 out of 76)
- Medium: \$304,975 (No. of respondents 4 out of 48)
- Large: \$210,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: \$36,500 (No. of respondents 1 out of 8)

Rule 408.17440 According to the GI Part 74 RIS survey, 84% of small, 93% of medium, and 92% of large, 100% of very large, and 100% of “unknown” fire departments meet or exceed NFPA 1982, 2007 edition.

Average estimated cost for compliance to amended rule R 408.17440: (small, medium, large, very large, and “unknown” fire departments): –

- Small: \$71,333 (No. of respondents 3 out of 76)
- Medium: \$479,900 (No. of respondents 1 out of 48)
- Large: No Responses
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17463(1) According to the GI Part 74 RIS survey results, 66% of small, 80% of medium, 90% of large, 100% of very large, and 57% of “unknown” fire departments meet or exceed NFPA 1983, 2001 edition.

Average estimated cost for compliance to amended subrule R 408.17463(1): (small, medium, large, very large, and “unknown” fire departments):–

- Small: \$7,394 (No. of respondents 9 out of 76)
- Medium: \$28,917 (No. of respondents 6 out of 48)
- Large: No Responses
- Very large: \$50,000 (No. of respondents 1 out of 7)
- “Unknown”: \$9,500 (No. of respondents 2 out of 8)

Rule 408.17464 Training and education program - live fire training. According to the GI Part 74 RIS survey results, 45% of small, 57% of medium, 61% of large, 60% of very large and 17% of “unknown” fire departments are currently performing compliant live fire training.

Average estimated cost for compliance to amended rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments) –

- Small: \$85,000 (No. of respondents 2 out of 76)
- Medium: \$50,333 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: \$1,002,667 (No. of respondents 3 out of 7)
- “Unknown”: \$6,500 (No. of respondents 1 out of 8)

New rule 408.17464. Training and education program. According to the GI Part 74 RIS survey results, 88% of small, 96% of medium, 100% of large, 100% of very large, and 100% of “unknown” fire departments have firefighters that are currently certified in first aid.

Average estimated cost for compliance to new rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments) –

- Small: \$2,117 (No. of respondents 6 out of 76)
- Medium: 9,353 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: No Responses
- “Unknown”:: \$500 (No. of respondents 1 out of 8)

14. Discuss any program, service, duty, or responsibility imposed upon any city, county, town, village, or school district by the rules.

MIOSHA has exclusive jurisdiction for administering and enforcing the occupational safety and health programs in Michigan, covering all state and local government workers, including small municipality fire departments. No programs, services, duties, or responsibilities will be imposed on any city, county, town, village, or school district.

A. Describe any actions that governmental units must take to be in compliance with the rules. This section should include items such as record keeping and reporting requirements or changing operational practices.

Pre-employment physical – R 408.17411(1)(a)

The government unit must ensure prospective firefighters receive a pre-employment physical conducted by a physician or other licensed healthcare professional to ensure they have the ability to perform assigned emergency operations.

Hose loading – R 408.17421(3)

The government unit must ensure that any employee riding on or in a fire apparatus shall be safely secured by a seat belt or safety harness any time the apparatus is in motion. If the operation occurs while the apparatus is in motion, several conditions must be met, as outlined in the proposed rule.

Life safety rope & equipment – R 408.17463(1)

The government unit must ensure that firefighters' life safety ropes and equipment comply with a newer version of the NFPA 1983 standard. This would be for existing equipment already possessed by a department or future equipment purchases.

Portable ladders – R 408.17426

The government unit must ensure that portable ladders used in structural firefighting or training comply with NFPA standards 1931 and 1932. This would be for existing equipment already possessed by a department or future equipment purchases.

PFAS – R 408.17430

The government unit must ensure the following:

- (1) An employer must follow the specific, manufacturer provided safety data sheets (SDSs) for all firefighting foam concentrate that employees may be exposed to and follow best practices regarding the proper use, handling, and storage information.
- (2) An employer must prevent intentionally added PFAS containing foam concentrate or foam solution from entering groundwater, surface water, or storm drains as soon as possible.
- (3) An employer must dispose of materials contaminated by foam containing PFAS pursuant to the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.101 to 324.90106.
- (4) An employer must ensure the decontamination of a firefighter's body and equipment.
- (5) An employer must prohibit the use of firefighting foam concentrate containing intentionally added PFAS, by a firefighter, for training purposes.
- (6) An employer must prohibit the use of firefighting foam concentrate containing intentionally added PFAS, by a firefighter, for equipment calibration purposes (unless required by law or facility where the calibration takes place has implemented appropriate measures).

Protective ensemble – R 408.17432

The government unit must ensure that the firefighters' protective ensemble complies with a newer version of the NFPA 1971 standard. This would be for existing protective ensembles already possessed by a department or future purchases.

Respiratory protection (SCBA & PASS) – R 408.17436 & R 408.17440

The government unit must ensure that the firefighters' respiratory protection devices comply with newer versions of NFPA 1981 and 1982. This would be for existing respiratory protection devices already possessed by a department or future purchases.

Training & Education – R 408.17464

The government unit must ensure firefighters receive and maintain certification in first aid, cardiopulmonary resuscitation, and automated external defibrillator.

Live Fire Training – R 408.17464

The government unit must ensure all live fire training must meet or exceed the requirements of the NFPA 1403.

15. Describe whether or not an appropriation to state or local governmental units has been made or a funding source provided for any additional expenditures associated with the proposed rules.

There are no appropriations or other funding sources available for the proposed rules that MIOSHA is aware of.

Rural Impact

16. In general, what impact will the rules have on rural areas?

MIOSHA has exclusive jurisdiction for administering and enforcing the occupational safety and health programs in Michigan, covering all state and local government workers, including small municipality fire departments. According to the GI Part 74 RIS survey, small fire departments may be affected the most due to budgetary constraints and the costs associated with compliance for some of the proposed rules. See the response to question 13 above for a cost breakdown associated with the proposed rules.

A. Describe the types of public or private interests in rural areas that will be affected by the rules.

Public interests in rural areas, specifically fire departments, will be affected by the proposed rules. Private interests will not be affected by the proposed rules.

Environmental Impact

17. Do the proposed rules have any impact on the environment? If yes, please explain.

The proposed rules regarding PFAS will have a positive impact on the environment. The proposed regulations prohibit the use of PFAS-containing firefighting foams for training. Such foams may only be used in emergency firefighting or fire prevention operation and for testing purposes in a facility that has implemented appropriate measures.

In addition, the proposed rules require the prevention of intentionally added PFAS containing foam concentrate or foam solution from entering groundwater, surface water, or storm drains through the implementation of manual containment strategies such as blocking storm drains to prevent the contaminated foam/water solution from entering the wastewater system or the environment. Defensive tactics such as damming, diking, and diverting should also be employed to get the foam/water solution to an area suitable for containment until it can be removed in accordance with local, state, and federal regulations.

The proposed rules require that immediately after the end of a fire or other incident at which a fire department uses firefighting foam containing intentionally added PFAS, the fire chief shall report the incident to the Michigan Pollution Emergency Alert System.

Lastly, the proposed rules require the disposal of materials contaminated by foam containing PFAS to be in accordance with the Natural Resources and Environmental Protection Act, PA 451 of 1944, MCL 324.101 to 324.90106.

Small Business Impact Statement

18. Describe whether and how the agency considered exempting small businesses from the proposed rules.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

19. If small businesses are not exempt, describe (a) the manner in which the agency reduced the economic impact of the proposed rules on small businesses, including a detailed recitation of the efforts of the agency to comply with the mandate to reduce the disproportionate impact of the rules upon small businesses as described below (in accordance with MCL 24.240(1)(a-d)), or (b) the reasons such a reduction was not lawful or feasible.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

A. Identify and estimate the number of small businesses affected by the proposed rules and the probable effect on small businesses.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

B. Describe how the agency established differing compliance or reporting requirements or timetables for small businesses under the rules after projecting the required reporting, record-keeping, and other administrative costs.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

C. Describe how the agency consolidated or simplified the compliance and reporting requirements for small businesses and identify the skills necessary to comply with the reporting requirements.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

D. Describe how the agency established performance standards to replace design or operation standards required by the proposed rules.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

20. Identify any disproportionate impact the proposed rules may have on small businesses because of their size or geographic location.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

21. Identify the nature of any report and the estimated cost of its preparation by small businesses required to comply with the proposed rules.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

22. Analyze the costs of compliance for all small businesses affected by the proposed rules, including costs of equipment, supplies, labor, and increased administrative costs.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

23. Identify the nature and estimated cost of any legal, consulting, or accounting services that small businesses would incur in complying with the proposed rules.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

24. Estimate the ability of small businesses to absorb the costs without suffering economic harm and without adversely affecting competition in the marketplace.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

25. Estimate the cost, if any, to the agency of administering or enforcing a rule that exempts or sets lesser standards for compliance by small businesses.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

26. Identify the impact on the public interest of exempting or setting lesser standards of compliance for small businesses.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

27. Describe whether and how the agency has involved small businesses in the development of the proposed rules.

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

A. If small businesses were involved in the development of the rules, please identify the business(es).

As the proposed rules only apply to municipalities, there will be no impact on small businesses due to the proposed rule changes.

Cost-Benefit Analysis of Rules (independent of statutory impact)

28. Estimate the actual statewide compliance costs of the rule amendments on businesses or groups.

There is no practical way to determine the expected costs for those not already in compliance due to many variations in equipment, installation methods and operational processes. Advisory Committee members indicated that the majority of employers are already in compliance.

A. Identify the businesses or groups who will be directly affected by, bear the cost of, or directly benefit from the proposed rules.

All fire departments not in compliance already with the proposed rules will see a varying degree of financial costs in complying with the new rules. The smaller fire departments may face significant costs, compared to their budgets, complying with the proposed rules.

B. What additional costs will be imposed on businesses and other groups as a result of these proposed rules (i.e. new equipment, supplies, labor, accounting, or recordkeeping)? Please identify the types and number of businesses and groups. Be sure to quantify how each entity will be affected.

On July 30, 2021, MIOSHA sent out a GI Part 74 Regulatory Impact Statement (RIS) survey to an extended list of Advisory Committee members and to the list of contacts provided by the State of Michigan Fire Marshal. The RIS survey was used to gather information regarding the new proposed rules and the impact the changes will have on small, medium, large, very large and “unknown” (no responses)-sized fire departments. Altogether, MIOSHA received 159 responses.

The fire department’s size was divided up based on the annual operating budget intake. The small fire departments reflect an annual operating budget of \$10,000-\$500,000. The medium-sized fire departments reflect an annual operating budget of \$500,001-\$3,000,000. The larger fire departments reflect an annual operating budget of \$3,000,001-\$8,000,000, and the very large fire departments reflect an annual operating budget of \$8,000,001 and above. The "unknown" size is data where fire departments responded but did not provide an annual operating budget, so MIOSHA could not place them amongst the others.

No. of Fire Dept./Size Avg. No. of employees Avg. Annual Operating Budget

Small 7620 \$182,890
 Med. 4829 \$1,543,396
 Large 2038 \$4,816,888
 Very Large 7224 \$36,200,000
 Unknown 819 No responses

Below are the results of the data received:

New subrule R 408.7421(3) - According to the GI Part 74 RIS survey results, 30% of small, 9% of medium, 0% of large, 0% of very large, and 0% of “unknown” fire departments currently have a travel restraint system.

Average estimated cost for compliance to new subrule R 408.7421(3): (small, medium, large, very large and “unknown” fire departments):

- Small: \$3,457 (No. of respondents: 7 out of 76)
- Medium: \$3,388 (No. of respondents 8 out of 48)
- Large: \$8,750 (No. of respondents 2 out of 20)
- Very large: \$30,000 (No. of respondents 2 out of 7)
- “Unknown”: \$8,750 (No. of respondents 1 out of 8)

Rule R 408.7424 (2) According to the GI Part 74 RIS survey results, 45% of small, 80% of medium, 95% of large , 100% of very large, and 43% of “unknown” fire departments' current belt systems meet or exceed NFPA 1983, 2001 edition.

Average estimated cost for compliance to amended subrule R 408.7424(2): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$1,500 (No. of respondents 1 out of 76)
- Medium: \$1,133 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17426(1)(a) According to the GI Part 74 RIS survey results, 94% of small, 95% of medium, and 100% of large, and 100% of very large and 100% of “unknown” fire departments meet or exceed NFPA 1931, 1994 edition.

Average estimated cost for compliance to amended subdivision R 408.17426(1)(a): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$10,520 (No. of respondents 5 out of 76)
- Medium: \$3,550 (No of respondents 2 out of 48)
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

Rule 408.17426 (1)(b) According to the GI Part 74 RIS survey results, 94% of small , 97% of medium, 100% of large, 100% of very large, and 100% of “unknown” fire departments are in compliance with NFPA 1932, 2015 edition.

Average estimated cost for compliance to amended subdivision R 408.17426(1)(b): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$2,100 (No. of respondents 2 out of 76)
- Medium: No responses
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

New Rule 408.17430. Proper use, handling, storage, and containment of firefighting foam concentrate. According to the GI Party 74 RIS survey results, 96% of small, 89% of medium, 93% of large, 100% of very large, and 86% of “unknown” fire departments are in accordance with SDS’s and already practicing appropriate storage measures.

Average estimated cost for compliance to new rule R 408.17430: (small, medium, large, very large and “unknown” fire departments):

- Small: \$150 (No. of respondents 1 out of 76)
- Medium: \$7,675 (No. of respondents 2 out 48)
- Large: No responses
- Very large: No responses
- “Unknown”:: \$1,000 (No. of respondents 1 out of 8)

New Rule 408.17430(2) According to the GI Part 74 RIS survey, 96% of small, 96% of medium, 100% of large, 100% of very large and 86% of “unknown” fire departments do not use intentionally added PFAS.

According to the GI Part 74 RIS survey, 75% of small, 100% of medium, 0% of large, 0% of very large, and 100% of “unknown” fire departments have appropriate containment materials, equipment, and/or devices.

New Rule 408.17430(4) prohibits the use of firefighting foam concentrate intentionally added PFAS for training, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam concrete for training purposes: 1% of small, 0% of medium, 0% of large, 0% of very large and 0% of “unknown”.

New Rule 408.17430(5) prohibits the use of firefighting foam concentrate containing intentionally added PFAS for equipment calibration purposes, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam for equipment calibration purposes: 1% of small, 0% of medium, 0% of large, 0% of very large, and 0% of “unknown”.

Rule 408.17432 According to the GI Part 74 RIS survey results, 89% of small, 88% of medium, 95% of large, 71% of very large and 86% of “unknown” fire departments are in compliance with NFPA 1932, 2015 edition.

Average estimated cost for compliance to amended rule R 408.17432: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$8,313 (No. of respondents 8 out of 76)
- Medium: \$72,333 (No. of respondents 6 out of 48)
- Large: \$36,500 (No. of respondents 2 out of 20)
- Very Large: \$477,500 (No. of respondents 2 out of 7)
- “Unknown”: \$125,000 (No. of respondents 1 out of 8)

Rule 408.17436 According to the GI Part 74 RIS survey results, 77% of small, 92% of medium, 95% of large, 100% of very large, and 86% of “unknown” fire departments meet or exceed NFPA 1981, 2007 edition.

Average estimated cost for compliance to amended rule R 408.17436: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$110,846 (No. of respondents 13 out of 76)
- Medium: \$304,975 (No. of respondents 4 out of 48)
- Large: \$210,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: \$36,500 (No. of respondents 1 out of 8)

Rule 408.17440 According to the GI Part 74 RIS survey, 84% of small, 93% of medium, and 92% of large, 100% of very large, and 100% of “unknown” fire departments meet or exceed NFPA 1982, 2007 edition.

Average estimated cost for compliance to amended rule R 408.17440: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$71,333 (No. of respondents 3 out of 76)
- Medium: \$479,900 (No. of respondents 1 out of 48)
- Large: No Responses
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17463(1) According to the GI Part 74 RIS survey results, 66% of small, 80% of medium, 90% of large, 100% of very large, and 57% of “unknown” fire departments meet or exceed NFPA 1983, 2001 edition.

Average estimated cost for compliance to amended subrule R 408.17463(1): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$7,394 (No. of respondents 9 out of 76)
- Medium: \$28,917 (No. of respondents 6 out of 48)
- Large: No Responses
- Very large: \$50,000 (No. of respondents 1 out of 7)
- “Unknown”: \$9,500 (No. of respondents 2 out of 8)

Rule 408.17464 According to the GI Part 74 RIS survey results, 45% of small, 57% of medium, 61% of large, 60% of very large and 17% of “unknown” fire departments are currently performing compliant live fire training.

Average estimated cost for compliance to amended rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments) –

- Small: \$85,000 (No. of respondents 2 out of 76)
- Medium: \$50,333 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: \$1,002,667 (No. of respondents 3 out of 7)
- “Unknown”: \$6,500 (No. of respondents 1 out of 8)

New rule 408.17464. Training and education program. According to the GI Part 74 RIS survey results, 88% of small, 96% of medium, 100% of large, 100% of very large, and 100% of “unknown” fire departments have firefighters that are currently certified in first aid.

Average estimated cost for compliance to new rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments)

- Small: \$2,117 (No. of respondents 6 out of 76)
- Medium: 9,353 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: No Responses
- “Unknown”: \$500 (No. of respondents 1 out of 8)

29. Estimate the actual statewide compliance costs of the proposed rules on individuals (regulated individuals or the public). Include the costs of education, training, application fees, examination fees, license fees, new equipment, supplies, labor, accounting, or recordkeeping.

Approximately 1,029 fire departments and approximately 34,500 firefighters will be affected by the new proposed revisions to GI Part 74. Firefighting. There is no practical way to determine the expected costs for those not already in compliance due to many variations in equipment, installation methods and operations. Advisory Committee members indicated that the majority of employers are already in compliance. Please see question 13 for estimates on costs.

A. How many and what category of individuals will be affected by the rules?

Approximately 1,029 fire departments and approximately 34,500 firefighters will be affected by the new proposed rules.

B. What qualitative and quantitative impact do the proposed changes in rules have on these individuals?

The qualitative impact the proposed changes will have is that they will help improve the safety and health of firefighters by providing better medical assessments, better safety and health equipment, and better protection while handling and disposing of PFAS and other firefighting foam concentrates.

According to the GI Part 74 RIS survey results, the quantitative impact the proposed changes in rules have on firefighter’s are in the following rules:

New subrule R 408.7421(3) – Travel Restraint System – Average estimated cost for compliance to new subrule R 408.7421(3): (small, medium, large, very large and “unknown” fire departments):

- Small: \$3,457 (No. of respondents: 7 out of 76)
- Medium: \$3,388 (No. of respondents 8 out of 48)
- Large: \$8,750 (No. of respondents 2 out of 20)
- Very large: \$30,000 (No. of respondents 2 out of 7)

- “unknown”: \$8,750 (No. of respondents 1 out of 8)

Rule 408.7424(2) – NFPA 1983: Standard on Life Safety Rope and Equipment for Emergency Services, 2001 edition – Average estimated cost for compliance to amended subrule R 408.7424(2): (small, medium, large, very large and “unknown” fire departments):

- Small: \$1,500 (No. of respondents 1 out of 76)
- Medium: \$1,133 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17426(1)(a) – NFPA 1931: Standard for Manufacturer’s Design of Fire Department Ground Ladders, 1994 edition – Average estimated cost for compliance to new subdivisions R 408.17426(1)(a): (small, medium, large, very large and “unknown” fire departments):

- Small: \$10,520 (No. of respondents 5 out of 76)
- Medium: \$3,550 (No of respondents 2 out of 48)
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

Rule 408.17426(1)(b) – NFPA 1932: Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders, 2015 edition – Average estimated cost for compliance to new subdivision R 408.17426(1)(b): (small, medium, large, very large and “unknown” fire departments):

- Small: \$2,100 (No. of respondents 2 out of 76)
- Medium: No responses
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

New Rule 408.17430 – Proper use, handling, storage, and containment of firefighting foam concentrate – Average estimated cost for compliance to new rule R 408.17430: (small, medium, large, very large and “unknown” fire departments):

- Small: \$150 (No. of respondents 1 out of 76)
- Medium: \$7,675 (No. of respondents 2 out 48)
- Large: No responses
- Very large: No responses
- “Unknown”: \$1,000 (No. of respondents 1 out of 8)

New Rule 408.17430(2) – According to the GI Part 74 RIS survey, 96% of small, 96% of medium, 100% of large, 100% of very large and 86% of “unknown” fire departments do not use intentionally added PFAS.

New Rule 408.17430(2)(a) – According to the GI Part 74 RIS survey, 75% of small, 100% of medium, 0% of large, 0% of very large, and 100% of “unknown” fire departments have appropriate containment materials, equipment, and/or devices.

New Rule 408.17430(4) prohibits the use of firefighting foam concentrate intentionally added PFAS for training, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam concrete for training purposes: 1% of small, 0% of medium, 0% of large, 0% of very large and 0% of “unknown”.

New Rule 408.17430(5) prohibits the use of firefighting foam concentrate containing intentionally added PFAS for equipment calibration purposes, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam for equipment calibration purposes: 1% of small, 0% of medium, 0% of large, 0% of very large, and 0% of “unknown”.

Rule 408.17432 – NFPA 1971: Standard on Protective Ensembles for Structural Firefighting and proximity Fire Fighting, 2013 edition – Average estimated cost for compliance to amended rule R 408.17432: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$8,313 (No. of respondents 8 out of 76)
- Medium: \$72,333 (No. of respondents 6 out of 48)
- Large: \$36,500 (No. of respondents 2 out of 20)
- Very Large: \$477,500 (No. of respondents 2 out of 7)
- “Unknown”: \$125,000 (No. of respondents 1 out of 8)

Rule 408.17436 – NFPA 1981: Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services, 2007 edition - Average estimated cost for compliance to amended rule R 408.17436: (small, medium, large, very large, and “unknown” fire departments): –

- Small: \$110,846 (No. of respondents 13 out of 76)
- Medium: \$304,975 (No. of respondents 4 out of 48)
- Large: \$210,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: \$36,500 (No. of respondents 1 out of 8)

Rule 408.17440 – NFPA 1982: Standard on Personal Alert Safety Systems (PASS), 2007 edition - Average estimated cost for compliance to amended rule R 408.17440: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$71,333 (No. of respondents 3 out of 76)
- Medium: \$479,900 (No. of respondents 1 out of 48)
- Large: No Responses
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17463(1) – NFPA 1983: Standard on Life Safety Rope and Equipment for Emergency Services, 2001 edition – Average estimated cost for compliance to amended subrule R 408.17463(1): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$7,394 (No. of respondents 9 out of 76)
- Medium: \$28,917 (No. of respondents 6 out of 48)
- Large: No Responses
- Very large: \$50,000 (No. of respondents 1 out of 7)

New Rule 408.17464 – NFPA 1403: Standard on Live Fire Training Evolutions, 2018 edition – Average estimated cost for compliance to amended rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$85,000 (No. of respondents 2 out of 76)
- Medium: \$50,333 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: \$1,002,667 (No. of respondents 3 out of 7)
- “Unknown”: \$6,500 (No. of respondents 1 out of 8)

New rule 408.17464 – Training and education program/First Aid – Average estimated cost for compliance to new rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$2,117 (No. of respondents 6 out of 76)
- Medium: 9,353 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: No Responses
- “Unknown”: \$500 (No. of respondents 1 out of 8)

30. Quantify any cost reductions to businesses, individuals, groups of individuals, or governmental units as a result of the proposed rules.

If we reduce the use of intentionally added PFAS firefighting containing foam, it will reduce environmental clean-up and disposal costs. There will be no cost reductions to businesses, individuals, groups of individuals, or governmental units as a result of the proposed rules.

31. Estimate the primary and direct benefits and any secondary or indirect benefits of the proposed rules. Please provide both quantitative and qualitative information, as well as your assumptions.

The proposed changes will help improve the safety and health of firefighters by providing better medical assessments, better safety and health equipment, and better protection while handling and disposing of PFAS and other firefighting foam concentrates. There were no quantifiable benefits identified by the advisory committee.

32. Explain how the proposed rules will impact business growth and job creation (or elimination) in Michigan.

The proposed rule changes should not have an impact on business growth and job creation in Michigan. However, there may be a negative impact on the ability to maintain staffing levels for some fire departments if there is an increased cost of compliance for those fire departments.

33. Identify any individuals or businesses who will be disproportionately affected by the rules as a result of their industrial sector, segment of the public, business size, or geographic location.

Fire departments with smaller operating budgets may be disproportionately affected by the rules.

On July 30, 2021, MIOSHA sent out a GI Part 74 Regulatory Impact Statement (RIS) survey to an extended list of Advisory Committee members and to the list of contacts provided by the State of Michigan Fire Marshal. The RIS survey was used to gather information regarding the new proposed rules and the impact the changes will have on small, medium, large, very large and “unknown” (no responses)-sized fire departments. Altogether, MIOSHA received 159 responses.

The fire department’s size was divided up based on the annual operating budget intake. The small fire departments reflect an annual operating budget of \$10,000-\$500,000. The medium-sized fire departments reflect an annual operating budget of \$500,001-\$3,000,000. The larger fire departments reflect an annual operating budget of \$3,000,001-\$8,000,000, and the very large fire departments reflect an annual operating budget of \$8,000,001 and above. The "unknown" size is data where fire departments responded but did not provide an annual operating budget, so MIOSHA could not place them amongst the others.

No. of Fire Dept./Size Avg. No. of employees Avg. Annual Operating Budget

Small	7620	\$182,890
Med.	4829	\$1,543,396
Large	2038	\$4,816,888
Very Large	7	224
Unknown	819	No responses

Below are the results of the data received:

New subrule R 408.7421(3) - According to the GI Part 74 RIS survey results, 30% of small, 9% of medium, 0% of large, 0% of very large, and 0% of “unknown” fire departments currently have a travel restraint system.

Average estimated cost for compliance to new subrule R 408.7421(3): (small, medium, large, very large and “unknown” fire departments):

- Small: \$3,457 (No. of respondents: 7 out of 76)
- Medium: \$3,388 (No. of respondents 8 out of 48)
- Large: \$8,750 (No. of respondents 2 out of 20)
- Very large: \$30,000 (No. of respondents 2 out of 7)
- “Unknown”: \$8,750 (No. of respondents 1 out of 8)

Rule R 408.7424 (2) According to the GI Part 74 RIS survey results, 45% of small, 80% of medium, 95% of large , 100% of very large, and 43% of “unknown” fire departments' current belt systems meet or exceed NFPA 1983, 2001 edition.

Average estimated cost for compliance to amended subrule R 408.7424(2): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$1,500 (No. of respondents 1 out of 76)
- Medium: \$1,133 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17426(1)(a) According to the GI Part 74 RIS survey results, 94% of small, 95% of medium, and 100% of large, and 100% of very large and 100% of “unknown” fire departments meet or exceed NFPA 1931, 1994 edition.

Average estimated cost for compliance to amended subdivision R 408.17426(1)(a): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$10,520 (No. of respondents 5 out of 76)
- Medium: \$3,550 (No of respondents 2 out of 48)
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

Rule 408.17426 (1)(b) According to the GI Part 74 RIS survey results, 94% of small , 97% of medium, 100% of large, 100% of very large, and 100% of “unknown” fire departments are in compliance with NFPA 1932, 2015 edition.

Average estimated cost for compliance to amended subdivision R 408.17426(1)(b): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$2,100 (No. of respondents 2 out of 76)
- Medium: No responses
- Large: No responses
- Very large: No responses
- “Unknown”: No responses

New Rule 408.17430. Proper use, handling, storage, and containment of firefighting foam concentrate. According to the GI Party 74 RIS survey results, 96% of small, 89% of medium, 93% of large, 100% of very large, and 86% of “unknown” fire departments are in accordance with SDS’s and already practicing appropriate storage measures.

Average estimated cost for compliance to new rule R 408.17430: (small, medium, large, very large and “unknown”

fire departments):

- Small: \$150 (No. of respondents 1 out of 76)
- Medium: \$7,675 (No. of respondents 2 out of 48)
- Large: No responses
- Very large: No responses
- “Unknown”: \$1,000 (No. of respondents 1 out of 8)

New Rule 408.17430(2) According to the GI Part 74 RIS survey, 96% of small, 96% of medium, 100% of large, 100% of very large and 86% of “unknown” fire departments do not use intentionally added PFAS.

According to the GI Part 74 RIS survey, 75% of small, 100% of medium, 0% of large, 0% of very large, and 100% of “unknown” fire departments have appropriate containment materials, equipment, and/or devices.

New Rule 408.17430(4) prohibits the use of firefighting foam concentrate intentionally added PFAS for training, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam concrete for training purposes: 1% of small, 0% of medium, 0% of large, 0% of very large and 0% of “unknown”.

New Rule 408.17430(5) prohibits the use of firefighting foam concentrate containing intentionally added PFAS for equipment calibration purposes, and the following results are responses received asking fire departments if they use intentionally added PFAS firefighting foam for equipment calibration purposes: 1% of small, 0% of medium, 0% of large, 0% of very large, and 0% of “unknown”.

Rule 408.17432 According to the GI Part 74 RIS survey results, 89% of small, 88% of medium, 95% of large, 71% of very large and 86% of “unknown” fire departments are in compliance with NFPA 1932, 2015 edition.

Average estimated cost for compliance to amended rule R 408.17432: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$8,313 (No. of respondents 8 out of 76)
- Medium: \$72,333 (No. of respondents 6 out of 48)
- Large: \$36,500 (No. of respondents 2 out of 20)
- Very Large: \$477,500 (No. of respondents 2 out of 7)
- “Unknown”: \$125,000 (No. of respondents 1 out of 8)

Rule 408.17436 According to the GI Part 74 RIS survey results, 77% of small, 92% of medium, 95% of large, 100% of very large, and 86% of “unknown” fire departments meet or exceed NFPA 1981, 2007 edition.

Average estimated cost for compliance to amended rule R 408.17436: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$110,846 (No. of respondents 13 out of 76)
- Medium: \$304,975 (No. of respondents 4 out of 48)
- Large: \$210,000 (No. of respondents 1 out of 20)
- Very Large: No responses
- “Unknown”: \$36,500 (No. of respondents 1 out of 8)

Rule 408.17440 According to the GI Part 74 RIS survey, 84% of small, 93% of medium, and 92% of large, 100% of very large, and 100% of “unknown” fire departments meet or exceed NFPA 1982, 2007 edition.

Average estimated cost for compliance to amended rule R 408.17440: (small, medium, large, very large, and “unknown” fire departments): –

- Small: \$71,333 (No. of respondents 3 out of 76)
- Medium: \$479,900 (No. of respondents 1 out of 48)
- Large: No Responses
- Very Large: No responses
- “Unknown”: No responses

Rule 408.17463(1) According to the GI Part 74 RIS survey results, 66% of small, 80% of medium, 90% of large, 100% of very large, and 57% of “unknown” fire departments meet or exceed NFPA 1983, 2001 edition.

Average estimated cost for compliance to amended subrule R 408.17463(1): (small, medium, large, very large, and “unknown” fire departments):

- Small: \$7,394 (No. of respondents 9 out of 76)
- Medium: \$28,917 (No. of respondents 6 out of 48)
- Large: No Responses
- Very large: \$50,000 (No. of respondents 1 out of 7)
- “Unknown”: \$9,500 (No. of respondents 2 out of 8)

Rule 408.17464 According to the GI Part 74 RIS survey results, 45% of small, 57% of medium, 61% of large, 60% of very large and 17% of “unknown” fire departments are currently performing compliant live fire training.

Average estimated cost for compliance to amended rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$85,000 (No. of respondents 2 out of 76)
- Medium: \$50,333 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: \$1,002,667 (No. of respondents 3 out of 7)
- “Unknown”: \$6,500 (No. of respondents 1 out of 8)

New rule 408.17464. Training and education program. According to the GI Part 74 RIS survey results, 88% of small, 96% of medium, 100% of large, 100% of very large, and 100% of “unknown” fire departments have firefighters that are currently certified in first aid.

Average estimated cost for compliance to new rule R 408.17464: (small, medium, large, very large, and “unknown” fire departments):

- Small: \$2,117 (No. of respondents 6 out of 76)
- Medium: 9,353 (No. of respondents 3 out of 48)
- Large: \$1,000 (No. of respondents 1 out of 20)
- Very large: No Responses
- “Unknown”: \$500 (No. of respondents 1 out of 8)

34. Identify the sources the agency relied upon in compiling the regulatory impact statement, including the methodology utilized in determining the existence and extent of the impact of the proposed rules and a cost-benefit analysis of the proposed rules.

MIOSHA convened an Advisory Committee and conducted a GI Part 74 RIS survey and sent it out to an extended list of Advisory Committee members and a list of contacts provided by the State of Michigan Fire Marshal to gather information regarding the new proposed rules revisions and the impact it will have on fire departments (small, medium, large).

A. How were estimates made, and what were your assumptions? Include internal and external sources, published reports, information provided by associations or organizations, etc., that demonstrate a need for the proposed rules.

MIOSHA relied on the expertise of the Advisory Committee members in evaluating the results of the GI Part 74 RIS survey that was sent out to all registered fire departments that was comprised of current members of the firefighting industry.

Alternative to Regulation

35. Identify any reasonable alternatives to the proposed rules that would achieve the same or similar goals.

There are no reasonable alternatives to the proposed rules that would achieve the same or similar goals.

A. Please include any statutory amendments that may be necessary to achieve such alternatives.

There are no statutory amendments necessary to achieve such alternatives, as there are no reasonable alternatives to the proposed rules.

36. Discuss the feasibility of establishing a regulatory program similar to that proposed in the rules that would operate through private market-based mechanisms. Please include a discussion of private market-based systems utilized by other states.

The Michigan Occupational Safety and Health Administration (MIOSHA), administers the occupational safety and health program in compliance with the provisions of the Michigan Occupational Safety and Health Act, Act 154 of 1974, as amended, and consistent with an agreement between Michigan and the United States Secretary of Labor, which became effective October 3, 1973, and is known as the Michigan State Plan for Occupational Safety and Health. Under the agreement, MIOSHA has jurisdiction for administering and enforcing the occupational safety and health program in Michigan that covers most private-sector employees and all state and local government workers.

There are no private market-based systems utilized by other states.

37. Discuss all significant alternatives the agency considered during rule development and why they were not incorporated into the rules. This section should include ideas considered both during internal discussions and discussions with stakeholders, affected parties, or advisory groups.

The Advisory Committee discussed updating various NFPA consensus standards to reference the most current NFPA standards. It was determined that this could potentially increase the cost of compliance, so the committee adopted versions that would result in fewer compliance and still provide improved safety and health performance.

Additional Information

38. As required by MCL 24.245b(1)(c), please describe any instructions regarding the method of complying with the rules, if applicable.

MIOSHA is developing an instruction for internal/external use on the enforcement and interpretation of the proposed rules. The Agency Instruction will be available on the MIOSHA website for public viewing.