

	<h1 style="text-align: center;">Emergency Eyewash and Drench Shower Program</h1>	Document Number:
		Effective Date:
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## 1.0 Purpose and Applicability

1.1 The purpose of this program is to ensure that all safety eyewashes and showers supply clean, potable water and are in proper working order. This program describes procedures for emergency use; selection, installation and placement; guidelines for activation, inspection, testing and maintenance of emergency eyewash and shower equipment.

This program applies to all emergency eyewash and shower units in university buildings. Annual flow rate testing will be conducted by EH&S personnel or others and monthly sanitation testing may be performed by the workplace personnel.

The Occupational Safety and Health Administration (OSHA) regulation that applies to emergency eyewashes and safety showers is applicable to all facilities that require this equipment as a form of first aid. This regulation (29 CFR 1910.151 (c), Medical Services and First Aid) states that:

"Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use."

This regulation specifies where and when emergency eye wash and shower equipment must be available. These regulations do not specify minimum operating requirements, installation requirements, or maintenance requirements.

The American National Standards Institute (ANSI) standard Z358.1-1990 (revised in 2004), "Emergency Eye Wash and Shower Equipment" provides guidance for selecting, installation, operation and maintenance of this equipment to meet OSHA requirements.

1.2 The Emergency Eyewash and Shower Program at the University of Massachusetts at Amherst (UMA) was developed to render guidance on the proper installation, inspection and repair of eyewashes and drench showers. As stated in the campus policy, all reasonable efforts shall be made to meet the requirements specified in the most recent edition of the American National Standard for Emergency Eyewash and Shower Equipment (ANSI, Z358.1) which is the widely accepted guideline for the design, performance, installation, use, and maintenance of emergency eyewashes and showers.

1.3 All new construction and remodeling shall meet the requirements of the UMA Facilities Standards, which may go above the minimum requirements described in this Program document. This document includes information on equipment specifications, location and installation requirements, equipment inspection and testing, and areas where emergency eyewashes and showers are required.

1.4 Architects, building designers, Facilities and Planning staff and Plant Operations staff must all be aware of the policy for floor drains in laboratories.

## 2.0 Definitions

**Combination unit** – A unit that has any combination of the following equipment: emergency shower, eyewash, eye/face wash or drench hose.

**Drench hose** – A supplemental device consisting of a flexible hose connected to a flushing fluid supply and used to irrigate and flush face and body areas. Areas that require eyewashes can only utilize drench hoses, if a plumbed or self-contained eyewash is also available in that area, or if the drench hose is designed to meet the definition of a plumbed or self-contained eyewash.

**Emergency shower** – A device specifically designed and intended to deliver flushing fluid in sufficient volume to cause that fluid to cascade over the entire body.

**Flushing fluid** – Fluid that is either water or else a sterile buffer solution designed specifically for eyewash and shower units.

**Personal eyewash** – A supplemental device to plumbed or self-contained eyewashes, which can deliver immediate flushing fluid to the eyes or body. Areas that require eyewashes can only use personal eyewashes, if plumbed or self-contained eyewashes are also available in that area.

**Plumbed eyewash** – An eyewash unit permanently connected to an uninterruptible water supply that is capable of delivering a minimum of 0.4 gallons per minute (GPM) for 15 minutes.

**Remodel** – Any large scale alterations to an area that will change the location of walls, doors, counter space or cabinets; or a project that replaces most existing furnishings/fixtures (cabinets, chemical fume hoods, light fixtures, wiring, plumbing, etc.) with new furnishings/fixtures in one area. Note: the implementation of numerous “small projects” for the same area in order to avoid being labeled as a remodel project may be subject to the requirements of this document as a remodel, based on the judgment of the Associate Director for Campus Code Compliance and Fire Safety.

**Self-contained eyewash** – A stand-alone eyewash device containing flushing fluid that is capable of delivering a minimum of 0.4 GPM for 15 minutes.

Emergency eyewashes and showers are not a substitute for the use of personal protective equipment (glasses, goggles, gloves, aprons, etc.). Contact Environmental Health and Safety (EH&S) at: 545-2682, for additional information or assistance in determining areas where emergency eyewashes and showers are required.

### **3.0 Roles and Responsibilities**

#### **3.1 Key Personnel**

##### **Department Heads:**

1. Ensure that emergency eyewashes and showers are provided for laboratories and other areas as required by this program document.
2. Ensure that emergency eyewashes and showers located in all areas of the unit including laboratories, corridors or common areas are tested and inspected as specified in this program document. This includes weekly testing and inspection of eyewashes and showers.

##### **Principal Investigators/Supervisors:**

1. Work with department head to ensure that emergency eyewashes and showers are provided for laboratories and other areas as required by this program document.

2. Ensure that emergency eyewashes and showers installed in their areas are tested and inspected weekly as specified in this program document.
3. Are responsible for reporting problems with drench showers and eye washes to Environmental Health and Safety and Physical Plant, and insure that all eye washes are tested weekly.
4. Ensure that laboratory/unit personnel are familiar with the location and operation of the emergency eyewash and shower equipment.

**Facilities and Campus Planning (F&CP):**

1. Facilities and Campus Planning will be responsible for the proper installation of drench showers and eye washes.
2. Will assure that new laboratory facilities will NOT incorporate floor drains into their designs with exceptions (autoclaves, RO water, ice machines, animal care) as noted in EH&S Floor Drain Policy.
3. Will assure that future renovations of laboratory space disconnect and plug all applicable inlets to and outlets from (where possible) applicable sanitary sewer lines, leaching structures, oil/water separators, and/or septic systems.
4. Will also assure removal of all existing sludge in traps, oil/water separators, septic systems, and where accessible, leaching structures. Any sludge determined to be a hazardous waste shall be disposed of in accordance with State hazardous waste regulations (310 CMR 30.000). Remedial activity involving any excavation and/or soil or groundwater sampling must be performed in accordance with appropriate Mass DEP policies.
5. Assists campus personnel or units with the selection and installation of emergency eyewashes and showers that meet the requirements of the campus program.
6. Assists in the development and maintenance of the campus program for emergency eyewashes and showers.

**Physical Plant (PP):**

1. Physical Plant will be responsible for the proper installation and repair of existing drench showers and eye washes.
2. Physical Plant will notify Environmental Health and Safety once repairs are made.

**Environmental Health and Safety (EH&S):**

1. Assists in the development and maintenance of the campus program for emergency eyewashes and showers.
2. Assists campus personnel or units with the selection of emergency eyewashes and showers that meet the requirements of the campus program.
3. Verifies that emergency eyewashes and showers in a given area meet the requirements of this campus program during EH&S inspections.
4. Evaluates whether a given area qualifies for the emergency shower exception.
5. Environmental Health and Safety will be responsible for the testing of all drench showers and eye washes on a semi-annual basis, submitting work orders to Physical Plant for drench showers and eye washes that need repair and for following up on all repairs.

**Contractors:**

1. Notify EH&S one week before the testing of new drench shower and eye wash installations.
2. Have a plumber test the drench shower and eyewash installation with EH&S.
3. Provide a 55-gallon drum with draining capacity, measuring tape, thermometer, and timer to test drench showers.
4. Record the following data for the plumbing inspector:

	<u>Acceptable Range:</u>	<u>Your Results:</u>
Water Pressure	>30 PSI but <55 PSI	_____
Water Flow Rate	> 20 Gal per Min	_____
Time Water Ran	> 15 Minutes	_____
Water Temperature	60-90°F	_____
Serial Number of Unit:	_____	
Building:	_____	
Room Number:	_____	

## **4.0 Emergency Procedures**

### **4.1 Eyewashes, Drench Hoses, and Eyewash/Facewash Units**

- Assist the victim to get to the eyewash. Sight may be impaired.
- Activate the unit using the hands-free valve.
- Hold the eyelids open with the fingers if necessary.
- Place the eyes in the stream of water.
- Flush for 15 minutes.
- Get medical attention.

### **4.2 Emergency Showers and Drench Hoses**

- Assist the victim to the shower. Do not let them slip and fall.
- Activate the unit using the hands-free valve.
- Put modesty aside. Remove contaminated clothing first if possible. (Rinsing contaminated clothing will wash chemicals out of the clothing and onto the skin). If this is not possible, remove contaminated clothing during the flushing process.
- Flush for 15 minutes.
- Get medical attention.

### **4.3 Notes**

1. Assist the victim with procedures. Shield them using fire blankets if necessary. Provide alternative clothing (lab coats, hospital scrubs, fire blankets can be used as necessary).
2. The contaminated water from a deluge shower or eyewash is very dilute. Use standard housekeeping precautions when cleaning the area.
3. Drains are not installed under emergency showers intentionally. Sanitary sewer drains from any fixture (floor drains, sinks, etc.) have an S-trap that contains a small amount of water to prevent sewer gas from entering the buildings. Because of the infrequent use of an emergency shower, drains under emergency showers will go dry and allow sewer gas into the building. If one is present, pour some water down the drain at regular intervals.

## **5.0 Application and Installation**

**5.1 Emergency Eyewashes** - A plumbed or self-contained eyewash shall be provided in all work areas where faculty, staff or students are exposed to a potential hazard of injury to the eye

due to contact with a hazardous chemical or biological materials of BSL-2 or greater, and radioactive materials. Such work areas include, but are not limited to:

- Laboratories, storerooms and other work areas where chemicals that are corrosive, irritating to mucous membranes, or toxic are stored and/or used including but not limited to: bleach, formaldehyde, phenol, liquids with pH equal to or less than 2 or greater than 12.5, biotoxins and organic solvents;
- Laboratories or other areas where work with biological materials that are at BSL 2 or greater is occurring;
- Laboratories using radioactive materials;
- Pesticide storage or mixing facilities;
- Battery repair areas;
- Acid neutralization tank storage areas.

**5.2 Emergency Showers** - An emergency shower shall be provided in all work areas where faculty, staff or students are exposed to a potential hazard of injury to the skin due to contact with a corrosive, severely irritating or toxic chemical. Such work areas include, but are not limited to:

- Research laboratories, storerooms and other work areas where corrosive, severely irritating or toxic chemicals are stored and/or used including but not limited to bleach, formaldehyde, phenol, liquids with pH equal to or less than 2 or greater than 12.5, and organic and flammable solvents;
- Pesticide storage or mixing facilities;
- Laboratories using radioactive materials;
- Battery repair areas;
- Acid neutralization tank storage areas.

**5.3 Exception** for existing facilities without an emergency shower. In lieu of installing an emergency shower, a facility can choose to use or install both a drench hose and eyewash unit, or a combination unit of those devices, if all of the following criteria are met:

1. The work area is not being remodeled;
2. All containers of corrosive, severely irritating and toxic chemicals that are stored or used in the work area are **one liter or less in size**;
3. The work area supervisor provides documentation of the chemical inventory including container sizes for that work area to Environmental Health and Safety to verify that the area qualifies for this exception.

#### **5.4 Combination Units**

A combination unit of an emergency shower and eyewash that complies with ANSI Z358.1, Section 7.1, and the UMA Facilities Standards may be used in work areas required to have both devices. A Combination Unit shall meet the following requirements at the time of installation:

1. The equipment must be certified by the manufacturer as meeting the most recent edition of ANSI Z358.1.

2. The equipment shall have a controlled flow of flushing fluid that is provided to both eyes simultaneously (for eyewashes) which is not injurious to the user. Massachusetts Plumbing Inspectors require a fluid pressure of >30 PSI but <55 PSI.
3. Valves on emergency eyewashes and showers shall be designed so that the flushing fluid remains on without requiring the use of the operator's hands. The valve should be designed to remain activated until intentionally shut off.
4. Emergency eyewash nozzles shall be protected from airborne contamination. Whatever means is used to afford such protection, its removal should not require a separate motion by the operator when activating the unit.
5. The equipment shall be in unobstructed and accessible locations that require no more than 10 seconds for the injured person to reach along an unobstructed pathway from the source of the hazard. If the pathway includes a door, then the door shall have panic hardware for easy egress.
6. The equipment shall be located such that accessing the equipment should not require going up and down stairs or ramps.
7. The equipment location should be identified with a highly visible sign. See Attachment 1.
8. The equipment shall be connected to a system capable of supplying adequate flushing fluid (20 GPM for 15 minutes) to meet the requirements of each component as outlined in ANSI Z358.1.
9. Deliver tepid (60-90°F) flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, EHS should be consulted for the optimum temperature for each application

## 5.5 Installation

### 5.5.1 Specific Plumbed or Self-Contained **Eyewash** Requirements:

1. Plumbed eyewashes shall be installed so that they are capable of delivering to the eyes a minimum of 0.4 GPM of flushing fluid for 15 minutes (1.5 liters per minute).
2. Self-contained eyewashes shall be installed with the water nozzles 33-45 inches from the floor and 6 inches minimum from the wall or nearest obstruction. If they are installed mounted on a counter, they should be mounted within 6 inches of the front edge of the lab sink to allow the eyes to be placed in the path of water by simply standing near the unit. There should be minimal reaching, bending, stretching or contorting to reach the eyewash.
3. All plumbed eyewashes shall be plumbed to a waste line as per the latest ANSI Standard: Z358.1 and Massachusetts State Plumbing Code (most recent edition).
4. Eyewashes shall not be installed on a faucet spout.
5. Eyewashes shall be installed to meet ADA accommodations, if needed.
6. Environmental Health and Safety should be contacted whenever an eye wash/drench shower is to be installed to insure proper placement and testing of the unit.

### 5.5.2 Specific **Emergency Shower** Requirements:

1. Emergency shower heads shall be installed so that they are capable of delivering a *minimum of 20 GPM of flushing fluid for 15 minutes.*

2. Emergency shower heads shall be designed so that a flushing fluid column is provided not less than 82 inches and not more than 96 inches in height from the surface on which the user stands.
3. The shower head shall not be mounted flush or recessed with any constructed surfaces or partitions and the center of the spray pattern should be located at least 16 inches from any obstruction.
4. The spray pattern shall have a minimum diameter of 20 inches at 60 inches above the surface on which the user stands.
5. The manual actuator triangle pull shall not be located more than 69 inches above the surface on which the user stands. The manual actuator should be free from obstruction for 18 to 24 inches in most directions.
6. The perimeter of the area (e.g., 3 x 3.5 ft) directly under the shower head shall be demarcated.
7. Emergency showers shall be installed to meet ADA accommodations, if needed.

### 5.5.3 Activation and Test Procedures

It is important to understand that “testing” and “activation or flushing” are different procedures that occur at different intervals. The ANSI standard *recommends* weekly activations and annual flow testing for both eyewash and safety showers. Because of the difficulty of activating some installations monthly activations are sufficient however more frequent activations are recommended to maintain clean water in the units. Daily activations of some units are easy to perform upon entering the workplace each day.

Activations and inspections should be done by laboratory occupants or laboratory safety coordinator. The following procedures are established to facilitate testing of all campus emergency eyewashes and drench showers as required by Massachusetts Fire Prevention Regulations.

1. **Emergency eyewashes** should be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available. This helps clean out any rust, scale deposits, or bacteria that may accumulate. *At a minimum*, the weekly inspections should include the following:
  - a. Ensure that access to the eyewash is unobstructed.
  - b. Visually inspect the eyewash to ensure that there are no broken parts or leakage.
  - c. Verify that protective eyewash covers are properly positioned, clean and intact.
  - d. Check that the spouts are clean and that the bowl and/or sink drains are free of trash.
  - e. Check that the flow is effective and continuous.
  - f. Allow the water to flow for at least 5 minutes or until the water is clear. Water pressure should be >30 PSI but <55 PSI.
  - g. Check that the unit remains activated without the use of the operator’s hands.
  - h. Fail the equipment if water pressure is weak or if the water color is a dirty, rusty color. Attach an “Out of Service” tag to the eyewash station.
  - i. Put in the work order requesting service/repair online at: [www.umass.edu/services](http://www.umass.edu/services), or call Physical Plant at: 545-0600.

- j. For two-headed eye wash stations place the test gauge on top of the stream of the eye wash. The flushing fluid should cover the areas between the interior and exterior lines when the gauge is lowered not more than 1.5 inches below the fluids peak. Adjust heads as necessary.
  - k. If the eyewash passes testing, mark the date on and initial the attached tag.
  - l. Maintain an inspection log for weekly testing. Affix it to the column of the drench shower or somewhere near the equipment. Checklists are available from EH&S (545-2682), or are posted right near the eyewashes.
  - m. Ensure that problems identified during the testing are resolved.
2. **Emergency showers** should be activated semi-annually for a period long enough to verify operation and ensure that flushing fluid is available. This helps clean out any rust, scale deposits, or bacteria that may accumulate. At a minimum, the inspections should include the following:
- a. Ensure that access to the shower is unobstructed;
  - b. Visually inspect the shower to ensure that there are no broken parts, leakage, etc.;
  - c. Check that the flow is effective and continuous;
  - d. Check that the unit remains activated without the use of the operator's hands;
  - e. Maintain an inspection log for this testing. Tags are available free of charge from EH&S (545-2682);
  - f. Plumbed shower equipment shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available. The intent is to ensure that there is a flushing fluid supply at the head of the device and to clear the supply line of any sediment build-up that could prevent fluid from being delivered to the head of the device and minimize microbial contamination due to standing water;
  - g. Ensure that problems identified during the testing are resolved. Call Physical Plant at: 545-0600, to report a problem testing drench showers and eyewashes (for EH&S testing team and contractors).

#### 5.5.4 Equipment and Supplies

A listing of emergency drench showers is available from the Industrial Hygiene Program at EH&S. The following is a list of equipment and supplies that should be available for the emergency drench showers:

- Lab coats and protective eyewear
- 55 gallon drum/cart with spray curtain
- 30 gallon plastic drum
- Small pipe wrench
- Ladder
- Pole for shut off valve
- Portable radio
- Eye wash gauge
- Testing record tags
- Out of Service cards
- Flashlight
- Transport vehicle
- Emergency shower drip buckets
- Sponge mop
- Paper towels



### 5.5.5 Procedures for Testing Drench Showers and Eyewashes

A testing team will be designated by the Laboratory Safety inspectors and Industrial Hygiene Services staff. All members of the team shall undergo hands-on training by experienced EH&S personnel.

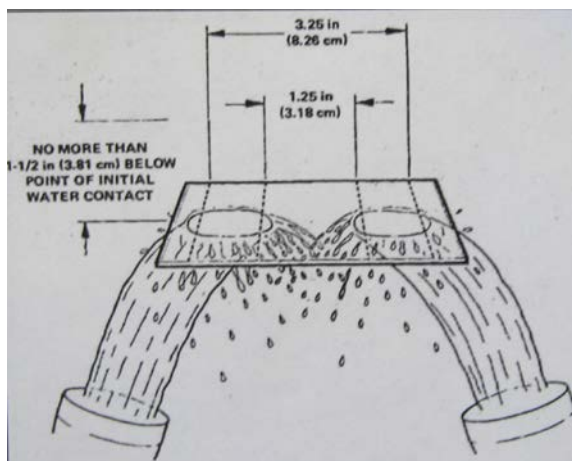
- a. Prior to activation of emergency shower, the shut off valve to the shower *must be located and turned closed several times*, then opened completely to insure that it is working properly. In most cases ladder access will be necessary. Place the 55 gallon drum beneath the drench shower and extend the spray control sleeve over the shower head.
- b. While one team member is located at the shut-off valve, the other activates the emergency shower for 5-10 seconds directing water to the 55 gallon drum. The shut off valve should stay open at least 10 seconds.
- c. All person(s) locating shut off valves located in ceiling areas must have undergone asbestos awareness training.
- d. The emergency shower should be delivering a continuous stream of at least 20GPM.
- e. Mark the drum level for the amount of water for 1 or 2 minutes.
- f. Take the temperature of the potable water in the drum; it should be between 65-90°F.
- g. If the shower functions well, the “Drench Shower Testing Record Tag” attached to the shower must be punched or signed by the team indicating the current month/year.
- h. If there is a problem with the drench shower, and it needs to be placed “Out of Service” attach the “WARNING DO NOT USE” card and call the Physical Plant Service Desk at: 545-0600 immediately. Ask them for the work request # and note it on the drench shower tag along with the date of the call.
- i. “Out of Service” problems would include, but are not limited to: leaks, pipe breaks, showers they will not shut off, shut off valve not operable. A Service Request can be submitted on-line at: [www.umass.edu/services](http://www.umass.edu/services). A work order (WO) will be generated by Physical Plant for the reappear.
- j. Note: If the drench shower is not able to be tested at the request of the occupants, it should be tagged as “Out of Service” and the reason given.
- k. Promptly clean up any water that is spilled on the floor as a result of this process.
- l. Once full, the 55 gallon drum shall be emptied at the most convenient location such as a custodial floor sink or a floor drain which goes to the sanitary sewer. **Note: It is NOT acceptable to dump the drums of water into any storm drains outside of University buildings.**
- m. Upon completion of an emergency shower test, the corresponding shower on the emergency showers list shall be checked off as having been completed.
- n. Data Entry - Use the Drench Showers database in Excel. Select “fcomment/Drench Shower Testing” then select the appropriate year. Enter the room number, drench

shower number, the reason it failed (if applicable), and the date the WO was initiated (if applicable).

- o. Once a drench shower is repaired, Physical Plant will notify EH&S for a retest.

## 5.6 Testing Eyewash Stations

- a. Use a bucket to capture the water. Let the water flow for at least 5 minutes. The water pressure should be at least 30 PSI but below 55 PSI.
- b. Use the eyewash testing gauge. The flushing fluid should cover both inside and outside line when the gauge is lowered no more than 1.5 inches below the fluid peak.



- c. If the water pressure is weak or the color of the water is dirty (rusty), the equipment has “failed.” Note the failure on the checklist. Attach an “*Out of Service*” tag to the eyewash station. Submit a WO using the same method as drench showers. (See above.)
- d. If the eyewash passes the test, note the date and initial the form (See Attachment 3) and affix it to the wall near the equipment. Notify lab personnel to test the eyewash station weekly and mark dates and initials on the list.
- e. Enter all data for the eyewash station in the Drench Shower database in Excel. Select “fcomment/Drenchshower testing” then select the appropriate year.

## 5.7 Purchasing Emergency Shower and Plumbed or Self-Contained Eyewash Equipment

In order to initiate the installation of a required emergency eyewash/safety shower unit, the Department Head, Laboratory Supervisor, or Principal Investigator should first contact the Facilities and Campus Planning Office at: 545-1383, to request an estimate for the purchase and installation of emergency eyewashes and showers.

If the laboratory has received approval from EH&S for the use of a counter-mounted drench hose/eyewash station, the Facilities Manager must specify that the estimate request is for this specific device. If the laboratory is required to install an emergency eyewash/safety shower unit, the Facilities Manager must request an estimate for the complete installation including a mixing valve.

Once F&CP has provided the estimate, the Department has identified a funding source and provided F&CP with a charge number and proper authorization, the installation can be scheduled.

## 5.8 Test Failures, Malfunctions, and Deficiencies

5.8.1 Corrective actions must be performed when deficiencies are noted by any personnel at any time.

5.8.2 Malfunctions or deficiencies noted during monthly activations, inspections, or normal daily activities must be reported immediately. Inform the supervisor. They will notify the Physical Plant by initiating a repair work request (Phone: 545-6401 or Fax: 545-0729). On-line request form: <http://facil6.facil.umass.edu/custinfo/request.html>

5.8.3 If use of the equipment is not possible tag the unit "DO NOT USE". The supervisor must notify the Physical Plant for repair or replacement.

5.8.4 Annual test failures must be corrected immediately. Malfunctions will be reported to supervisors and EH&S will submit a work order for repair.

## 5.9 Training

5.9.1 Employees receive training during laboratory and chemical safety training on the proper procedure for eyewash and shower use during an emergency.

5.9.2 Training to perform monthly activations and maintain minimum performance requirements for eyewash and shower equipment is provided during annual testing or safety inspections in the lab or workplace.

## 6.0 Key References

American Chemical Society; *Safety in Academic Laboratories, Vol. 2. Accident Prevention for Faculty and Administrators*. 7<sup>th</sup> edition.

American National Standards Institute (ANSI) Z358.1 (current edition). Emergency Eyewash and Shower Equipment.

Center for Disease Control and Prevention/National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories (current edition).

National Research Council. *Prudent Practices in the Laboratory*. National Academy Press, 1995.

Regulations, Consensus Standards and References. Massachusetts State Plumbing Code 248 CMR 1.00-10.00. General Provisions Governing the Conduct of Plumbing and Gas Work Performed in the Commonwealth. Introduction and Massachusetts Modifications.

University of Illinois at Urbana-Champaign: Emergency Eyewashes and Drench Showers Program.

Indiana University, Office of Environmental, Health, and Safety Management: Emergency Eyewash and Safety Showers: Bloomington, IL

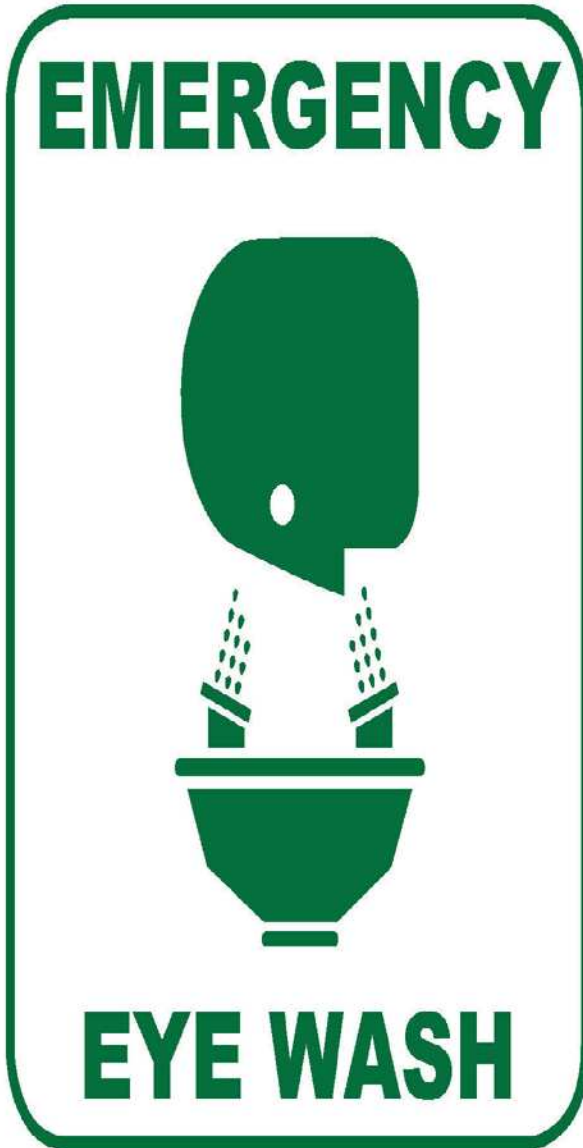
United States Environmental Protection Agency: EPA Small Business Office: <http://www.epa.gov/smallbusiness/help.htm> or call (800) 368-5888.

EPA Compliance Assistance Center: <http://es.epa.gov/oeca/main/compasst/compcenters.html>

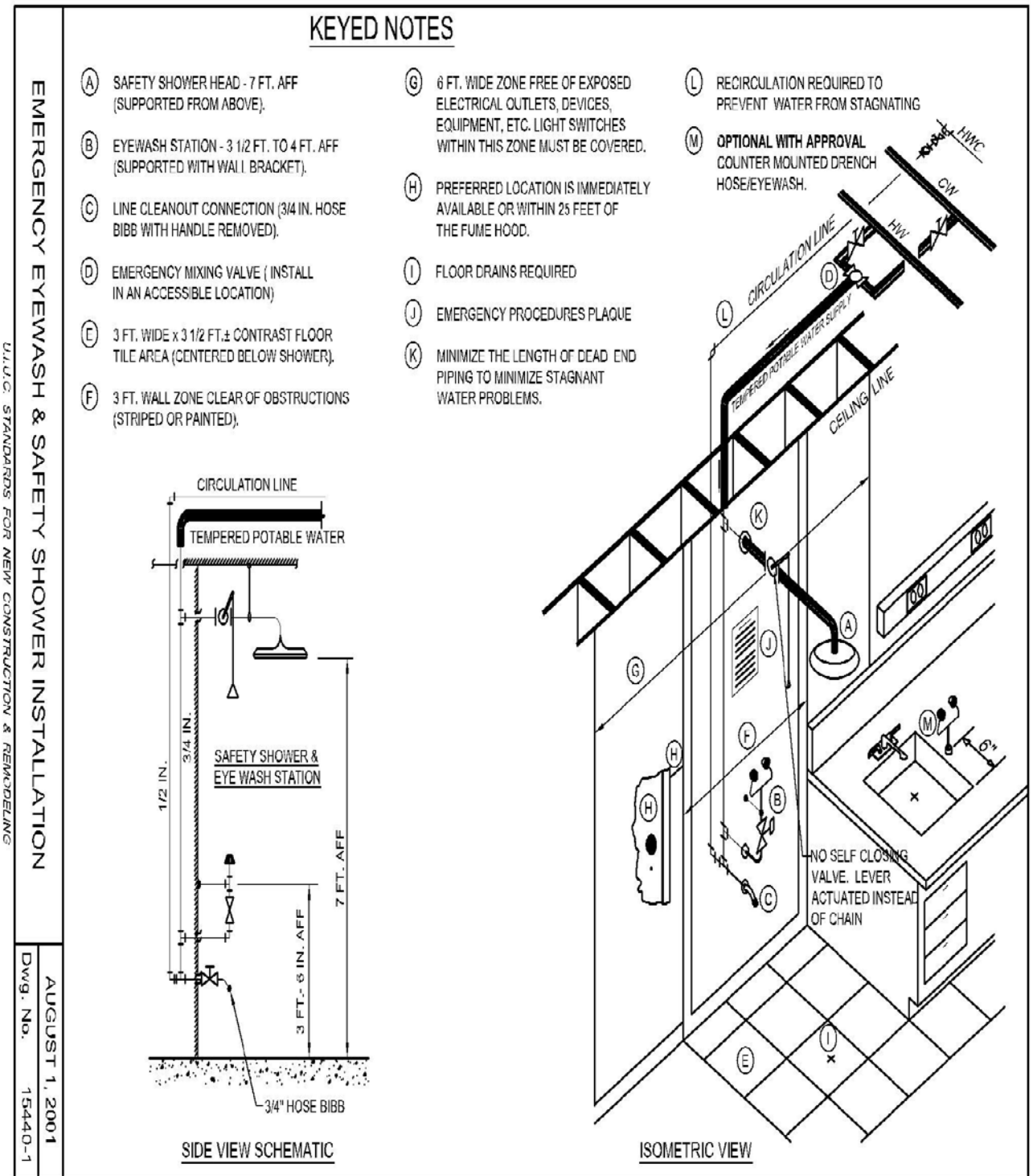
Massachusetts Department of Environmental Protection: <http://www.mass.gov/dep/>

Regulations, Massachusetts Board of Fire Prevention: 527 CMR 10.02; Fire Extinguishers: <http://www.lawlib.state.ma.us/source/mass/cmr/cmrtxt/527CMR10.pdf>

Attachment 1



# Attachment 2





## Attachment 4

### Eyewash and Drench Shower Equipment

