

# EMERGENCY EYEWASH & SHOWER STATION TRAINING AND MAINTENANCE REQUIREMENTS

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## Purpose:

Edmonds Community College is committed to providing a safe and healthful environment for our students, staff, and visitors. In pursuit of this endeavor, the following provides emergency eyewash/shower maintenance and training requirements for all staff to ensure all devices supply clean, potable water and are in proper working order in compliance with WAC 296-800-15030, WAC 296-800-15035. This WISHA standard is based on the federal rule, adopted by the Occupational Safety and Health Administration (OSHA) (29 CFR Part 1910.151(c)). This Exposure Control Plan (ECP) is a key document to assist in implementing and ensuring compliance with the standard, thereby protecting our employees.

## Eyewash station regulation:

### **OSHA regulation:**

OSHA regulation requires the installation of an emergency shower or eyewash station equipment as a form of first aid. [[29 CFR 1910.151 \(c\)](#)]. It 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."

There is also reference in industry specific OSHA regulation and recommendations that specifies certain industries must include emergency eyewash and/or shower equipment in every facility where hazardous chemicals or materials exposure is possible.

### **Washington Administrative Code (WAC)**

WAC 296-800 has eyewash/shower specific requirements related to workplace safety. (See Appendix A for details)

- WAC 296-800-15030 - Make sure emergency washing facilities are functional and readily accessible
- WAC 296-800-15035 - Inspect and activate your emergency washing facilities
- WAC 296-800-15040 - Make sure supplemental flushing equipment provides sufficient water

### **American National Standards Institute (ANSI Z358.1-2014)**

The American National Standards Institute (ANSI) developed the ANSI standard Z358.1-1990 that meets regulatory requirements. While it doesn't have the full force of an OSHA regulation, the ANSI standard covers situations when employees are exposed to hazardous materials. ANSI's definition of "hazardous material" would include caustics, as well as additional substances and compounds that have the capability of producing adverse effects on the health and safety of humans.

Note: The ANSI standard was revised in 2004, 2009, 2014.

This "Emergency eyewash and Shower Equipment" standard helps the user select and install emergency equipment to meet OSHA requirements.

- Verification is needed to ensure:
  - Proper water flow, quality, and temperature, along with proper operation of the unit (Procedure follows on page 6).
  - Access to all emergency wash stations must remain clear of obstructions at all times.
  - Emergency eyewash/shower locations are clearly labeled.
- All eye/face wash stations are also verified monthly by EHS coordinator, and inspected annually by maintenance staff per ANSI Z358.1 requirements.
- Gravity-feed units shall be maintained according to the manufacturer's instructions. They shall also be activated weekly to verify correct operation.



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A testing log needs to be maintained for all units. Inspection log should be readily viewable near each unit, as in posted on wall nearby, or other readily accessible location.

Example:

Add date & Initial each week when test done::	Week 1	Week 2	Week 3	Week 4
January				
February				
March				
April				
May				
June				
July				
August				
September				
October:				
November				
December				





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## Emergency Eyewash and Shower Testing Procedure:

The purpose of this program is to ensure that safety eyewashes and showers supply clean, potable water and are in proper working order at all times.

- Ensure eyewash/shower is clear of obstructions and easily visible from all directions (includes adequate signage).**
- Eyewash protective caps must be in place and in good condition.
- The ON/OFF valves must be operational, activated by a single motion.
- Water flow remains ON when the operator removes their hand.
- Properly activate the systems.
  - 3" or more height of flow- even distributed on both sides.
  - While activating plumbed eyewashes, eye/face washes and showers, you should also verify that they are providing tepid water (between 60°-100°F).
  - Ensure the water from next step flushing is captured in a suitable container (such as a plumbed drain, bucket, or large rolling waste can. If any water accumulates on the floor, dry the area before leaving to prevent a slipping hazard.
  - Run the eyewash/shower for five seconds. The running(or collected ) water must be clear: If water is clear, turn off water and sign the inspection tag.
    - If water is cloudy, discolored, or contains sediment, start another five-second flush; stop; and then continue flushing at five- second intervals until the water flushed clear. Then initial the inspection tag.
- \*\*\* If the water does not run clear after running the water for several minutes, initiate a work order request with Facilities for repair.
- Weekly Inspections must be performed by qualified area staff, faculty, or assigned student under qualified supervision.
  - If weekly inspections are not possible, because area is shut down and not in use, they must be tested before occupancy or potential exposure is possible.

***Note If a plumbed eyewash station does not run clear after repeated flushing's, contact your Supervisor/Facilities Department/EHS coordinator.***

Document review/revision history:

April 02, 2010  
Sept 16, 2010  
June 11, 2015  
Sept 10, 2018

### Appendix A - Eyewash/shower locations and checklist

CAMPUS MONTHLY EYEWASH CHECK				
EHS Department WO#		EHS Dept.		DATE:
EYEWASH STATION/LOCATION	CHECKED	SHOWER *	SPILL KIT *	ISSUES NEEDING ATTENTION
ALD #01 - Custodial closet 1st floor				
Boiler room		*	*	
BRI #04 Cafeteria kitchen				
BRI#05 Culinary kitchen				
BRI - Student Union - Custodial closet 1st floor				
BRI N - Custodial closet			*	
BRI S - Custodial closet			*	
BRI - #36 - Rm 283		*		
BRI #37 - Rm 281		*		
BRI #38 - Biology Rm 210		*		
BRI #39 - Rm 205		*		
BRI #40 - Rm 204		*		
BRI #41 - RM 213		*		
BRI #42 - Rm 209 at sink				
BRI #45 - Rm 211		*		
CFF #07 - Rm 136			*	
GWY - Custodial closet 1st floor			*	
LYN #12 - Custodial closet 1st floor			*	
MLT #10 - Lab - Room 220		*		
MLT #26 - Custodial - Room 109			*	
FIR # 34 - Mens' RR			*	
FIR 107 - Lab				
FIR #35 - Rm 108				
MIC #23 - Women's restroom				
MON # 24 - Rm 110		*		
MON #25 Rm 119		*		
MON #43 Custodial closet			*	
Fuel Station - Warehouse			*	
GR #09 Grounds shop		*	*	
Bay 4 #11 Bay 4			*	
MDL #14 - Rm 126 Custodial closet 1st floor			*	
MDL #15 - Rm 101				
MDL #16 - Rm 116 Pottery				



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MDL #17 - Rm 107				
MDL #18 - Rm 227 Photo Lab				
MDL #19 - DARK ROOM - CA5 key				
MDL #20 - DARK ROOM - CA5 key				
MDL #21 - Rm 221				
MDL #22 - Rm 211				
MUK #27 - Custodial closet 1st floor			*	
SEA - Custodial locker - men's RR			*	
SNH #29 - Custodial closet - 2nd floor			*	
SQL #30 - Custodial closet 1st floor			*	
WWY - Security office			*	



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## Appendix B - Regulatory Requirement details

### [WAC 296-800-15030](#)

Make sure emergency washing facilities are functional and readily accessible.

You must:

- Provide an emergency shower:
  - When there is potential for major portions of an employee's body to contact corrosives, strong irritants, or toxic chemicals.
  - That delivers water to cascade over the user's entire body at a minimum rate of 20 gallons (75 liters) per minute for fifteen minutes or more.
- Provide an emergency eyewash:
  - When there is potential for an employee's eyes to be exposed to corrosives, strong irritants, or toxic chemicals.
  - That irrigates and flushes both eyes simultaneously while the user holds their eyes open.
  - With an on-off valve that activates in one second or less and remains on without user assistance until intentionally turned off.
  - That delivers at least 0.4 gallons (1.5 liters) of water per minute for fifteen minutes or more.

Note: Chemicals that require emergency washing facilities:

- You can determine whether chemicals in your workplace require emergency washing facilities by looking at the safety data sheet (SDS) or similar documents. The SDS contains information about first-aid requirements and emergency flushing of skin or eyes.
- For chemicals developed in the workplace, the following resources provide information about first-aid requirements:
  - NIOSH Pocket Guide to Chemical Hazards
  - DHHS (NIOSH) Publication No. 97-140
  - <http://www.cdc.gov/niosh/npg/ggdstart.html>
  - Threshold Limit Values for Chemical Substances and Physical Agents American Conference of Governmental Industrial Hygienists (ACGIH)

You must:

- Make sure emergency washing facilities:
  - Are located so that it takes no more than ten seconds to reach.
  - Are kept free of obstacles blocking their use.
  - Function correctly.
  - Provide the quality and quantity of water that is satisfactory for emergency washing purposes.





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- Note:
- If water in emergency washing facilities is allowed to freeze, they will not function correctly. Precautions need to be taken to prevent this from happening.
  - The travel distance to an emergency washing facility should be no more than fifty feet (15.25 meters).
  - For further information on the design, installation, and maintenance of emergency washing facilities, see American National Standards Institute (ANSI) publication Z358.1 - 1998, Emergency Eyewash and Shower Equipment. Emergency washing facilities that are designed to meet ANSI Z358.1 - 1998 also meet the requirements of this standard. The ANSI standard can be obtained from the American National Standards Institute, 1430 Broadway, New York, New York 10018.

- Reference:
- Training in the location and use of your emergency washing facilities is required under the hazard communication rule, WAC [296-901-140](#), and the accident prevention program rule, WAC [296-800-140](#).
  - All emergency washing facilities using "not fit for drinking" (nonpotable) water must have signs stating the water is "not fit for drinking." See WAC [296-800-23010](#).

[Statutory Authority: RCW [49.17.010](#), [49.17.040](#), [49.17.050](#), [49.17.060](#) and 29 C.F.R. 1910 Subpart Z. WSR 14-07-086, § 296-800-15030, filed 3/18/14, effective 5/1/14. Statutory Authority: RCW [49.17.010](#), [49.17.040](#), and [49.17.050](#). WSR 02-16-047, § 296-800-15030, filed 8/1/02, effective 10/1/02.]

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## WAC 296-800-15035

Inspect and activate your emergency washing facilities.

You must:

Make sure all plumbed emergency washing facilities are inspected once a year to make sure they function correctly.

Note: Inspections should include:

- Examination of the piping
- Making sure that water is available at the appropriate temperature and quality
- Activation to check that the valves and other hardware work properly
- Checking the water flow rate.

You must:

- Make sure plumbed emergency eyewashes and hand-held drench hoses are activated weekly to check the proper functioning of the valves, hardware, and availability of water



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- Make sure all self-contained eyewash equipment and personal eyewash units are inspected and maintained according to manufacturer instructions.
  - Inspections to check proper operation must be done once a year
  - Sealed personal eyewashes must be replaced after the manufacturer's expiration date.

Note: Most manufacturers recommend replacing fluid in open self-contained eyewashes every six months. The period for sealed containers is typically two years.

[Statutory Authority: RCW [49.17.010](#), [49.17].040, and [49.17].050. WSR 02-16-047, § 296-800-15035, filed 8/1/02, effective 10/1/02.]

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### **WAC 296-800-15040**

Make sure supplemental flushing equipment provides sufficient water.

Note: Supplemental flushing equipment cannot be used in place of required emergency showers or eyewashes.

You must:

Make sure hand-held drench hoses deliver at least 3.0 gallons (11.4 liters) of water per minute for fifteen minutes or more.

Note: Why use a drench hose? A drench hose is useful when:

- The spill is small and does not require an emergency shower
- Used with a shower for local rinsing, particularly on the lower extremities.

You must:

Make sure personal eyewash equipment delivers only clean water or other medically approved eye flushing solutions.

[Statutory Authority: RCW [49.17.010](#), [49.17].040, and [49.17].050. WSR 02-16-047, § 296-800-15040, filed 8/1/02, effective 10/1/02.]

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### **OSHA - CFR 1910.151 (c)**

#### [1910.151\(c\)](#)

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.

## Appendix C - Emergency Shower and Eyewash Requirements

\*\*\* Installation must be in accordance with ANSI standard Z358.1:

### Plumbed Shower:

An emergency shower permanently connected to a source of potable water,

#### Heads

- Positioned 82"—96" from floor
- Spray pattern will have a minimum diameter of 20" at 60" above the floor
- Flow Rate=20 gallons per minute (GPM) at 30 pounds per square inch (PSI)
- The center of the spray pattern shall be located at least 16 inches from any obstruction

#### Valves

- Activate in 1 second or less
- Stay-open valve (no use of hands)
- Valve remains on until the user shuts it off

#### Installation

- Emergency Shower shall be located in an area that requires no more than 10 seconds to reach. *\*Consult a medical professional to determine the appropriate distance for harsh acids and caustics (high hazard=closer distance)*
- Shower location shall be in a well-lit area and identified with a sign
- Shower shall be located on the same level as the hazard
- Standard states the use of tepid water.\* Appendix B6 defines tepid water as 60°F for the lower limit and 100°F as the upper limit

### Plumbed eyewash Station: (There are two types of eyewash stations):

An eyewash unit permanently connected to a source of potable water

#### Heads

- Positioned 33"—45" from floor
- Positioned 6" from wall or nearest obstruction
- 0.4 gallons per minute (GPM) for 15 minutes for plumbed units shall provide flushing fluid at 30 PSI
- 0.4 gallons per minute (GPM) for 15 minutes for gravity-feed units

#### Valves

- Activate in 1 second or less
- Stay-open valve (leaving hands free)

#### Installation

- eyewash station shall be located in an area that requires no more than 10 seconds to reach. *\*Consult a medical professional to determine the appropriate distance for harsh acids and caustics (high hazard=closer distance)*
- The location of the eyewash station shall be in a well-lit area and identified with a sign
- eyewash stations shall be on the same level as the hazard



- Mixing valve- The ANSI/ISEA Z358.1-2009 Standard states the use of tepid water.\* Appendix B6 defines tepid water as 60°F for the lower limit and 100°F as the upper limit

#### Personal eyewash and eyesaline requirements

A [Personal eyewash](#) is a supplementary eyewash that supports plumbed units, gravity-feed units, or both by delivering immediate flushing fluid.

NOTE: Personal eyewash units can provide immediate flushing when they are located near the workstations. Personal eyewash equipment does not meet the requirements of plumbed or gravity-feed eyewash equipment. Personal eyewash units can support plumbed or gravity-feed eyewash units, but cannot be a substitute.

Personal eyewash can be delivered through bottles of saline solution designed to simulate human tears. Individual bottles can be carried by workers and provide relief until in the crucial seconds until an approved eyewash station installation can be reached.