



Placement, accessibility key to shower/eyewash requirements

Question: How do I know how many emergency showers and eyewashes I need for my facility, and where to locate them? Are there any established volume requirements?

Responding to this month's question is Casey Hayes, engineering manager, Haws Corp., Sparks, NV.

Answer: There is no standard answer to these questions. ANSI does not provide equipment volumes or any standardized way to calculate your equipment need. Instead, ANSI Standard Z358.1 established the response requirements in terms of accessibility, recognizing possible diminished capabilities of an injured worker, and the maximum time it should take a victim to reach a shower and/or eyewash.



For the purpose of answering these questions, begin by determining the minimum number of placements necessary to have all personnel within ANSI accessibility limits. Standard Z358.1 establishes that emergency eyewash and shower equipment should be immediately available, but in no instance should it take a victim longer than 10 seconds

to reach the nearest facility. The standard establishes that an average person can cover approximately 55 feet in 10 seconds. The physical and emotional state of the victim also should be considered because visual impairment, pain and panic will have an effect on their mobility.

Also, consider the likelihood of other personnel in the immediate area being able to assist, as well as the possibility of other hazards along the route to the emergency equipment that could cause further injury. Another consideration is the chance of multiple casualties from a single incident. Each casualty must have ready access to emergency response equipment, which could drive the need for multiple pieces of apparatus at a given location. So, the first point is identifying where accidents can occur, the likelihood of multiple victims at any given location, and then working backwards toward the total number of areas that must have discreet installations, as well as the total number of pieces of equipment needed.

Next you should consider unimpeded access. Suggesting that an accident victim traverse a set of stairs is probably not a good idea, even if that activity can be accomplished within the 10-second window. Barriers, such as doors, between potential accident sites and emergency equipment also should be carefully considered. While doors are not precluded, they must open toward the equipment, aiding the victim to ready access without appreciably slowing their momentum. Keep in mind that unimpeded access means that the pathway to the equipment must be clear, not encroached upon by even temporary clutter and the equipment itself must be clearly identified.

Finally, weekly inspections and maintenance should be done to assure the number of accessible, useable showers and eyewashes never dips below the volume you've established as correct for any given facility. Having the right number of showers and eyewashes means very little if the one that's needed right now doesn't work or hasn't been maintained properly. **S+H**

Editor's Note: This article represents the independent views of the author and should not be construed as a National Safety Council endorsement.