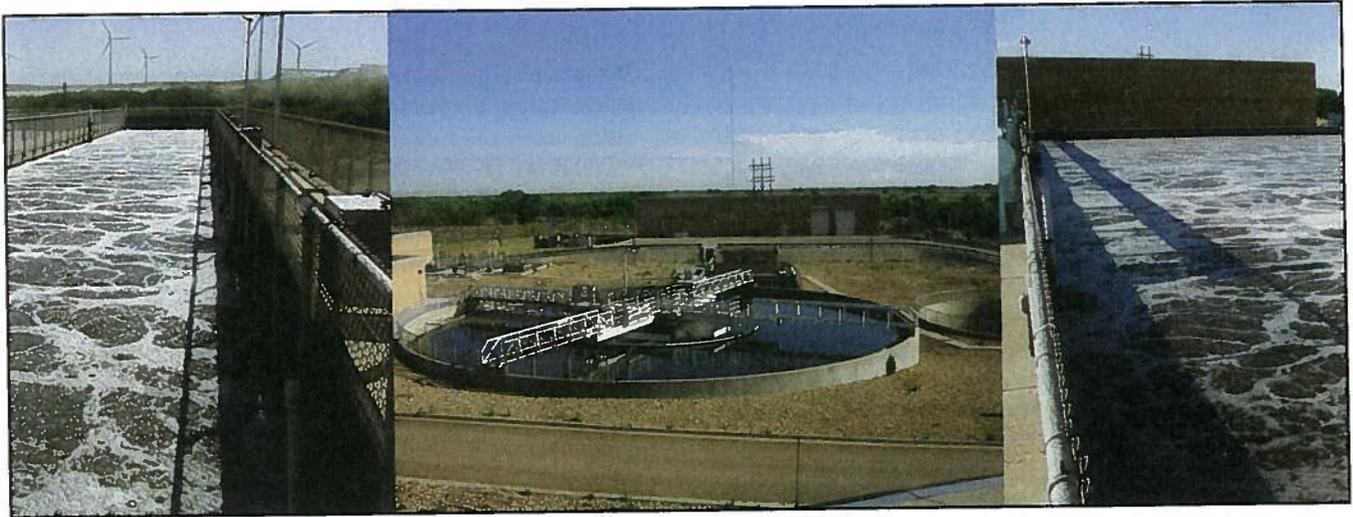


SAFETY NEWS:

Fall Prevention In and Around Basins

By Amy Northam, City of Lubbock, Safety Committee Member



From sedimentation basins and clarifiers to aeration basins and water tanks, workers in the water utilities industry operate around basins on a daily basis. Most basins are open and outside which increases the fall hazards in these areas. Although railings, fences, and toeboards are installed around most basins to protect the workers from falling into the basins, observation and environmental awareness also play a factor.

According to the Bureau of Labor Statistics, there were 225,500 injuries reported in 2011 due to slips, trips and falls. Of those, 667 of the incidents proved fatal. Slips, trips and falls are the fastest growing category of jobsite injuries and are the easiest to prevent. Most injuries are caused from falls from scaffolding and ladders, tripping and slipping.

Preventing Scaffolding Accidents

In May 2011, a worker was painting the walls of an empty water basin from a scaffold when it gave way. The worker fell an estimated 15 feet and sustained back injuries. Federal regulations under 29 CFR § 1926.451 require that any work performed above 6 feet from a lower level requires the use of personal fall protection devices. His fall could have been prevented by practicing safe scaffolding techniques and the use of personal protective equipment.

When working from scaffolds:

- Be sure that scaffolds are assembled according to manufacturers' specifications and examined daily for loose bolts or clamps.
- Check carefully for defects before using. Working and standing planks should be level and clean.
- Use toeboards to prevent tools from slipping or falling.
- Personal fall protection equipment includes a harness

fastened securely around the torso, a lanyard with a deceleration device and a substantial anchorage.

Preventing Falls from Ladders

An operator was standing on the top rung of a fixed tank ladder, pulling a floating mixer over to the side of the tank for rag removal. The rope used to pull the mixer broke and the operator fell off the tank ladder onto the ground below, landing on both feet. He suffered injuries to his knees and ankles. Fixed and portable ladders are used daily in the maintenance of treatment facilities.

To prevent falls like the above example, ladder safety should be observed by practicing the following:

- Always maintain a three-point contact when mounting or dismounting ladders. Three-point contact means that three of your limbs (two arms and a leg, or two legs and an arm) are in contact with the ladder at all times. Repairmen and mechanics often fail to do this while carrying tools and testing equipment.
- When manipulating equipment from a ladder, secure yourself to the ladder. Ensure all ropes, cables or chains used to move equipment is in good working order.
- When carrying tools or equipment use a pouch or other device to keep your hands free and not lose your balance.
- Use a ladder that is placed on a firm surface is the correct length and is in good condition.
- Never climb a ladder placed on machinery, crates, stock or boxes.
- Keep the ladder's base one foot away from the wall for every four feet of ladder height.

- Don't overreach.
- Never stand on the top rung or step of a ladder.

Preventing Slip and Trip Hazards

Slipping accounts for **almost half** of the injuries reported. Slipping can be caused from spills, water, ice, mud, sawdust, or overspray. Two operators were preparing to remove rags from mixer blades on a floating aerator. One of the operators had to go back to the office, and advised the other to wait until her return before beginning the work. Instead, the operator stepped onto the floating aerator to begin the work by himself. He slipped on the aerator and fell into the sludge tank, hitting his arm on the aerator on the way down. He was able to climb back onto the aerator and exit the tank. He had to receive stitches and a tetanus shot. In situations like this, it is always good to remember the buddy system when working in slippery areas.

Slipping can't always be prevented, but it can be minimized by:

- Walking safely and deliberately and avoid sharp changes in direction, running or sliding.
- Taking slow, short steps with your toes pointed slightly outward. For additional balance, keep your hands at your sides (not in your pockets) to support you if you begin to fall.
- Wearing shoes that have slip-resistant soles.
- Practicing good housekeeping. Clean up spills and use absorbents such as dirt or sand.
- Posting appropriate signs until the area is dry if it's necessary to wash the area down.
- Provide proper lighting on walkways, catwalks, and stairs.
- Use handrails when ascending or descending stairs and on suspended walkways.
- Using salt, icemelt, sand or mats on icy walkways to provide traction.



equipment, tools, and hoses. Since it is not always feasible to bury pipes and conduits, these should be covered with a low profile, high color contrast cover. Visual cues with warning messages should be displayed as well.

Safety measures to prevent tripping hazards include:

- Good housekeeping. Pick up trash, tools, and spare equipment.
- Provide proper lighting on walkways and stairs.
- Use handrails when ascending or descending stairs.
- Roll hoses or use a hose reel to keep them out of the walkway.
- Pay attention to your surroundings. Watch where you are walking.
- Don't jump or try to step over an obstacle to take a short cut; walk around the obstacle.

Slip, trip and fall injuries can be significantly reduced in and around basins by simply following safety guidelines, being aware of the environment around you, and by not taking unnecessary risks. Avoiding potential hazards can minimize the risk of serious injury, OSHA violations or workers' compensation issues, which makes for a safer and happier workplace environment for all.

Amy Northam is a new member of our Safety Committee. She is currently the Operations Shift Leader at the Southeast Water Reclamation Plant for the City of Lubbock. She has an Associate of Applied Science degree specializing in Radioactive and Hazardous Materials technology and has worked for the City of Lubbock for 8 years. She holds a Level A Wastewater license. 💧



Tripping hazards are one of the most frequently reported causes of workplace injuries. Around basins, potential trip hazards include pipes, electrical conduits and cords, trash, spare