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Risk ADVISOR

Texas Water Conservation Association Risk Management Fund

Personal Protective Equipment, Part 3

The first two installments in the Summer and Fall 2014 newsletters of this series about Personal Protective equipment covered equipment that was designed to help prevent or reduce the severity of the most common types of workplace injuries. This segment will look at two more types of equipment that are used in more specialized operations and address less common but no less serious situations. Respirators and personal flotation devices will be discussed in this article.

Respirators take several forms depending on the exposures encountered by the worker. OSHA respirator standards are found in section 1926.134.

> **1910.134(a)(1)**
>
> In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section.
>
> **1910.134(a)(2)**
>
> A respirator shall be provided to each employee when such equipment is necessary to protect the health of such employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employer shall be responsible for the establishment and maintenance of a respiratory protection program, which shall include the requirements outlined in paragraph (c) of this section. The program shall cover each employee required by this section to use a respirator.

Water treatment and wastewater treatment workers are probably most exposed to hazards requiring the use of respirators, but any district could have uses for them depending on the work. For instance, sandblasting and painting or entry into confined spaces can necessitate use of respirators. A respirator is defined as any device that is designed to protect the user from inhaling harmful particulates, fumes, vapors or gases. The two main types of respirators are air purifying and supplied air respirators. According to OSHA the important features of each type include:

- **Air-purifying respirator** means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
- **Supplied-air respirator (SAR) or airline respirator** means an atmosphere-supplying respirator for which the source of breathing air is not carried by the user or a **Self-contained breathing apparatus (SCBA)** that supplies air carried by the user.

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Loss Control Briefs

When an Accident Becomes a Crime

Political subdivisions in Texas are fortunate to have effective protection against many kinds of liabilities based on the sovereign immunity granted in the Texas Constitution and the Texas Tort Claims Act. There are, however, significant and costly exceptions. One exception is liability from allegations of violations of federal statutes related to discrimination in employment actions. Another less common but more serious exposure to risk is an allegation of criminal liability related to the workplace. Fraud and embezzlement are perhaps the most frequent criminal activity related to operating a public entity in Texas. Another rare, but very serious kind of criminal liability can arise from workplace accidents resulting in injury or a fatality. Recent examples of criminal liability resulting from workplace fatalities include:

- In 2013 a building being demolished in downtown Philadelphia collapsed onto a Salvation Army Thrift Store killing six people. The contractor was indicted on six counts of murder and 13 counts of reckless endangerment. The operator of an excavator being used in the demolition was indicted on six counts of manslaughter and the 13 counts of reckless endangerment. The contractor had removed the interior structure of the building to salvage joists that he could sell. Without the interior structure the building collapsed killing those in the thrift store next door. *(Workplace Safety and Health Update, December 2013, Jackson, Lewis, Attorneys)*
- In October 2013 the owner and president of the Port Arthur Chemical and Environmental Services Company, LLC was convicted on Federal charges of falsifying documents and lying to investigators in the death of a truck driver who was transporting hazardous waste for the company. The waste contained hydrogen sulfide, a lethal gas that asphyxiated the driver. The district attorney who prosecuted the case cited the owner's responsibility for the operations of the company, directing the transportation of the waste, his responsibility for purchasing and providing safety equipment and allowing the transport of hazardous materials without proper placarding. *(Justice News, United States Department of Justice, October 2013*)
- In a case settled in June of 2014, a chemistry professor at University of California at Los Angeles (UCLA) was given a deferred adjudication sentence for his responsibility in not adequately training a laboratory assistant who died of burns suffered in the chemistry laboratory he supervised. The original indictment was for four felony counts of willfully violating state occupational health and safety standards. *(Chemistry World, June 2014)*

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Questions, comments, tips, advice, ideas, opinions, criticism, and news are welcomed and encouraged. Every effort has been made to ensure the accuracy of the information published in *Risk Advisor.*

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Fund Administrator: JI Specialty Services, Inc.
800-580-8922

Workers' Compensation Cost Containment in Texas

The Workers' Compensation system in Texas has been characterized as a method of transferring an employer's money to lawyers, doctors, chiropractors and injured workers. The employer had very little recourse and few tools to try to reduce the amount of their money flowing into a system that was stacked against them. Before 1989 the Workers' Compensation system in Texas was rife with litigation, life time indemnity payments and large awards. If a claimant and his or her attorney didn't like a ruling by the Workers' Compensation regulator (then the Industrial Accident Board) they could appeal to the state district court in a process called trial de novo. A huge percentage of claims wound up being decided in district court and the Industrial Accident Board almost became irrelevant. Attorneys were involved in claims that were not in dispute and would take huge fees and large percentages of settlements from injured workers. The system was broken, getting more and more expensive and hurting economic growth in the state.

In 1987 the Texas legislature appointed a committee to study the Workers' Compensation system and recommend changes. The recommendations for reform were adopted by the Texas Legislature and upheld by the Texas Supreme Court in 1989. This started a process of evaluation and reform that continues to this day. The reforms implemented since 1989 have made the Texas Workers' Compensation system one of the most effective in the country in terms of cost, medical outcomes and worker and employer satisfaction.

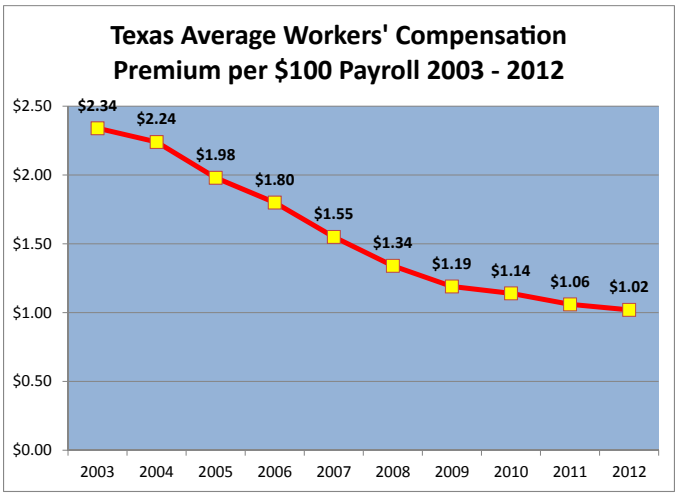
One of the key reforms made in 1989 that still benefits the system was the elimination of trial de novo. Getting attorneys out of every claim and almost every board action reduced costs and improved the amount of lost time benefits injured workers received. Employees still had access to the court system for matters of law; they just couldn't go to court because they didn't like an impairment rating or having to get a second opinion. Other very significant changes included new medical fee schedules, increased weekly benefits, an administrative appeal process, improved health and safety monitoring and a stronger disciplinary function for all of the participants in the system. All of these actions began to decrease system costs and improve outcomes for injured workers.

As medical inflation accelerated in the late 1990's and early 2000's, the legislature again established a committee to study the Workers' Compensation system. Reforms implemented in 2005 went even farther than the 1989 changes in reining in medical costs and bringing the medical treatment of injured workers more in line with the evolving medical landscape. Medical treatment could now be delivered by members of health care networks so that the pricing and accessibility advantages of networks could benefit the workers' compensation system. Reforms also included rolling the administration of the system into the Texas Department of Insurance in a Division of Workers' Compensation (DWC), limiting the duration of lost time benefits and establishing an Office of Injured Employee Counsel.

Since 2001 there have been several additional measures implemented either through legislation or administratively by the DWC. These measures include:

- Implementation of treatment guidelines and adoption of Medicare reimbursement, payment and coding protocols, 2001
- Streamlined dispute resolution procedures adopted, 2005
- Workers' Compensation Health Care Networks began in 2006
- Implementation of Medical Fee Guidelines in 2007
- Adoption of evidence based treatment guidelines, 2007
- Adoption of a closed pharmaceutical formulary, 2011
- Implementation of pre-authorization procedures for use of narcotic drugs, 2011

The net effect of these changes in the law and how the Workers' Compensation system is administered has been a steady decrease in the cost of Workers' Compensation for Texas employers. The first chart illustrates the decline in the average premium cost of Workers' Compensation in Texas for all employers. The data is taken from the Texas Department of Insurance, Division of Workers' Compensation "Biennial Report to the 84th Legislature for 2014."



The first chart is the aggregate premium rate for all insured employers in Texas that includes claims, expenses, profits and commissions.

In addition to the measures taken by the Texas Legislature and Texas Department of Insurance, the Fund has also implemented policies and changes to take advantage of the improved climate for Workers' Compensation in Texas. These measures include aggressive use of medical bill review, pre-authorization for medical procedures, use of nurse case managers and participation in the most effective health care network in Texas, the Political Subdivision Workers' Compensation Alliance.

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Air purifying respirators include the familiar "dust mask" used by landscape workers or air travelers. Even this simple device is considered a respirator by OSHA. This type of respirator uses a filter medium that may be the fabric itself that filters out particles or a layer of activated charcoal that absorbs harmful vapors. Protection depends on the fit to a user's face. This type of respirator is not designed for protection in highly contaminated environments.

Air purifying half mask respirators create a tight seal around the user's nose and mouth to insure that the air being breathed has passed through cartridges designed to filter out various pollutants. The full face respirator creates a seal and also protects the rest of a user's eyes and face. Neither of these are effective if the user has facial hair. Common types of cartridges include HEPA (for asbestos, silica and radionuclides) Organic Vapor, Acid Gas/Mist, Pesticides, Mercury and Combination. Cartridges can become clogged and require replacement to maintain effectiveness. When the filter medium becomes saturated, breathing can become more difficult and cause air infiltration around the seal of the mask. Some wearers may have difficulty breathing through the cartridges whether they are clogged or not. To counter this problem a powered air purifying mask can be used. It uses a battery powered fan to pull air through the cartridge making breathing easier for the wearer.

Supplied air respirators eliminate cartridge replacement by supplying clean, breathable air either from outside of the contaminated area or from pressurized air tanks worn by the worker. Airline respirators are often used by workers performing sand or water blasting. The supplied air is drawn from outside of the work area and fed to the worker through a hose. This system works very well until the equipment supplying the air quits working. The supplied air is under minimal pressure but a constant flow makes it easy to breathe and prevents particulates or vapor from entering the hood or mask.

The self contained breathing apparatus (SCBA) is commonly used for access into areas where the atmosphere is hazardous at the time of entry. Common situations when SCBA is used include in confined spaces or in the event of a chlorine gas leak. The apparatus is ready to use as soon as it is put on so it is used in emergency situations when the ability to protect workers quickly is paramount. Drawbacks include the weight of the equipment and the limited amount of time afforded by the air in the tank.

The necessity for respirators requires the employer to maintain the equipment in working order, choose equipment appropriate for the hazards encountered and fit test the users of respirators. Each worker who will use a respirator must try it on and make sure the equipment fits properly so it will protect the worker effectively.

Just as the Occupational Safety and Health Administration (OSHA) sets standards for protective equipment for "eyes, face, head and extremities" the United States Coast Guard sets the standards for personal flotation devices, or life jackets. The most familiar form is the bright orange, bulky life jacket we often only see on small children in ski boats. However, Coast Guard regulations require everyone in a boat to have available a wearable flotation device that provides a minimum buoyancy sufficient to support a person in the water. Different types of personal flotation devices (PFD's) have different buoyancy ratings. Although there are several kinds of PFD's this article will discuss the two types most likely to be effectively used by water district employees.

Inherently Buoyant Devices are usually made of a covered foam that users wear like a vest. This type III device provides at least 15.5 pounds of buoyancy and ease of movement for the wearer. It is probably the most common type of PFD worn by water district workers who use boats because it affords ease of movement, is light weight and relatively inexpensive. It is not suited for offshore or remote areas when rescue may take a long time. This type of device does not usually have the ability to right an unconscious person and keep their face out of the water.

The Inflatable Personal Flotation Device is a second type III device in common use. It also provides ease of movement when uninflated and may be more comfortable during the summer. The device may be automatically or manually activated when the wearer enters the water. Inflation is accomplished by a CO2 cartridge or if that fails by an oral inflation tube. The inflatable device provides 7.5 to 22 pounds of buoyancy. It is also intended primarily for inland waters but some designs do have the ability to bring an unconscious person into a position where their face is out of the water.

Any type of device used by a district should be kept in good condition and replaced if it becomes worn or damaged. CO2 cartridges should be replaced periodically if not used. Areas where foam has become compressed also lose buoyancy.

In addition to employees who work from boats, every employee who works on docks or structures over water should wear a PFD. Work boats should also be equipped with a throwable flotation device such as a ring as well as a PFD for every occupant of the boat. Please consult with your Loss Control Consultant if you have any questions about any of the personal protective equipment profiled in this series of articles. Remember that the purpose of this equipment is to help prevent injury by protecting workers from common hazards encountered in the daily operations of water districts in Texas.

Sources: Occupational Safety and Health Administration, CFR1926.134, centers for Disease Control and Prevention, "Respirators" article, University of California Santa Cruz, EH &S Manual, "Respirators" chapter, United States Coast Guard, Personal Flotation Device regulations, PFD Manufacturers Association, photographs

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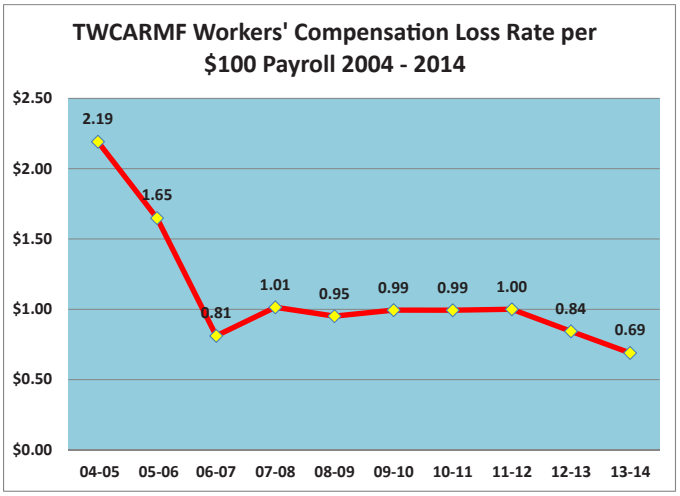
The next chart from data in the 2014 Annual Report for the TWCARMF shows the dramatic decrease in the Fund's loss rates since 2003. Unlike the first chart, this one shows the cost of claims as a rate per $100 of payroll



The chart not only illustrates a significant decrease in claim costs, it also shows rate stability over time. Pricing stability is one of the goals of the Fund and is the result of the efforts of its members to control on the job injuries.

Although the measures taken by the Legislature and Texas Department of Insurance have had an impact on workers' compensation claims and costs, it is the members of the Fund who have had the most effect on the loss costs illustrated above. The members establish the priority for safety at their districts and set up the infrastructure for a safe work place for their employees. They implement the safety programs and make the opportunities available for an early return to work for their employees. Without the commitment of the members to reducing the negative impacts of on the job injury, all of the reforms implemented in Texas would not make much of a difference.

Sources: Texas Department of Insurance, Division of Workers' Compensation, Biennial Report to the 84th Legislature for 2014, Annual Report for Texas Water Conservation Association Risk Management Fund

Upcoming Events

March 4 Wednesday	TWCARMF Board Meeting, Annual Meeting & Annual Lunch @ TWCA Conference, Sheraton Austin Hotel
March 4-6 Wednesday – Friday	TWCA Annual Convention, Sheraton Austin Hotel (Exhibit Booth)
May 21 Thursday	TWCARMF Board Meeting @ York Risk Services Group offices, Austin

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P.O. Box 26655
Austin, Texas 78755-0655

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- In all three of these cases, the owner made decisions that placed employees or the public at risk. The owner, manager or supervisor bears the responsibility of deciding how the work is done, training the employee, choosing safety equipment and deceiving others. In all three cases the responsible parties were aware of the hazards and that the consequences of accidents could be catastrophic.

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The Fund will distribute future editions of *Risk Advisor* electronically to those who prefer a paperless version. The newsletter is provided in PDF format. To add your name to the distribution list, send your e-mail address to Renee Harris at the Fund (renee.harris@jicompanies.com).

Reminder about Online Resources of the Fund

The Fund has been upgrading the resources included on its website, www.twcarmf.org. Some of the recent additions include a searchable archive of all quarterly newsletters back through 2007, ability to register online for workshops and seminars, 26 online safety courses and the old standbys of online claim filing and online confidential access to a member's workers' compensation claim history. In addition, recent annual reports and audited financial statements are also available on the site. Updated loss prevention resources include recent risk management bulletins, checklists and guidelines.