

## NC Industrial Commission

# Safety Bulletin

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***"Don't leave safe habits at work, take them home!"***

**March - 2007**

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Greetings Friends in the Name of Safety:

We hope you are enjoying our new format for our mailings. We now can provide you with more information in one mailing and with a splash of color too!

Please don't forget that our 77<sup>th</sup> Annual Statewide Safety Conference is fast approaching and registration and the preliminary programs are available on our [website](#). Please make plans to join us May 15 - 18, 2007 at the Joseph Koury Convention Center in Greensboro, NC.

We are continuing our 30-Hour Accident Prevention Certificate Awareness Program (APCAP) this year. We had a very successful program February 5-9, 2007 in Manteo, NC and look forward to another successful program March 5 - 9, 2007 at Wilkes Community College in Wilkesboro, NC. Stay tuned for others coming to your area!

Again, we thank you for your support and we pledge to continue to serve your needs. We remain open to your suggestions to improve our programs and promise to continue to provide quality ACCIDENT PREVENTION training programs.

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## **2005 data on alcohol related fatalities out**

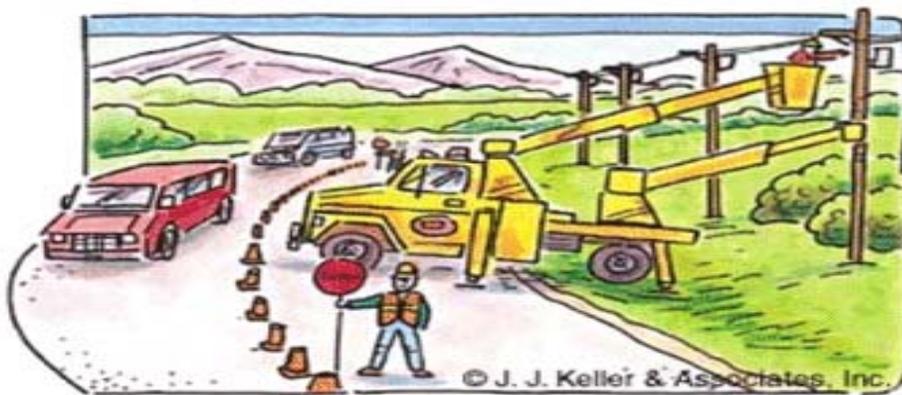
Department of Transportation (DOT) Secretary Mary E. Peters released state-by-state data for 2005 showing that alcohol-impaired driving remains one of the nation's deadliest crimes. In that year, 23 states and Puerto Rico showed a decrease in the fatality rate for crashes where the driver

had an illegal alcohol level of at least 0.08, while the rate in 21 states and the District of Columbia increased and in 6 other states it remained flat.

Peters also announced the first-ever, December holiday season advertising blitz to support impaired driving enforcement, committing \$7 million for paid advertising as part of its "Drunk Driving. Over the Limit. Under Arrest" campaign. This unprecedented holiday ad buy coincided with a nationwide law enforcement crackdown that included thousands of police agencies throughout the United States.

The drunk driving data provide new details that will help law enforcement and the DOT tackle this persistent problem, Peters said. She noted that in the last two years alone DOT has invested more than \$410 million in impaired driving efforts nationally to fund programs ranging from education and enforcement to treatment and improvements to the judicial process. NHTSA's new statistical report on alcohol-related fatalities is drawn from the agency's Fatality Analysis Reporting System (FARS). To view the data, visit: <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/RNotes/2006/810686.pdf>

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## Flagger Safety: The Road to Be On

Directing traffic through or around work zones is crucial to successful projects. It's also a very dangerous activity. Following are some general safety tips to keep in mind while flagging:

- Stand either on the shoulder adjacent to the road user being controlled or in the closed lane prior to stopping road users.
- Be clearly visible to the first approaching road user at all times. The flagger also should be visible to other road users.
- Stand alone, never permitting a group of workers to congregate around the flagger station.
- Locate so there is time to warn workers of dangerous vehicles.

Give [Mel Harmon](#) a call at 919-218-3374 to setup a training class!

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## Use of aerial lifts: Quick tips

Aerial lifts, such as bucket trucks, are one of the most useful pieces of equipment many utility personnel have available. However, the equipment needs to be used properly to avoid unsafe situations.

Here are some key engineering controls and work practices:

- Do not exceed the boom and basket load limits specified by the manufacturer.
- Ensure that brakes are set and outriggers are used and secured before boom is raised.
- Never move the vehicle until the ladder is safely stored and secured (for ladder and tower trucks only) and all people are out of the basket (unless the equipment has been specifically designed for this purpose).
- Never override hydraulic, mechanical, or electrical safety devices.
- Never allow an aerial lift to be used as a crane or material-lifting device.
- Do not make any modifications to the aerial lift without a written certification from the manufacturer.
- Ensure that users stand firmly on the floor and do not sit or climb on the edge or rails of the basket.
- Ensure that no devices are used to elevate employees above the basket.
- Use proper fall protection.

*Give us a call to assist you with your training needs!*

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### Insight...

- **TV Trivia Question:** *What was the longest running of the "fantasy sitcoms" that dominated the airwaves in the mid 1960s?*

Possible Answers: **A: The Addams Family, B: I Dream of Jeannie, C: The Munsters, D:**

**Bewitched - Answer: see last page**

- The world's longest street is located in Canada. Toronto's Yonge Street runs 1,900 kilometers/1,190 miles from the shores of Lake Ontario past Lake Superior.
  - On March 26, 1885, George Eastman manufactured the first commercial motion-picture film at his factory in Rochester, New York.
  - Queen Elizabeth (of England, Ireland Scotland and Wales - but not Empress of India) sent her first email in 1976. (How's THAT for a useless bit of trivia?)
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## Who Wins With a Strong Safety Culture?

By Mike Bingham

The title of this article raises a question that may seem to have a simple answer-*everyone wins*. But lots of questions need to be answered in order to fully understand the question, "Who Wins With a Strong Safety Culture?"

Everyone wins is true, but how? Why is that answer true? What does win mean?

Winning has different meanings to different people. To the hourly worker winning could mean going home each day with both eyes, both ears, all fingers, toes, limbs, skin and lungs in the same or better condition than when they started their shift. To management winning could mean having strong, healthy workers to come back the next day to make the product, which in turn generates the profits, which grow the business and pay the wages, that ensures the company can stay competitive - and on it goes.

Winning is mutually inclusive in a strong safety culture. When hourly folks work in a manner consistent with solid safety training, in a safe environment provided by management, everyone's goals can be met.

So, how do we get people to work safely? How do we provide a safe and healthful workplace? By building and implementing a strong safety culture.

Combining training with hazard management is essential for eliminating work-related injuries. Hazard *awareness* is severely limited if hazard *elimination* isn't applied. Hazard elimination is difficult if workers can't recognize a hazard for what it is. Awareness is good, but how do we ensure that each and every individual in the workplace is aware of a hazard? Do we greet new hires at the door with a rundown of our safety hazards? Well, no; doing that would be silly. If we eliminate the hazard, though, we no longer have to think about it. We don't have to manage behaviors related to avoiding the hazard every day. We don't have to worry about workers forgetting about the hazard. It is behind us and we can spend our efforts on other functions, in building progress rather than maintaining the status quo. When training people and eliminating hazards is done out of a deep respect for the individual worker, a culture has begun.

Requiring employees to work safely, using solid safety techniques, and providing a safe, healthy work place is one sure way to reduce pain and suffering, cut costs, and protect people, our only real asset.

But guess what... building a safety culture is a hands-on, highly interactive process. Just as no machine or process has spontaneously started producing more and/or better products, a strong safety culture will simply not spontaneously appear. Building a good safety culture takes responsible management, (both as a verb and a noun). It takes responsible employees with safety training and education that augments their physical workplace environment. It is a shared desire and commitment to supporting each other in the workplace that creates the strong safety culture that makes everyone a winner.

*Editor's Note: Mike Bingham is the Western Area Safety Representative for the North Carolina Industrial Commission. He has 27 years experience in industry, from entry-level assembly work through various technical and managerial positions. He says he is fortunate that his job is also his hobby. Mike is one of the 10 members of the North Carolina Industrial Commission's Safety Department who are out there Working for You to make our workplaces safer and better for each and every worker by reducing injuries to employees and saving money for employers through education and training.*

You can contact Mike at: [binghamm@ind.commerce.state.nc.us](mailto:binghamm@ind.commerce.state.nc.us) or call: 919.218.9045

## **DOT announces 2006 stats**

More Americans must take steps to protect themselves on the highways to reduce rising fatality numbers, Secretary of Transportation Mary E. Peters said while releasing a study announcing slight changes to the seatbelt and helmet-use figures from 2005 to 2006. Citing new data from the National Occupant Protection Use Survey (NOPUS), Peters said that seat belt use in the US now stands at 81%, down slightly from the 2005 use rate of 82%. She noted that in the West, belt use climbed from 85% to 90% between 2005 and 2006; and it rose from 82 to 83% in the South. However, in the Northeast, belt use fell to 74%, down from 78%; and in the Midwest it dropped to 77% from 79%.

Peters noted that the Department of Transportation (DOT) is working with states to promote seat belt use, providing more than \$123 million in 2006 incentive grants to states with primary seat belt laws. The National Highway Traffic Safety Administration (NHTSA) also coordinates the national

*Click It or Ticket* law enforcement campaigns, which mobilize thousands of police agencies across the country to vigorously enforce state belt laws.

Peters said the latest new data also shows that 51% of motorcyclists in the US now wear helmets, up from 48% in 2005. She noted that motorcycle helmet use rose in the West between 2005 and 2006 (from 50 to 72%); and in the Northeast (from 42 to 47%). However, the use rate fell in the Midwest (from 53 to 50%) and in the South (from 49 to 45%). (The only helmets counted in the survey were those that comply with DOT standards.)

Nicole R. Nason, NHTSA administrator said NHTSA recently began to offer federal grants to states for programs to reduce the number of motorcyclist crashes. This year, for example, the agency will provide \$6 million in grant funds to states for motorcycle safety training and motorist awareness programs. She said the agency will also create a public service announcement to promote helmet use and a consumer video for its website on how to choose a safe and well-fitting helmet.

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### **From the Desk of Dennis Parnell, Director Safety Education...**

#### **Learn to relax at work**

Sitting at a desk for long periods of time can lead to stiff, sore muscles. Doing some simple stretching exercises throughout the day can help loosen and relax muscles and joints.

You should always consult with your doctor before you start any exercise program. Do all of these exercises slowly, and stop if you feel any pain.

Start each exercise by standing or sitting up straight. Hold the stretches about five seconds. Alternate stretching your right and left sides, and repeat each exercise up to five times.

The first three exercises work on the neck muscles. Turn your head to look over your shoulder. Hold the stretch, and face forward. Then, look over your other shoulder. For the next exercise, look forward while you drop your ear toward your shoulder until you feel a stretch. Another simple neck exercise is to simply drop your chin to your chest.

Here's one to stretch your arms and ribs. Stand up with your hands clasped in front of you. Lift your hands above your head while keeping your hands together and your elbows straight. Stretch your arms back behind your head.

To stretch your shoulders and sides, touch the back of your neck with your hand. Grab your raised elbow with your other hand. Pull your elbow gently behind your head as you lean to the side to feel the stretch. Repeat to stretch your other side. Another shoulder exercise is to bend both elbows and squeeze your shoulder blades together. You can "shrug" your shoulders by lifting them up toward your ears. Next, roll your shoulders forward in a circular motion. Then, roll them backwards.



To stretch your back, stand with your feet apart, put your palms on your hips, and bend backward. Keep your knees straight. After this, sit down, bend forward to lower your chest to your legs, and dangle your arms.

Don't forget to stretch your hands and wrists. Put your arms out in front of you with your palms up. Bend your fingers down toward the floor. This time, put the backs of your wrists together. Now, bend your fingers toward your body. Here's a quick warm-up for your hands. Keep your wrist straight, and fan your fingers apart. Then close your hand into a fist.

Try these stretches and pick your favorites. Remember to do them regularly. Now you know. Dennis ☺

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## The Effectiveness of Your Safety Program

By Michael Nance, NCIC

It was January 28, 1986 and millions of people were watching television. Can you think of this monumental event? Let me give you a clue: "T-minus Ten. Nine, Eight, Seven, Six. We have main engine start. Five. Four. Three. Two. One. And lift-off of the twenty-fifth shuttle mission and it has cleared the tower." The Challenger shuttle was making history.

It was a chilling day in history and one that we will never forget. All seven of the astronauts were killed one minute and thirteen seconds after lift-off. Like most Americans, I wanted to know what happened, then why it happened. This mission was delayed and changed so many times that NASA, along with other agencies, began to receive numerous questions. True, the accident was caused by a mechanical problem with the seal of the O-ring, but as the investigation of the tragedy unfolded, it was clear that safety took a back seat to economic considerations, political pressures, and schedule backlogs. One of the major people involved was Senior Engineer Roger Boisjoly of Morton Thiokol. He (and others) had concerns and expressed these concerns in various forms, right down to the hours before launch. Later, he helped expose the broken safety culture that existed at NASA.

Has the safety culture or attitude improved? Certainly NASA has a safety program, but were the persons responsible for the execution and participation complacent? On February 1, 2003 another disaster. The Columbia shuttle disintegrated while reentering the earth's atmosphere and seven more astronauts were killed. I am not trying to convince you one way or the other about the validity of the space program. These terrible events crippled the program and caused an outcry to end this form of space exploration. Now, what if a catastrophe occurs at your place of business? While ethics and attitudes played a huge role in the events leading up to these disasters, we hope that corporate values harmonize with our own philosophy. Managers, supervisors and the front line workers are consistently forced into high-pressure environments and prompt decision making. We have an obligation to make the right decision in everything we do. Part of making the right decision is developing a strong, monitored safety program.

What comes to mind when you hear the word "Safety"? Does the thought of additional expense come to mind? How about the same messages and videos year after year? Perhaps you think of the incident that happened last month and how that is going to affect the bottom line profits. Finally, maybe you recall the last insurance or governmental audit that you were responsible for and how the rates were going to increase.

As a person who has experienced all of the items mentioned in the paragraph above, I can understand how businesses define, think of, and view safety. I have spent over 27 years in my

professional life working in safety and it began with my military service. I worked on munition systems in the Air Force where one mistake could mean loss of life to me or a comrade. After serving two terms in the Air Force, I began a career with the transportation industry. It didn't take long to realize how a safety attitude can affect the driver. I studied tasks and procedures to improve the safety rating and to lower insurance cost. As a result of continuously improving the company ratings and reducing accident frequency, I earned the honor of being named a Certified Director of Safety. Many of my ideas for safety improvement came from the network of people in the transportation safety council. The company was sold and relocation was not in my best interest, so I altered my career to include warehouse management with a large warehousing company. In a relatively short time, I became the Warehouse Manager. I learned many facets of what it takes to move material in, out, and around a building. As with most warehouses, special focus was paid to forklift safety, dock safety, slips trips and falls, PPE, and hazardous materials. This was a company that had a reputation for being one of the best and I was proud to be a part of it. However, my roots belonged to safety and when Dennis Parnell called me and explained what a Safety Representative does, I couldn't pass it up. What an opportunity! I am tasked with promoting safety and accident prevention, while making a difference in hundreds of companies across the state. It is an honor to be a Safety Representative with the North Carolina Industrial Commission's Safety Education Section.

Accidents can and will happen, without warning and without regard, but you can reduce the probability. The North Carolina Industrial Commission's Safety Section is a group of experienced folks that want to act in a preventative measure with your existing safety program. We have a broad range of topics with a special interest in getting participants involved and getting everyone focused on having a safe work and home environment. We offer practical instruction on prevention, which, in turn can reduce worker's compensation.

Most companies and organizations face an insurance review (or audit) once a year. Usually during this review, the spotlight will lean to preventative measures taken either pre or post accident. Documentation of training records will be reviewed along with the sources of training. Membership in any outside safety organization will also be asked. Fortunately, you can have both of these areas covered with the North Carolina Industrial Commission and your area Safety Council. Auditors tend to look for training that is conducted the same way, year after year. It gives the appearance of a stale safety program that is not effective, especially if there are numerous occurrences.

Have I touched on anything that you have experienced? I certainly hope that you continuously monitor the effectiveness of your safety program and will take advantage of the free services offered by the North Carolina Industrial Commission's Safety Education Section. It makes sense to be involved with a local safety council and to use free outside sources for training needs. Call one of our Safety Representatives today and schedule them for your next training session or safety meeting. Go to [www.comp.state.nc.us](http://www.comp.state.nc.us) and click on the "safety" link on the right side of the page. This will direct you to a wealth of information that will help change your idea or attitude of the word safety. In order to make your safety program credible and effective, you must demonstrate to the customer and employee that safety is a top priority.

Give us a call today. Thanks, Michael



## **Electrical safety: Understanding arc flash**

An electrical equipment failure (like a short circuit) or human error (such as holding a metal object too close to energized equipment) causes arc flashes. If you have two energized points, which are not contacting each other solidly, the current can jump from one point to the other. This is called an electric arc or arc flash.

### **One-second duration**

Unlike a flash fire, an electric arc can begin and end in less than a second. Bystanders see a flash and hear an extremely loud boom and it is over.

### **Electric arc**

A person can be severely injured or killed by the huge amount of heat generated by this arc. Temperature of the arc can range from 15,000 to 35,000 degrees F. You can imagine what this heat can do to the human body. (Heat in excess of 122 degrees F. can cause third degree burns, which do not heal.)

### **Flying molten metal**

The arc also immediately turns the electrical conductors into molten metal droplets that fly away from the source at near the speed of sound. These projectiles can travel quite a distance, starting clothing and other materials on fire.

### **Arc blast**

Not only does the electric arc generate an excessive amount of heat; this heat causes an intense pressure wave that usually throws the employees working nearby away from the arc. This wave is so strong it can break ear drums and cause concussions and broken bones.

### **Explosions and/or fire**

The heat from electric arcs can ignite combustible or flammable vapors in the air causing an explosion. Materials stored nearby can also start on fire.

### **Personal protective equipment (PPE)**

Whenever electrical workers have the chance to be exposed to an electric arc they must wear clothing and eye protection resistant to the flash. Make sure you provide employees with the necessary PPE. (Part II, Chapter 3 of NFPA 70E, Standard for Electrical Safety Requirements for Employee Workplaces covers the standards for PPE.)

### **Monetary cost**

The monetary cost of an electric arc accident can run into the hundreds of thousands of dollars. Damage to equipment and the facility, lost production time, increased insurance expense, medical bills, worker's compensation, and legal costs all can be the result of one electric arc accident.

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The *NC Industrial Commission Safety Education Section* stands ready to assist you with your Safety training needs. We offer a variety of courses, designed to suit your needs. Please give one of our Industrial Safety Representatives a call...

- [Mike Bingham](mailto:binghamm@ind.commerce.state.nc.us) - [binghamm@ind.commerce.state.nc.us](mailto:binghamm@ind.commerce.state.nc.us) - Western Carolina Area - 919-218-9045
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*We Are Working For You!*

[NC INDUSTRIAL COMMISSION](#)

***[CLIP AND SAVE]***  
***Upcoming Events...***

- ⊙ March 5 - 9, 2007 - 30-Hour APCAP - Wilkes Community College, Wilkesboro, NC
- ⊙ March 6, 2007 - Western Piedmont Safety Council SAFETY TALK CONTEST - Hudson Uptown Building (known as the "HUB") in Hudson, NC. 6:00 p.m.
- ⊙ March 7, 2007 - Southern Piedmont Safety Council SAFETY TALK CONTEST - Roush Racing HQ & Museum - Concord, NC
- ⊙ March 13, 2007 - Mid-State Safety Council SAFETY TALK CONTEST - Ocean Stars - Apex, NC
- ⊙ March 15, 2007 - Central Piedmont Safety Council - SAFETY TALK CONTEST - Smith Hall - NC A & T State - Greensboro, NC
- ⊙ March 15, 2007 - NCRWA Safety Workshop - Atlantic Beach, NC - 6 hours credit
- ⊙ March 27, 2007 - Southeastern Safety Council - Regional Workshop - Shallotte, NC
- ⊙ March 29, 2007 - Eastern Carolina Safety Council Safety Talk - Bill Ellis Convention Center - Wilson, NC
- ⊙ May 15 - 18, 2007 - NC Statewide Safety Conference - Koury Convention Center Greensboro, NC

- Answer: D. Running for eight seasons. "Bewitched" was the longest-running of the so-called "fantasy sitcoms" that dominated the airwaves in the mid-1960s, as well as the last surviving example of the genre when it went off the air in 1972, a year after "All in the Family" (1971) ushered in a new era of reality sitcoms.

