

New
ANSI Z133
**Stresses
Aerial Rescue
Preparedness**

By Rick Howland

Something's wrong. Your tree care worker is aloft in an aerial bucket. There's a problem. Maybe it's a pre-existing condition, maybe it's the heat or maybe it's contact with a hot wire.

What to you do?

Your first inclination as a human being, co-worker, or an employer is to perform a rescue and first aid. But is that the right thing to do? Are you putting yourself or others at risk of becoming a victim, too?

The newly revised "ANSI Standard: Z133.1-2006: American National Standard for Arboricultural Operations—Safety Requirements" lists very early in the document, in section 3.3.4:

"Employees who may be faced with a rescue decision shall receive training in emergency response and rescue procedures appropriate and applicable to the work to be performed as well as training to recognize the hazards inherent in rescue efforts (Annex F.)"

Annex F is basically a flow chart (See Figure 1) outlining the decision-making and actions to be taken in such situations. Study that chart carefully. It is a blueprint for two things. First, it can be used in the field to determine quickly which procedures need to be taken in the event of an emergency. Having a checklist handy on what to do and not to do will speed up rescue and first aid and minimize decisions made with all good intentions but in haste, which could result in further emergency.



The new ANSI Z133 implores that employees who may be faced with a rescue decision shall receive training in emergency response and rescue procedures appropriate and applicable to the work to be performed as well as training to recognize the hazards inherent in rescue efforts.

Second, and regardless of the size of your operation, each step is a wake-up call for training in emergency or first aid procedures. It is also a checklist of the steps a caregiver or Samaritan needs to take to effect the best possible result – all of which can be taught and refreshed in simple classes in the field or back at the shop.

John Ball, who is a professor of forestry at South Dakota State University, draws on 30 years in arbor care, many of them in the field managing tree care companies in the Midwest and East. "A number of years ago, 2001 in fact, we started a research study looking into fatalities in our industry," explains Ball. "We were appalled to

find more accidents than many people suspected. Just about every arborist has a war story; there are few who don't know someone who has been seriously injured or killed. The results should not have surprised us, but they did," he says.

After that, Ball and his team began to look into non-fatal injuries and reports in which OSHA found that serious arbor care accidents tend to have lifelong consequences. "Every one of us suffers from thousands of nicks and scrapes associated with any outdoor employment, but the serious ones resulting in hospitalization tend to have lifelong effects. These are ones that are not fast healing, nor necessarily com-

plete healing,” he says.

The next logical step, Ball says, was to look at how the industry could go about saving lives. “There are two approaches. One is to improve safety with safer work practices and equipment. And our industry has made great strides in this area. We do see a change in attitude by people looking at achieving zero accidents. There is no such thing any more as an acceptable accident rate. We can’t make it zero, but we can continue to reduce them,” he says.

The other aspect and truly the reason for updating documents such as the ANSI Z133 Standard is, as Ball puts it, “If an accident does happen, how can we change the outcome? How can we make that a survivable accident?”

The forestry professor says his inquiries led him to look at medicine’s so-called “golden hour” where, if intervention is made properly and quickly, a life can be saved.

“Our efforts have been mostly in the area of aerial rescue, and we were surprised to find that rescues are more common (than we might have thought), and often they are not the ones we have been practicing for. Our traditional standards have been that we are going to bring a victim down from a height of about 35 feet and get him to the ground in less than five minutes to begin first aid. This is a good idea if the victim has suffered electric shock and is not breathing or suffered some other trauma and needs rapid descent, say for uncontrolled bleeding or another problem. Here, we have a small window to get the victim down and get CPR going.”

“There’s no question that we need to have arborists who can quickly extract a victim from a tree, but I remind people that we need to add more good skills.” He offers as an example a tree care professional trapped in the canopy of a tree. Perhaps the rigging failed and a log is pressing down, pinning or crushing the victim.

“What if you know how to bring down a victim quickly but the first time you have to perform an aerial rescue the victim is

Aerial Rescue Flowchart



pinned. Now what do you do?” He asks, what if someone was struck in the head and was unconscious, or perhaps is conscious but not acting normally and the victim is fighting off rescuers? What if someone has a spinal cord injury? What if someone is slumped in the bucket but otherwise OK?

Here a rapid descent may not be the best solution, he argues, for “what we don’t know may in fact make the situation worse before medics arrive. Our role should be to get to the victim, to check the condition of the victim and stabilize the situation until emergency rescue teams can arrive. Then,

with their expertise, we lower the victim. The conclusion, he maintains, is that climbers aren't rescue people and emergency rescue personnel are not expert climbers. "We need to share the best of those skill sets.

"We need to look at our role. Why extract a victim unless there is an immediate threat to the victim?" Ball asks. "Rapid descent is not always necessary and may not be advisable," he adds. (Another look at the adjacent flow chart is advisable at this point.)

Ball says his team's job has been to gather accident data and present it to the ANSI committee and to the industry for its procedures. While he's not directly involved in developing the new standards and doesn't think it appropriate to be gathering information and making policy, Ball says the industry is at a point where it needs to address methods to stabilize victims in any scenario and to hammer out an emergency process built on what we already know.

"We need more training and education in the field," he stresses. "I can't over empha-

size this. We are NOT going to take away the skills we know and have trained for. We are adding to what we know."

Joe Tommasi, manager of safety & loss prevention at Davey Tree Expert Company in Kent, Ohio, has sat on the ANSI committee looking into the safety requirement standards. Regarding the new standard – and especially the section having to do with aerial rescue (and the aerial rescue flowchart) – he says, "The issue is how to carry forward the standards we've built upon. In recent years we've begun to talk about expanding and modifying longstanding aerial rescue procedures based on a menu of circumstances that may arise. Historically, there is a lot of material on aerial rescue stemming from electrical contact events, but aerial rescue is far more than that."

Having attended numerous symposiums to get opinions on different rescue procedures, Tommasi says the new requirements are still a work in process. "Davey and others have found that the concept of longstanding rescue procedures take the premise to render aid as good Samaritan –

to volunteer without becoming a victim yourself." In the case of electrical hazard, that is to manage the hazard, go on to aerial assistance and rely on emergency service providers if one is not capable of rendering aid.

"We need to take the same concept but eliminate the electrical-only circumstance and apply it to any person in any tree, say in an open yard with no conductors, where a person is injured or ill aloft. Many of the same principals as in electrical hazards apply. We need to take the best practices and expand on them," he says.

That may actually mean minimizing the rush to render aid. "Although most people in our business think in terms of the electrical hazard and of getting people down in four minutes to restore breathing, that is not always the case."

"Beyond the TCIA discussions on the point, plus symposium groups, we have come up with proposed new standards and a flow chart that is a visualization of how one might respond to different types of emergencies aloft."

He stresses that this is not a "how to," but from here a business can take each step in-house and review aerial rescue procedures and first aid or develop their own proprietary information to develop and train people for these emergencies.

Tommasi says the first premise is and always will be to discuss training and to raise awareness to generate acts of prevention, then to raise awareness in life-saving situations, for example emergency response practices. He sees the aerial rescue flowchart as a tool that may assist rescue teams control emotions and to be able to respond quickly and calmly, "and with that comes efficiency," he adds.

"The reality is that these serious aerial rescues are not as frequent as you might think, but they are in reality a very serious emergency response situation. And it doesn't have to be aloft. The same circumstances can take place on the ground,

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so the same concept of assistance applies,” notes Tommasi. “And let’s not forget that as the demand for arbor care increases, so, too, does the potential for risk.”

He advises to take the profession seriously, plan your work and execute it well and, in the event of an emergency, do no harm but be prepared to take proper action. “That is all part of the totality of professionalism,” he says.

Stephen Chisholm Sr., president of Aspen Tree Expert Co. in New Jersey, is a 40-year veteran of the business – 30 of those years with his own company – and he sits on the ANSI crane subcommittee. He recognizes that, “We’ve been training for aerial rescue for a long time, especially line-clearance tree trimming. It has always been a requirement for those in line clear-

ing to train for aerial rescue in the event of a possible electrocution. You have a four-minute time frame to get into a tree safely and retrieve a victim of electrocution to begin CPR. That’s been a longtime requirement for companies with those services,” he says

“But certainly with tree work you don’t have to be electrocuted to have an emergency. It could be a cut from a chain saw, getting stung by wasps or hornets; you could slip and break a bone. Someone still has to come to the rescue. When there’s a tree involved, it’s a very different rescue from what emergency teams are trained to deal with.”

He points out that an electrical event could involve either high or low voltage and each has a result that requires a different, specific emergency response.

“The tree care professional needs to know the importance and difference in a defibrillation from a low voltage shock and complete heart stoppage from a high voltage line. It’s knowing what to do if you’re working in the tree care business and one of your team gets injured – how to perform a rescue safely and not become a victim yourself.”

All of the safety professionals interviewed stress that the new ANSI Z133 poses significant changes in safety practices for industry. They advise all professional arborists to obtain a copy and make its recommendations a part of their daily work and company training systems.

To purchase copies of the new ANSI Z133 visit www.tcia.org or call 1-800-733-2622.



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