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CIA's fiscal year ended on August 31, which makes the first week of September the time to clean up, close out, and begin the new year fresh. In cleaning out, I ran across a brochure for TCI EXPO 1997 in Columbus. Looking at the changes over 15 years makes for some interesting reading on a number of levels.

The speaker program reminded me of people who are no longer with us – legends such as Alex Shigo, Don Marx and Bonnie Appleton – who contributed so much to the profession during their lifetimes. The brochure also reinforced the notion that while the speakers have changed over time, the topics have remained remarkably consistent: pest management, how to increase profits without raising prices, solutions to attract good employees, and marketing strategies for the growing business.

Also interesting in comparing the 1997 event with what will be happening at TCI EXPO 2012 in Baltimore is the sheer volume of activities, networking and education available to attendees today. In 1997, a Gold Card ($175) bought 13 hours of classroom education. In 2012, a Gold Card ($255) buys more than 30 hours.

In 1997, those 13 hours in the classroom were about all that went on at TCI EXPO outside the trade show floor. Has that ever changed!

Over time at the request of members, we added full- and half-day pre-conference sessions for more detailed presentations. Some topics simply can’t be covered in a meaningful way in only 75 minutes. We also added safety as a third track to the standard tree care and business tracks in recognition of the ongoing personal and financial costs of accidents. Finally, we took a hard look at the informal and semi-structured information-sharing opportunities and significantly ramped up those offerings.

In 1997, we had no scheduled networking opportunities beyond the welcome reception. This year we’ll have a welcome reception, a reception with students for CTSPs and accredited companies, free forums on Accreditation, A300 Standards, the Guide to Plant Appraisal, and Utility Contractor Accreditation. We’ll have specific, open forums on safety for CTSPs, on building a company for Young Business Leaders, and a Tweet Up for those who communicate using Twitter. We’ll have members-only forums on “Marketing Ideas to Grow Your Business” and “Maximizing Member Benefits.” Lastly, attendees can stop by the separate TCIA marketing and publications booth where members can offer suggestions for future magazine articles and discuss reviews of their websites, newsletters, sales brochures, and marketing campaigns.

Traditionally, a trade show is the place where industry buyers and sellers gather to share information and shop for new tools or services to grow their companies. A conference is designed to transfer knowledge from researchers and industry experts to practitioners who will put their newfound education to use in the field. In addition to presentations, there is usually some social time scheduled to allow for networking and informal idea sharing. The changes to the TCI EXPO trade show and conference over the past 15 years reflect a determination to improve the overall experience for everyone who attends – member, nonmember, vendor, and buyer. They are an outgrowth of a constant examination of the very purpose of a trade show and conference.

The point of this massive expansion over time is to offer the opportunity to share collective knowledge and advance tree care businesses in the best way for each individual. In TCI EXPO 2012, we believe we have created a conference that directly speaks to your business needs … and we’ll keep evolving as the industry and your needs change. See you there.

Mark Garvin
Publisher
New for 2012 is the RG1645S self-propelled stump cutter. This compact unit takes RAYCO’s popular RG1645 platform to the next level of performance with a heavier cutter wheel and improved cutting torque. A swing-out operator control station allows for maximum visibility of the cutting action while keeping the operator shielded from chips and debris, and swings in line with the machine to pass through gates. Wider tires help to improve flotation and traction and removal of the outer dual wheels allow passage through 36” gates. The RG1645S is powered by a Kubota 44hp turbo diesel engine that meets tier 4 interim emissions. For more information, call 800-392-2686 or visit www.raycomfg.com.
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By Dwayne Neustaeter

In this article, I want to focus predominantly on one part of the felling process – the back cut. It is an important part of the felling process. The back cut is what forms the hinge and the hinge is what provides control to a tree being felled, and control is a good thing when felling trees.

But first, a bit about planning and control.

Many studies suggest that accidents are not random acts but rather a series of events that tend to connect and build on each other and culminate in a negative experience. Have you ever experienced an accident in the tree care business? There are always variables, things that are out of your control or things that you didn’t think about and that you didn’t take time to plan for – and then they show themselves in some way resulting in a mishap. By “planning your work and working your plan” you can eliminate or reduce these variables by identifying and dealing with them before they become a problem. Planning is kind of like insurance.

It has been said that an accident is an unplanned event. Therefore it stands to reason that a way to avoid accidents is to plan your work and work your plan. If something goes wrong part way through a plan, you re-plan and start with the new plan. Don’t just keep going along with the original plan, stop to regroup and make another plan.

Take things that are out of your control and put them in your control. If you can keep control of a situation, like the felling of a tree, for instance, the safer you can be. If you fail to plan, then you plan to fail.

It can be the simplest things about planning that matter. You hear a lot about statistics and that arboriculture is one of the top five most dangerous occupations, which is enough reason right there to always plan your work and work your plan. High risk activities require a lot of thought and planning. Time is never wasted on reconnaissance or, in other words, checking things out, practicing and using guides.

The back cut

As we said earlier, the back cut is an important part of the felling process. It forms the hinge, and the hinge provides control to a tree being felled.
The back cut is what we do to release the tree, the final cut. It is important that the back cut stop before we cut all the way to the notch, otherwise we would compromise a very important part of the felling process, the control part, the hinge. Until you make the back cut, nothing happens and you are safe and in control. It is when the back cut starts being made that everything starts happening.

We always form the back cut behind the notch apex and it is cut level or perpendicular to the grain of the wood, not slanted as you sometimes see, and the hinge should be even in thickness.

Let’s look at the back cut from a placement aspect first and then from a techniques aspect. There are many nuances and variations pertaining to back cuts and not all aspects are talked about in the next few paragraphs.

**Placement**

Often the back cut is stepped up or raised above the notch apex. The reason for the raised or stepped back cut lies with the 45-degree notch. A narrower notch aperture will close sooner and, in fact, a notch 45 degrees or less will close before the tree is on the ground. A stepped back cut helps prevent the tree from sliding backward off the stump.

As long as a tree being felled is in the air, gravity is acting on it, and as it is falling through the air, the hinge is giving you control. When the hinge breaks, there is little keeping it on the stump and there is nothing from keeping it from twisting or rolling. By raising the back cut above the apex of the notch, it creates a shelf or step that helps keep the tree on the stump in the event there is hinge-wood failure.

Caution is in order when raising the back cut because your eyes tend to follow the kerf of the back cut, and the higher the back cut is made, the easier it is to bypass the notch apex. Even though the back cut has not reached the angled top cut of the notch, it may have passed the notch apex below. It is important to understand that the hinge starts form the apex of the notch and when you raise the back cut, it is easy to overcut your hinge. A way to avoid this is to scribe a vertical line with your chain saw into the bark behind the notch apex where you want your hinge to be. This provides a visual indicator as to when to stop cutting the back cut, and this is part of planning the back cut.

Using shallow kerfs in the bark that can be used as guides that will show the cutter where to cut and when to stop cutting is a powerful and simple example of planning.

Making the back cut more level with the notch apex is common when cutting a notch with an aperture greater than 70 degrees. This is because open notches allow the hinge to work longer as the tree falls and in many cases the hinge works until the tree is on the ground, sometimes even staying intact. The need to have a step is not as important in this case, so the back cut is placed more in line with the notch apex. One advantage to doing this is that it makes it easier to ensure that the cutter does not cut into the hinge wood, because the back cut is in line with notch apex and there is a more obvious point of visual reference. However, I recommend scribing lines into the bark even if the notch is open faced.

There are other points of view regarding back cuts being raised and hinge-wood thickness regarding uniformity that I am not going to delve into. Suffice it to say that everyone agrees that compromising hinge wood due to a careless back cut is unsafe.

**Techniques**

Back cuts have traditionally been made from the back of the tree cutting toward the notch apex. In the days of cross-cut saws and axes there really was no other choice, and this back-cut technique still is commonly used today. I have heard it said that every technique has advantages and limitations and one limitation with the common back cut is that the cutter must remain near
the tree and cut up to the point where the tree begins to fall. This can delay the escape process and it is wise to always retreat at an angle and away from the direction a tree is falling.

Examination of tree felling accidents and fatalities show that 90 percent of all accidents and fatalities when felling trees occur within 15 seconds of when the tree starts to fall, just when the back cut is cut enough that the hinge can start to bend. Also, they happen within 5 feet of the base of the tree, where you are making your back cut. This is why the escape route is so important, and is referred to as the 5-15-90 rule.

The escape route is one of the most important steps in your plan. It is so important, in fact, that if you can’t plan for a good escape route then you shouldn’t do the cutting.

Another limitation of the common back cut is that often the hinge is too thick to bend and this can cause gravity and the mass of the tree to act on your hinge and create intense pressure. This can lead to other reactions such as a barber chair, where the tree splits vertically. This occurs because the hinge is too thick to bend and almost always occurs with heavy leaning trees. Conversely leaving too little hinge wood could cause premature hinge failure,
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Another back cut method is the bore-cut or plunge-cut back cut, this where the saw is bored through the center of the wood behind the notch – not close to apex nor close to the back of the tree, but through the middle of the uncut wood left behind your notch. Once the bore is complete, the cutter can check to ensure the back cut is level and then proceed to cut toward the notch, establishing the hinge. The wood left uncut at the back of the tree acts as holding wood and can be cut and released from a position that allows the cutter to retreat down the escape route efficiently. This is, perhaps, the one of the most significant advantages of the bore/plunge-cut back cut technique.

This technique was not possible until the modern chain-saw chain was developed, as it is necessary to use the tip of the bar. The reactive forces of a chain saw must be understood and bore/plunge cutting can be done very safely with practice. There are training and education companies that specialize in training workers how to use the bore/plunge-cut back cut technique. If you don’t understand it, take a course.

Review

The back cut is made using a chain saw to create a hinge. Whether you raise it or cut it level should depend on the size of the notch aperture or opening. Whether you use a common back cut or choose to bore or plunge, the purpose is to cut the wood left behind the notch thin enough for it to begin to bend or fold and guide the tree to the ground. The back cut has to be deep enough into the wood that the tree starts to fall or, if it doesn’t fall, we may have to put in wedges or use a rope. But proper planning will have anticipated this. We continue cutting the back cut until the tree starts to fall, and this requires focus and concentration while you are forming the hinge. Then, once the tree starts to fall, you have to escape. So, there is a lot going on all at once.

With the bore/plunge-cut back cut we cut through the center of the tree, and by doing this the tension is released in the center of the tree first. This minimizes barber chair and, by leaving what we call the strap or holding wood at the back of the
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A tree felling plan should consist of several steps, starting with site hazards and tree risk assessment. A good felling plan also should include height and lean assessment, an escape plan, all the equipment you need such as wedges and an axe, a notch plan and, finally, a back cut plan.

Decide what back cut technique you are going to use. If raised, how much? Plan for how thick you want your hinge to be. A good rule of thumb is to have your hinge thickness be approximately 10 percent of the diameter of the trunk at the point where you are cutting. For example, a 12-inch diameter tree would require a 1.2-inch-thick hinge. It is recommended to drop down to 5 percent for trees that have diameters in excess of 40 inches.

A couple of techniques I have found to be helpful include doing a practice or dry run of your notch and back cut. With the saw off, stand and go through the motions of cutting your notch and making your back cut. This prepares you for the real thing and often reveals positioning or other challenges and gives you a chance to eliminate more variables. Another technique, as I mentioned earlier, is to give yourself guides by scribing lines in the bark with the chain saw before cutting the back cut. This way, you can more easily be sure your back cut is exactly where you want it and ensure your hinge is just right.

Plan your work, work your plan, plan your back cut – all the parts of your plan are important. The more that you think through it and the more you plan it, the better off you are going to be.

Dwayne Neustaeter is president of Arboriculture Canada Training & Education, Ltd., a five-year TCIA Associate Member company offering arborist training across Canada. This article was based on his presentation on the same subject at TCI EXPO 2011 in Hartford, Connecticut. For a schedule of sessions or to register for TCI EXPO 2012 in Baltimore, visit expo.tcia.org.
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Management buyout at Reachmaster/Skako Lift

ReachMaster, Inc. in September took over the assets and activities of Skako Lift, Inc., which includes the representation of the ReachMaster Falcon, Bluelift and Denka compact aerial lift product lines.

After 11 years of operation in the U.S., Skako Lift, Inc, in Houston, Texas, agreed to the buyout with Ebbe H. Christensen, who was its president & CEO and who has formed the new company operating as ReachMaster, Inc.

ReachMaster started its operation in Houston, Texas, in 2001 as a subsidiary of then Danish compact lift pioneer E. Falck Schmidt A/S, which in 2005 merged with the other Danish compact lift manufacturer Denka Lift, and eventually became Skako Lift. The Skako Group decided in 2011 to divest all its interests in the global lift manufacturing industry. Last year Skako completed a management buyout for their Falcon Division in Denmark, and also sold off the Denka production.

“We’re very pleased with this agreement and the opportunities it represents, including going back to our well-known ReachMaster name,” says Christensen. “It provides us with a new platform, where we can renew our focus as a company that again has compact lift sales and service as its primary business. Since we pioneered the compact lift segment in the U.S. more than 10 years ago, we’ve seen a positive and growing interest for the segment in the market. We believe this new setup will allow us to better utilize our extensive experience while taking advantage of these new opportunities.

“It was paramount for us to both secure our American operation as well as the manufacturer support needed to make the change completely seamless from a customer perspective. This includes both technical service and warranty, which will remain unchanged. With several new product releases coming up this fall, this was the perfect timing for us.”

ReachMaster, Inc. will continue its operation in suburban Houston with no changes to location, phone numbers or website.

(Continued on page 30)
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Viltom/FourGroup Italia Raptor chain saw pants

New Raptor chain saw pants from Viltom/FourGroup Italia Srl. are an Italian design for professional climbers. Features include an abrasion resistant front (made of synthetic Cordura fiber); bi-flex (two way stretch) back fabric; water resistance; No-Fly-Zone (insect repellent surface treatment); vertical zips for rear ventilation; double-braced ankle and knee protection; an ergonomic design; zipped and Velcro front and rear pockets; and no-cut Kevlar chain saw protection, class 2 (24 m/sec = 4,724 ft/min). Certified EN 381-5/type 2, exceeding ASTM-F1897 Standard. (FourGroup Italia Srl will be exhibiting at TCI EXPO 2012 in Baltimore this November: Booth #322)

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Talking2Trees inventory and management tool

Talking2Trees is a new urban forest inventory and management tool from Talking2Trees LLC in Greensboro, North Carolina, designed for consulting arborists and municipalities. Talking2Trees is centered around a dedicated iPad app. Use Talking2Trees on your iPad in the field to efficiently collect tree inventory data such as spatial data (address and GPS information); physical attributes (species, height and diameter); photos; growing space; health conditions, and maintenance needs. All of your project data is securely stored on your iPad and can be synced with the Talking2Trees website back at your office. The Talking2Trees website extends the value of your inventories by providing data summary reports, client and project management, and export tools for Excel, ESRI GIS databases and iTree. Talking2Trees is launching in late October 2012. (Talking2Trees LLC will be exhibiting at TCI EXPO 2012 in Baltimore this November: Booth #436)

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RopeArmor RopeKnight Light

Night or day, RopeArmor’s new RopeKnight Light is a multi-purpose rope access throw-weight device and system that will illuminate. It is made from transparent acrylic and contains a flashing LED for high visibility. The “Light” is identical to the RopeKnight in design, form and function, but is also a highly visible solution for low-level lighting and nighttime use. The newly illuminated and optimal geometric form allows for ease of movement for launching, isolating targets and positioning of ropes. RopeShield also serves as a “smooth over” for connections (knots), a throwline-to-rope pull handle, and a positioning or retrieving tool for cambium savers. Fly up and out of the throw-ball dark ages. When tree work and infrastructure can’t wait for the sun to come up, you’ll be illuminated.

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BladeBath saw sanitizer

Pruning-saw sanitation is often a greatly overlooked aspect of professional tree care. Arborists have a duty to guard against cross-contamination of trees. Many tree care specifications now require provisions for saw sanitation. Lauderdale Tree Inc.’s new BladeBath (BLADEBATH™) is a simple, light-weight, efficient and effective means of achieving sanitation results. Used properly, this patent pending device will disinfect most straight-blade hand pruning saws. Simply fill the cylinder with disinfecting solution, attach to your work belt and insert the saw blade. BladeBath was invented and designed by James LeGette, a practicing certified arborist and president of Lauderdale Tree Inc. in Davie, Florida.

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All Gear Cherry Bomb line

All Gear’s Cherry Bomb is the newest addition to their 24-strand climbing lines. Triple construction gives it a 24-strand outer braid, a 16-strand inner braid and a neon orange cable and twisted core for an extra round firmness that climbers look for, especially when using with mechanical equipment. Cherry Bomb was designed in response to requests from the field for a high visibility line. As with the Pro-lite 24, Securelite and Rocketline, the new line is engineered with premium polyester. Excellent quality control along with field testing makes this rope a perfect choice for the discerning climber. (All Gear will be exhibiting at TCI EXPO 2012 in Baltimore this November: Booth #648)

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Events & Seminar

October 10, 2012*
Maryland OSHA Safety Conference
Howard County Fairgrounds, West Friendship, MD
Contact: Jim Reilly, MOSH (410) 527-2090; Reilly.James@dol.gov

October 16-17, 2012*
Illinois Arborist Association Annual Meeting
Tinley Park, IL
Contact: www.illionoisarborist.org

October 19-21, 2012
2012 American Chestnut Summit
Crowe Plaza Resort, Asheville, NC
The AmerChestnut Fdtn (TACF) and USDA Forest Svc.
Contact: www.acf.org

October 24-25, 2012
Certified Treecare Safety Professional/CTSP Workshop
Central Park Recreation Center, Denver, CO
Contact: 1-800-733-2622; peter@tcia.org

October 29-30, 2012
L2 Tree Climbing Methods & Work Positioning:
2-Day Hands-On Training Module
Haddam, CT
Contact: www.ArborMaster.com; (860) 429-5028

October 31-December 12, 2012
UMass Green School for Professional Arborists
Holiday Inn, Marlborough, MA (Twice weekly 9-3:30)
Contact: eweeks@umext.umass.edu; (413) 545-0895; http://extension.umass.edu/landscape/education/

November 8-10, 2012*
2012 TCI EXPO Conference & Trade Show
Pre-conference workshops Nov. 6-7
Baltimore, MD
Contact: 1-800-733-2622; dcyr@tcia.org

November 14-15, 2012
2012 Partners in Community Forestry National Conf.
Sacramento, CA
Contact: www.arborday.org/shopping/pcf/2012/

November 15, 2012
Clean Fleet Technologies Conf: Fueling the Choice
George R. Brown Convention Center, Houston, TX
Contact: www.h-gac.com; (713) 970-2112

December 5, 2012
ISA Exams (All Exams & Tree Worker Written/Skills)
Grand Rapids, MI
Contact: (517) 337-4999; www.asm-isa.org

January 9-11, 2013*
Northern Green Expo 2013
Minneapolis Convention Center, Minneapolis, MN
Contact: MNLA MTGF; www.NorthernGreenExpo.org

January 22-23, 2013
NJ Plants-Professional Landscape & Nursery Trade Show
New Jersey Convention Center, Edison, NJ
Contact: www.NJPlantShow.com

January 27-28, 2013*
New York State Arborists Annual Conference
Crowe Plaza, Suffern, NY
Contact: www.nysarborists.com

February 6-8, 2013*
PennDel Shade Tree Symposium
Lancaster, PA
Contact: www.penndelisa.org

February 9-11, 2013*
Trees Florida
Ft. Lauderdale, FL
Contact: www.treesflorida.org

February 13-15, 2013
ISA Ontario Chapter Annual Meeting
Crowe Plaza, Niagara Falls, Ontario, Canada
Contact: info@isaontario.com

February 19-20, 2013
ArborCon 2013
Lansing, MI
Contact: (517) 337-4999; www.asm-isa.org

February 20, 2013
ISA Exams (All Exams & Tree Worker Written/Skills)
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February 24-26, 2013*
PennDel Shade Tree Symposium
Lancaster, PA
Contact: www.penndelisa.org

March 24-26, 2013*
Southern Chapter ISA
Memphis, TN
Contact: www.isasouthern.org

May 7-10, 2013*
Western Chapter ISA
Indian Wells, CA
Contact: www.wcisa.net

June 9-11, 2013*
Trees Florida
Ft. Lauderdale, FL
Contact: www.treesflorida.org

* Indicates that TCIA staff will be in attendance

Urban Forest Symposium Call for Presentations

PlantAmnesty and the University of Washington Botanic Gardens are hosting the 5th Annual Urban Forest Symposium in May of 2013 in Seattle, Washington, and are seeking speakers. The theme is Trees and Views. Respondents may serve on a panel, or speak anywhere from ½ hour to 2 hours on any of the following topics: Pruning for Views, View Covenants, Trees and Slopes, or Municipal View Policies.

Please send a description of proposed presentations to Cass Turnbull, 906 NW 87th St., Seattle WA 98117, or email casssturnbull@comcast.net. Include biography, credentials, topic description, whether or not it is a PowerPoint, and your experience as a public speaker. Expenses are paid, plus a modest honorarium.

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The following are questions that have come into TCIA by email and telephone over the past few months, together with our answers.

**Q:** Are chaps supposed to be washed every month per OSHA regulations? We’ve got someone washing them, but haven’t found the regulations. Inquiries to OSHA haven’t been helpful. My Dad thought he saw the requirements in the TCIA “Tailgate Safety” manual, but we can’t find it. I’d like to find the standard for the lady who washes our chaps. She wants to market her services to other area tree companies. Anyone know if it’s OSHA, ANSI or something else?

**A:** The best we can figure is that they have seen guidance from OSHA such as OSHA 3151-12R 2003 Personal Protective Equipment (an informative booklet, see http://www.osha.gov/Publications/oshare3151.pdf), that gives general guidance and notes in general terms that employers are responsible for maintaining PPE, but also notes that employees should care for, clean and maintain PPE, and inform employers if there is a need to repair or replace the PPE.

There is no OSHA regulation or ANSI standard for washing chaps. The best guidance comes from the manufacturer.

**Q:** If an employee has been issued all PPE, has signed that he understands and will comply with company policy, then cuts his leg with a chain saw because he’s not wearing chaps, is he or workers’ comp liable for the injury and time missed? This hasn’t happened yet but I was asked the question. This would apply to getting hurt while not using any required PPE.

**A:** Determining workers’ comp applicability is very different from determining one’s liability to OSHA regulation. This is an over-simplification but under workers’ comp, there is no fault. The claim is simply paid and the payments are limited, which is supposed to prevent the employer from facing a catastrophic lawsuit. The employee at least receives some level of compensation.

With OSHA, the employer is assumed to be at fault and bears the burden of proving otherwise. The affirmative defense of employee willful misconduct requires a well-documented safety policy, training and enforcement of the policy and training.

**Q:** Our crews occasionally use our hydraulic log loader like a crane; in other words, they use it to “pick” vertical stems. Is this an OSHA-compliant practice?

**A:** If we understand your question completely, we have reservations about recommending the practice of using a clam loader-type device to grab a vertical stem.

For instance, we have heard of some near misses. Recently in Massachusetts, a loader operator was gravely injured attempting this on a standing trunk.

In all these instances, they were using the hydraulic clam to grab a relatively smooth trunk tree. You could probably mitigate the risk if you were able to attach a choker (sling) to the trunk and to a suitable attachment point at the end of the boom.

OSHA standards are silent on this practice. ANSI Z133 only has general advisories to use the equipment in a manner consistent with the manufacturer’s instructions. It probably comes down to what it says or doesn’t say in the operator’s manual. An OSHA compliance person can enforce the owner’s manual in an instance like this, citing the company for a “general duty clause” violation. They would only initiate this if the operation seemed unsafe to them. A general duty violation is by legal definition “Serious”; i.e., with fines typically into the thousands.

**Q:** Do you all have any information that pertains to how much OSHA charges for not wearing the various PPE equipment? [This question was posted from a company in North Carolina – Ed.]

**A:** In North Carolina, you have what is called a “State Plan” OSHA. In other words, the state administers its own safety & health program more or less independent of federal OSHA. However they do enforce federal OSHA standards.

When NCOSHA cites a PPE violation against a tree care crew, which they do very frequently, there can be a wide range of monetary penalties. I reviewed about five years worth of inspection data for NC on the federal OSHA website and found that fines ranged from $0 to $2,400 per infraction. A lot of times the initial fine is reduced because the company is small, or it may even be negotiated to zero dollars if the company immediately abates the problem.

It’s important for employers to note that due to a recent federal OSHA rules change, compliance officers can now cite per infraction. In other words, the fines multiply by the number of employees out of compliance on that particular job site.

NCOSHA still enforces the logging standard (29 CFR Part 1910.266) against our industry. The highest PPE fines I found had cited 1910.266; and they were $2,400 for no chaps and $2,400 for no eye protection.

Peter Gerstenberger is senior advisor for safety, compliance & standards for the Tree Care Industry Association.
By Dr. Sharon M. Douglas

All you need to do is look around to see that conifers are important components of our forests and landscapes. However, what is not evident at first glance is that conifers in landscape settings are challenged by diseases more often than conifers in natural forest habitats. With the exception of a few diseases, conifers in forests rarely suffer the effects of disease. In contrast, conifers in horticultural settings are often affected by diseases, especially by those that impact the tree’s value or its contribution to shade or landscape beauty. These diseases are also intensified by site, poor cultural practices, or environmental issues. For example, Diplodia blight, a common disease of landscape conifers, is especially problematic on trees growing in drought-prone sites, and is rarely found on conifers in the forest.

With these points in mind, let’s look at some conifer problems that arborists encounter in the landscape. This selection of diseases is not all-inclusive, but represents some key fungal diseases diagnosed on samples that arborists in southern New England submitted to our diagnostic office last year.

### Needle diseases

Needle diseases, including needlecasts and needle rusts, are the most noticeable and common diseases of landscape conifers. High-value trees lose aesthetic value due to off-colored needles and disfigurement from premature needle drop. These diseases can also have serious implications for tree health and vigor – unlike deciduous trees, which drop and replace their leaves every year, conifers require several years of needles to meet their photosynthetic needs. So, partial defoliation for several years will weaken and disfigure trees and complete defoliation can be fatal.

Needle diseases are usually not serious enough to warrant annual fungicide protection. However, trees in areas where yearly weather conditions are favorable for disease (e.g., cool, wet, spring weather as new growth emerges) can benefit from fungicide applications. Needle diseases are caused by fungi and share similar disease cycles, environmental requirements, and means of spread. Generally, newly emerging needles are infected during wet weather in spring from sources of nearby, overwintering inoculum. Infections occur, but symptoms usually do not develop until later that season, or during winter or early spring of the following year. Lower portions of trees can exhibit higher levels of infection because air circulation is more limited and needles stay wet longer, which increases chances for successful infections. Needle diseases become escalating problems if not controlled for several years, since continued loss of needles will increase stress for the trees.

#### Rhizosphaera needlecast

Rhizosphaera needlecast, caused by the fungus *Rhizosphaera kalkhoffii*, results in recurring damage on blue spruce (occasionally other species of spruce), Douglas-fir, true fir, and pine. Trees under drought stress are particularly susceptible. Although the primary damage is premature needle drop, under epidemic conditions, lower branches and whole trees may be killed. The fungus first infects needles on lower branches and infections gradually progress up the tree. Early defoliation leads to suppressed growth and occasional deformity. On severely diseased trees, infected needles usually drop during their second summer, leaving only the current season’s growth. Branches can die when defoliated for three to four consecutive years.

Current-year needles become infected in May and June, but symptoms do not appear until late summer, fall, or the following spring. In late summer, infected needles develop a mottled or speckled appearance, sometimes with dull yellow or reddish blotches. Diagnostic symptoms may develop in early September, but typically appear in late winter or early spring, when infected needles turn brown.

On blue spruce, needles develop a distinctive lavender or purplish-brown color. Pinpoint, black fruiting bodies of the pathogen emerge out of the stomates of infected needles and appear as rows of fuzzy, black spots that are easily distinguished from rows of white stomates on healthy needles using a hand lens. During periods of rain and wet weather, spores of the fungus ooze out of the fruiting bodies. Spores are dispersed by wind-driven rain and splashed onto newly developing needles where infection occurs. The infection period for this disease is quite long, since spores are released from spring until autumn.

#### Rhabdocline needlecast

Rhabdocline needlecast, one of the most common diseases of Douglas-fir in the landscape and in Christmas tree plantations, is a fungal disease caused by *Rhabdocline pseudotsugae* or *R. weirii*. The primary damage is defoliation, leading to suppressed growth, occasional deformity, loss of aesthetics, and loss of
marketability in the case of Christmas trees.

Symptoms are first visible in late fall or early winter as yellow spots or flecks on one or both surfaces of current-season needles. These symptoms are often confused with feeding damage from the Cooley spruce gall adelgid. In late winter or early spring, the chlorotic spots enlarge and turn reddish-brown; they range in size from small (1-2mm) areas to large, brown areas encompassing entire needles. A diagnostic symptom is the sharp border between healthy green tissue and infected brown tissue of a needle. Discolored needles are most conspicuous in early spring and symptoms can be severe in the lower portion of the tree where air circulation is poor. Although some heavily-infected needles drop before or during budbreak, most persist for several months.

In late spring, fungal fruiting structures develop beneath the epidermis of the needle. The lower surface epidermis splits open in two longitudinal lines and exposes the orange-brown spores of the fungus. These spores are carried by rain and wind to newly expanding needles. Spores land on immature needles and germinate; the fungus penetrates the cuticle and grows within the needle. Although infections have occurred, no external symptoms are evident until considerably later, usually by fall or winter.

There is only one infection period per year; infection is favored by cool, moist weather and periods of rain as new needles are emerging. Rhabdocline needlecast is most damaging in sites where trees are closely spaced or weeds and underplantings impede air circulation and prolong wetness of lower branches.

**Canavirgella needlecast**

Canavirgella needlecast is a fungal disease (*Canavirgella banfieldii*) of Eastern white pine and Macedonian white pine. It was first described in Pennsylvania in 1996 and occurs sporadically along the Eastern Seaboard. However, in 2010, an unusually widespread outbreak of this little-known disease occurred on white pine throughout New England, justifying inclusion in this discussion. For many years, this needlecast was confused with acute ozone injury or other needlecast diseases.

Initial symptoms develop on the tips of infected needles in late summer, fall, or winter. They are yellowish-tan, and then turn reddish-brown. By the following spring, infected needles curl and fade to tan or gray. Key diagnostic characteristics include: not all needles within a five-needle fascicle are infected; individual needles within a fascicle have differing amounts of browning; bases of symptomatic needles usually remain green; and the fascicle and needle bases often remain attached to the tree, while symptomatic portions of needles often break off.

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Throughout the winter and spring, diagnostic fruiting bodies form under the epidermis on the stomatal (adaxial) surfaces of infected needles. These appear as dull gray stripes along symptomatic portions of the needle. Spores are thought to be released during early stages of needle elongation and periods of favorable, wet weather. As with needlecast pathogens, extended periods when needles stay wet promote infections. Interestingly, not all white pines are susceptible to the disease, so it is believed that susceptibility is probably hereditary – infected trees are distinctly off-colored when compared to their healthy counterparts in spring.

**Repeating spruce needle rust**

Repeating spruce needle rust, caused by the fungus *Chrysomyxa weirii*, infects spruce, especially blue spruce, which is highly susceptible. It is distinguished from other *Chrysomyxa* rusts by completing its life cycle on one host (autoecious) and the timing of symptoms, which occur in the spring as opposed to mid to late summer. Symptoms initially appear as yellow spots or flecks on current-season (occasionally two-year-old) needles in late winter and early spring. These spots develop into pustules (or blisters) containing spores that are wind-blown and rain-splashed onto newly emerging needles on the same tree or adjacent trees. New infections occur in spring when needles are immature and tender. Infections are not detected for the remainder of the season, since outward symptoms are rarely visible. However, by the following winter or spring, diagnostic yellow spots and blisters develop on the infected needles and the disease cycle starts again.

In spring, blisters of *C. weirii* develop on one- and two-year-old needles, so heavily infected trees appear yellow-orange from a distance. As with most needle diseases, this disease is usually not fatal. However, significant needle drop can occur, and repeated defoliation may retard growth and reduce the aesthetics of the tree. It is more problematic for young seedlings or transplants and can result in tree death.

**Blight diseases**

Blight diseases are occasional problems for landscape conifers. However, they can result in moderate to severe damage. These diseases can be difficult to manage, especially on trees under environmental or site-related stress. High-value trees can be disfigured or even killed by blights. Fungicide sprays are often needed to manage these diseases, especially for situations where repeated infections have occurred for several years and weather is conducive for infection in spring. Unfortunately, good coverage with fungicide sprays is difficult to achieve on mature landscape trees.

**Sirococcus blight**

Symptoms of sirococcus blight, caused by the fungus *Sirococcus conigenus*, are most pronounced after cool, wet spring weather. Young trees are generally more susceptible, although trees of any age can be infected. Sirococcus blight rarely kills trees, but repeated infections of young trees result in stunting and severe disfigurement of growing tips.

Initial symptoms develop in midsummer...
on succulent shoots and occasionally 1-year-old twigs. Affected shoots appear at random within the canopy of a tree, although they can be more pronounced in the lower portions of older trees where low light levels increase the susceptibility of tissues to infection. Red pine and blue spruce are highly susceptible, although sirococcus has also been reported on other species of pine, spruce, and hemlock. Shoot dieback and stem and branch cankers develop on the current year’s growth and are often confused with diplodia blight and botrytis blight.

The fungus infects at needle bases and grows into and girdles the shoot, resulting in tip dieback. Infected shoots turn brown and develop a diagnostic “shepherd’s crook.” In mid to late summer or early fall, pinpoint, brown, fungal fruiting structures visible with a hand lens develop at the bases of infected needles or on infected shoots. The fungus overwinters in these killed shoots and in cone scales. Spores are spread by splashing rain from spring into summer. Infections occur when spores land on succulent tissues of newly emerging shoot tissue that have been wet for 24 hours or longer. The longer the tissues are wet, the more severe the infection.

**Diplodia blight**

Diplodia blight, caused by the fungus *Diplodia pinea*, is destructive for many conifers, especially for trees growing in stressful conditions. It is frequently found on two- and three-needled pines (e.g., Austrian, black, mugo, red, and Scots pine), but has been reported on Douglas-fir, cedar, and spruce in the landscape. This disease is seldom found in natural stands of pine. The fungus usually attacks mature trees, so most landscape trees escape infection during their first 15 to 20 years. Once trees reach maturity and begin to produce cones, the fungus colonizes the female cones and produces many fruiting bodies on the cone scales. Since infected cones are distributed throughout the tree canopy, fruiting bodies shower the tree with spores whenever it rains. Diplodia blight can be damaging to young trees or those of any age under stress from drought, excessive soil moisture, restricted root growth, and other site problems or stresses. Older trees generally sustain greater damage and dis-
deformed. Since spores from affected shoots and cones are washed down through the tree during rain, symptoms are often most severe in lower branches.

The Diplodia blight fungus enters through stomates of needles and grows into new shoots. It can also invade older shoots through wounds from pruning, hail, or insects. These infections result in perennial, bleeding twig and stem cankers that lead to girdling, branch death, and disfigurement of the tree. The fungus overwinters in fallen or diseased needles, cankers, and in 2-year-old cones. Cone infections contribute to increased incidence of disease in older trees. Disease is favored by wet spring weather. Spores are spread during prolonged periods of wet weather, and newly emerging needles and shoots are particularly susceptible to infection in the early spring. Trees predisposed by stress are more susceptible than their stress-free counterparts. Interestingly, research suggests that the fungus causes latent infections that go undetected until a tree is exposed to periods of stress, at which time the fungus is activated to initiate blight and dieback symptoms.

Management of conifer diseases

A preventative management program for diseases of landscape conifers starts with tree and site selection, and with healthy, pathogen-free trees. Selecting species native to the region will minimize the occurrence and impact of many diseases, since trees planted “off-site” have been found to be more heavily affected than their locally adapted counterparts. In areas where specific diseases are recurring problems, such as rhabdocline or diplodia, selecting resistant or tolerant cultivars or species is important. For example, seed sources of Douglas-fir such as ‘Shuswap’ and ‘Pillar Lake’ are more resistant to Rhabdocline needlecast than ‘Lincoln,’ a highly susceptible strain. Black, Norway, and Serbian spruce are less susceptible to

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Rhizosphaera needlecast than highly susceptible blue spruce. Eastern white pine is less susceptible to Diplodia blight than Austrian pine, which is highly susceptible. Site selection includes factors such as adequate soil volume to accommodate a tree at maturity, soil drainage and percolation, wind and sun exposure (particularly the amount of sun during the summer), and good air circulation to minimize the amount of time needles and shoots are wet.

These practices should be combined with a sound maintenance program that promotes tree vigor and reduces stress. Included are mulching to reduce injury and compaction, maintaining adequate soil moisture and nutrient levels, and controlling insect pests to minimize injuries or wounds. Sanitation, such as pruning to remove dead branches, shoot tips, or cones, and raking and removing fallen, infected needles, when practical, are thought to reduce the amount of the fungus available to infect the new growth in the spring and also help to increase the aesthetics of affected trees. It is sometimes necessary to sacrifice and remove severely symptomatic trees to reduce inoculum in the vicinity of important landscape specimens. All work with infected trees is best done when the bark and needles are dry to help minimize spread of pathogens.

A final management practice involves fungicides to protect newly emerging needles and shoots, particularly for diseases that have recurred for several consecutive years. Fungicides need to be selected on their efficacy for the disease that has been diagnosed and its registration in each state. For needlecasts, chlorothalonil, copper hydroxide + mancozeb, copper salts of fatty and rosin acids, mancozeb, or thiophanate-methyl can be effective and are registered in many states. Sprays need to be timed when spores are being dispersed and when new growth is emerging – generally when needles are approximately ½-inch long, and are continued at label rates and intervals until needles are half or fully elongated and conditions are no longer favorable for disease. Full coverage and spray penetration into the canopy is important.

Fungicides can also be effective for some blight diseases. Initial applications are generally made before bud sheaths have broken, followed by two or three additional applications at label rates and intervals, as necessary. Among effective fungicides for blights are Bordeaux mixture, chlorothalonil, copper hydroxide + mancozeb, mancozeb, and thiophanate-methyl, depending on diagnosis and state registrations.

Conifers are available in all sizes, shapes, and colors, and provide year-round beauty and interest unrivaled by most deciduous species. Armed with a better understanding of the problems that challenge conifers, we can keep them in good health and vigor so they can continue their important role in our landscapes.

Dr. Sharon M. Douglas is a plant pathologist and head of the Department of Plant Pathology & Ecology at The Connecticut Agricultural Experiment Station in New Haven, Connecticut. This article was based on her presentation on the same subject at TCI EXPO 2011 in Hartford. To listen to the audio recording of that entire presentation, go to the digital version of this article online at www.tcia.org and click here.
We focus a lot of attention on tree worker fatalities and for good reason; the loss of a life is a tragedy. But the majority of serious tree worker incidents result in non-fatal injuries. Just because these injuries do not result in a death doesn’t mean they should be dismissed as unimportant; they can have serious and life-long consequences.

Imagine living with chronic pain or never being able to work again due to an incident. And to the company, serious non-fatal injuries can be expensive. It sounds callous, but to the bottom line a death can be cheaper than the life-long medical care associated with a non-fatal injury.

There aren’t any first-aid issues with fatalities; the coroner, not EMS, is involved. Not so with severe non-fatal injuries. How the crew responds to these incidents can be the critical factor in the outcome. Crews that respond to incidents quickly and appropriately can keep non-fatal injuries from becoming fatal or reduce the consequences of the injury. Unfortunately, too many tree crews have no one trained in first aid.

A common OSHA citation for an incident is “failure to have a crew member trained in first aid.” When incidents are investigated, too often it’s discovered that no one had any training in how to respond to the incident. So you know what happens when an incident occurs? No one does anything. I know that may sound surprising, but there are too many examples of crews not recognizing that a worker has suffered a serious injury until the worker goes into shock.

Internal bleeding is one of those injuries that are often missed until it is too late. Even when the injury is obvious, the crew often does not quickly call 911 or apply first aid; instead they act in a confused and ineffective manner, trying to decide what to do rather than knowing what to do.

First aid starts with the first-aid kit. What should be in your first-aid kit? Nothing you do not know how to use and nothing that has expired or is more than a few years old.

Tree crews often carry first-aid kits as an amulet, protection from harm or danger, not something to be opened and used. I usually ask tree companies to bring their first-aid kits to training and am no longer surprised by the number of tree crews that have no idea what is in their first-aid kit; they have never opened them.

Your first task (after reading this article, one thing at a time) is open the first-aid kits that are carried and remove anything that you have no idea what it is used for or how to use it. Leave it out of the kit till you know what it is and how to use it (and if the kit is empty because you have no idea about anything in the kit, you need to pay close attention at your next first-aid class).

Second, for anything left in the kit, check the expiration date and replace the expired items. The other items in the kit, such as gloves, should also be replaced if they are more than a few years old. I have seen old gloves fall apart when taken out of a kit, and even synthetic materials have a limited shelf life.

The most important item in your first aid kit is a cell phone. Calling 911 is the first aid in first aid. One important reason to stay awake in your next first-aid class is so you can recognize the severity of the injuries, know you need to call 911 and apply the appropriate first aid until EMS arrives.

When you call 911, there are a number of key items to keep in mind. First, stay on the line, don’t hang up. Hand the phone to someone else if you have to start first aid or CPR. If no one else is on site, sit the phone down with the line open while you are doing CPR, they can still hear you. While you are on the line, you are probably
going to be asked what is the nature of the injury, how many people are injured (I know the number is obvious to you but dispatch does not know the tree only fell on one person) and any special circumstances, such as an electrical hazard or the workers is aloft.

Next, what are the key injuries you may have to deal with regarding tree worker incidents? Too often workers just stay awake (or at least semi-conscious) during their first-aid classes since the information seems so abstract. I like to start first-aid classes by covering injuries and their first aid, not alphabetical – bites, choking, diabetes, etc., but by what you may have to treat, what I call the big three: bleeding, burns and fractures. Everything does need to be covered in a class, since anything can happen (I have dealt with bites from raccoon, bee stings and diabetic emergencies among others), but let’s start with the ones that result in the most common non-fatal injuries. I will go over these as examples of some of the first-aid needs in the industry, but this discussion can in no way substitute for a first-aid class – pay particular attention to these injuries in your next class and practice how you would treat them.

Bleeding is one of the big three non-fatal injuries among tree workers. Chain saws are usually involved and these can make quite a deep and long laceration (or several if the saw skips along the arm), but workers have also had their hands impaled by grapples on log loaders or even on a branch stub. Your first concern should be your own safety – remember body substance isolation (BSI), pull the gloves out of the first aid kit and put them on. Apply a dressing and pressure with a finger or the palm of your hand (your hand better be in a glove). If bleeding continues, add more dressing, but don’t remove the first one.

If the injured worker is standing, get them to the ground, just in case they faint or go into shock. If the bleeding persists, and this is common with the stronger pressure from arterial bleeding, you may have to apply a soft tourniquet while awaiting EMS. These should only be applied if you have been trained in their use, know the circumstances when they should be used and have practiced the techniques.

External bleeding is easy to spot, but internal bleeding is often missed. There really isn’t any first aid for internal bleeding due to trauma. But you need to know if this injury is suspected and call 911. Some common symptoms of internal bleeding are abdominal pain or swelling, part of the body hard and painful to the touch, dizziness, and headaches among others. Internal bleeding is one of the injuries that tree crews often miss and rather than call 911, instead just have the worker sit and rest for a while. Unfortunately the call is not made until the worker has gone into shock, often too late for effective treatment.

Bone or joint injuries also are common occurrences with tree worker incidents. Remember, unless you see the bone (an open fracture), you do not know if you are dealing with a dislocation, fracture or even a sprain, so treat everything as a potential fracture. Cover any open wound with clean dressing but do not try to straighten or put back into place any injured parts. Don’t assume that just because an injured worker can move their arm or fingers that the part cannot be broken – don’t allow any movement until it’s been checked by health care professionals.

Head and spine injuries are a special concern. If a worker is struck by a limb or took a long fall (generally more than 15 feet), head or spine injuries may have occurred. Common symptoms associated with these injuries are numbness in the arms or legs or the inability to move them.

Headaches, dizziness or confusion may also occur. When head or spine injuries are suspected, do not move the person until the situation requires rapid extraction (if the tree they are in is becoming unstable) or CPR is needed. Otherwise do not move them, and if movement is necessary try to hold the head and neck so neither can be moved or twisted. Don’t try to improvise by tying boots together to make a collar or other “MacGyver” techniques, just use your hands to hold.

Burns are the other concern. Burns to tree workers are usually associated with electrical contact. Obviously the first concern is your own safety; don’t try to remove someone from contact. If the contact is broken and there is no risk of contact for you, then attention can be given to the injury. If the worker’s clothing are on fire, drop them to the ground and roll them, and apply water to smother the flames. Remove the burned clothing. If it is a small burn, cool the area with cold water, otherwise do not add water. People with severe burns may have significant skin loss and skin is what helps to regulate body temperature. The loss of skin can interfere with body’s ability to regulate temperature and adding water can result in dangerous cooling. Do not apply ointments or other dressing to the burns, instead call 911 quickly and report the severity of the burns – these require immediate treatment.

These are the most common first-aid needs for severe injuries, but they are not the only injuries to affect tree workers. Insect bites and stings, heat cramps and heat exhaustion are other concerns. In your next first-aid class you need to pay attention to everything.

First aid is not something to sit through once a year and never practice. Remember, the first time you have to apply first aid you have to get it right the first time. It’s called “first” aid, not “second- or third-try” aid.

Dr. John Ball, CTSP, is a professor of forestry at South Dakota State University in Brookings, S.D., where he conducts research on tree worker safety. Dr. Ball is also an emergency medical technician and lectures EMT courses at the university.
On the cover

The National Aquarium in Baltimore is on the Inner Harbor, just a few minutes walk from the Baltimore Convention Center, where TCI EXPO 2012 will be taking place November 8-10.

The stand-alone trees outside on the aquarium on Pier 3 are London planes, which are a hybrid of the American sycamore (*Platanus occidentalis*), and river birches (*Betula nigra*), according to Josh Leisenring, aquarium horticulturist.

“Within the habitat planters we also have a variety of other trees from throughout Maryland, including white oak, chestnut oak, sassafras, spicebush, pagoda dogwood, flowering dogwood, serviceberry, witch hazel, red maple, sweetbay magnolia, white pine, and loblolly pine, as well as several shrub species,” says Leisenring.

“On Pier 4, we also have honey locust (*Gleditsia triacanthos*). In the lobby/visitors entrance we have a chestnut oak (*Quercus montana*).”

Leisenring is the person who generally cares for the trees, conducting day-to-day maintenance such as watering, fertilizing, pruning and so forth. Occasionally, if there is major work to be done that is outside of the aquarium staff’s practical abilities, they will call on a local tree service. One of the companies they use at such times is TCIA member Davey Tree Experts.

Cutting Edge News

(Continued from page 16)

**Bandit adds dealers**

Bandit Industries recently added two new dealers to the company’s North American dealer network that will provide sales and service for Bandit hand-fed chippers and stump grinders, while also serving most chipper owners by stocking Zenith knives for a variety of machines.

Bandit Tree Care Products of Southern California is based in Foothill Ranch, California, between Los Angeles and San Diego.

Miner’s Equipment and Truck Repair is centrally located in Oklahoma City to serve customers throughout Oklahoma.

**Terex Utilities has new VP/GM**

Terex Utilities in August named Don Anderson vice president and general manager. Anderson will have overall responsibility for Terex Utilities including equipment and parts, sales, product development, manufacturing and aftermarket support, along with key supporting functions. In addition, Anderson will also have shared responsibility with Jacob Thomas, president of Terex Latin America, for the Terex Ritz business based in Brazil.

Anderson joined Terex in August, 2003, and most recently held the position of general manager for Terex Roadbuilding.

Anderson will be based at the Terex Utilities facilities in Watertown, South Dakota.

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In this feature, a take-off of the Highlights Magazine children’s puzzles, our goal is to point out unsafe behaviors that can, and have, led to injuries or deaths in the tree care industry.

One month we run the image and challenge readers to identify one or more hazards depicted. The next month we identify the hazards. The intent is that these will be used individually and/or by crews, for tailgate safety sessions or in other training.

⚠️ **Caution:** This is a staged photo intended to show one or more ANSI, OSHA violations, or other hazards. Activities shown are NOT approved practices.

⚠️ **Cuidado:** Esta es una foto para mostrar una o mas ANSI, OSHA u otras infracciones de seguridad. Las actividades mostradas no son practicas approvadas.

For the previous Hi-Lights picture, at right, which ran in the September 2012 issue, unsafe behaviors (and related ANSI Z133 standards) include:

1) Chaps too high. Recommended down to top of boot.
2) Workers in drop zone of tree. Z133: 8.5.3
3) Notch more than halfway through tree. Z133: 8.5.15.3
4) Cutting with the tip of the bar.
5) The back cut is a little too low, which would not leave much of a ledge for the stem to fall against. Z133: 8.5.15 and 8.5.15.3

See letters, page 55, for discussion about correct hand placement on a chain saw related to the July 2012 Hi-Lights photo.

Send feedback to editor@tcia.org.

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**TREE CARE INDUSTRY MAGAZINE**

If you love to read TCI Magazine, take a picture of yourself reading it and we’ll consider you for the next ad!
In 2011, 13.8 percent of reported fatalities in the tree care industry were due to contact with energized lines. The sad truth is that “ALL” of these fatalities were avoidable.

There can be many contributing factors that lead up to an incident that results in a serious injury or fatality. The most common factor is human error. Generally people who have not received proper training or those who disregard safety or ignore hazards are most likely to be injured or killed. They are also more likely to injure or kill a co-worker or innocent bystander.

There are two types of electrical contact: direct and indirect. Direct contact occurs when one part of your body touches an energized electrical conductor and another part of the body provides a path to ground. Indirect contact occurs when you touch a piece of equipment or tree branch that is in contact with an energized electrical conductor, while another part of your body is touching the tree or a piece of equipment, providing a path to ground.

I once was a young climber who made what I know now to be foolish decisions when working around overhead conductors. At that time in my career I had not received any training on how to work around energized conductors. Working around primary and secondary distribution lines, residential service drops, telecommunication and cable television lines was just something we did. Today there remains a huge misconception of the hazards associated with working around energized conductors above and below the ground. It is vitally important that we receive proper training so that we may go home to our families, dirty and tired, at the end of every day.

The purpose of TCIA’s Electrical Hazards Awareness Program (EHAP) is to educate owners, managers and production personnel how to identify, understand and avoid electrical hazards. The program focuses on the following areas: a) electricity and the utility industry, b) recognizing electrical hazards, c) emergency response and aerial rescue, and d) safety standards, but for the purpose of this short article, let’s just take a quick look at one them.

Aerial rescue protocols have changed in recent years. It is no longer about how fast you can rescue an injured climber from tree. The golden rule of aerial rescue is: the rescuer must not become a victim when performing an actual or practice aerial rescue. Among all the scenarios in which a rescue might be necessary, the electrical emergency poses a lot of risk to the would-be rescuer.

Annex F of the ANSI Z133 Standard, the Aerial Rescue Flowchart, provides a visual of all the decisions that must be made in a potential rescue situation.

When there is an emergency in the air on a tree crew, it is very likely the other members of the crew will be thrust into the role of first responders. It is vital, and in some cases a regulatory requirement, that all crew members are properly trained in emergency response and basic aerial rescue techniques.

Rich Godwin, CTSP, is a Certified Arborist and operations manager for 22-year TCIA member Mead Tree & Turf Care, Inc. in Lisbon, Maryland. He will be presenting on this same subject at TCI EXPO 2012 in Baltimore this fall. For a complete schedule or to register for TCI EXPO, visit expo.tcia.org.
Firewood prices vary by region and by the type of wood, its length and its age, i.e. dry or green. Though firewood pricing has been choppy in recent years, it is definitely trending up from what it was just five years ago. Price for seasoned wood is as low as $125 a cord in northern New York to as high as $500 a cord or more for barkless, kiln-dried wood in Boston.

Demand could continue to be strong, given initiatives such as Maryland’s post Labor Day launch of a $400 rebate program to encourage the purchase of clean burning wood stoves ($600 for pellet stoves). The intent is to promote use and to integrate firewood and other biomass products into a renewable energy infrastructure. Currently there is no federal tax credit for wood or pellet stoves as there are for solar, geothermal and wind, but the states may take up the slack.

Then there are the other more controllable variables – such as splitting, delivery and stacking – that affect your bottom line and your profits. Each of these service steps has the potential to add to your price and profit.

The amount of profit will be directly impacted by the equipment you use. For example, if you are a small operation, through-put of a cord-an-hour may be good enough. But if you rely on firewood sales to contribute significantly to the bottom line, especially in the off-season, you’ll likely want to double or triple that. Decisions on how you process and move the wood need to be viewed as strategic issues. Do you mostly just want to be rid of your take-down material, or are you looking to be a big player?

Keep in mind, firewood production is not as simple as it once was. There are state and federal regulations revolving around sourcing and transporting firewood that are intended to help prevent long-distance travel of disease and insects. These restrictions may affect the size of your market.

Ultimately, yielding good firewood at a rate that is profitable for your business model depends on what you put into it. That might be as simple as a chain saw and splitter with a lot of manual labor, representing a modest investment of under $1,500 (quality chain saw $500, if cutting wood on a regular basis. Splitter $1,000-$4,000 average cost new; could get used for lower, but not much less than $1,000).

The other extreme may involve buying a whole-tree processor capable of handling several cords of wood or more an hour with a single operator at the controls, and costing $70,000 or more.

Of course, options such as conveyors/ele-
vators, tables, operator cabs, even air conditioning and, yes, AM/FM radios will drive up the cost further, but they also speed or otherwise enhance production.

We’re told that, in this economy, buyers looking for wood processing equipment are tending to buy on price alone, not necessarily what they need and not on quality. Several manufacturers we spoke with recounted stories of buyers, even tree care professionals, shopping online or at home centers and via catalogs, getting off brand and lower-quality imports, then regretting their decision. “Know what you are buying,” was a common warning.

Timberwolf, a long-time TCIA associate member, specializes in a broad array of wood processing equipment for home and commercial applications. The product line includes horizontal and vertical log splitters, either independently powered or running off a skidsteer or other power take-off (PTO), and firewood processors, some of which are very high-capacity. At the high end, Timberwolf offers units for professional use that include one model capable of accommodating 14-foot long, 18-inch-diameter logs with a saw cut off rate of 6 seconds between cuts.

Peter Hincks, sales manager, says, “We are hearing of firewood prices nationally at $125 to $275. Affecting that is the carry-over of firewood from last year. Customers are putting off their firewood purchasing decisions because of last year’s mild winter, recognizing they still have wood in the shed. It’s a bit like driving a car. You don’t stop to get gas when the tank is half full.”

Continuing, he says, “The biggest thing we have seen is that no one is excited about gasoline and fuel oil at about $4 a gallon. In 2008 (when fuel prices tagged $4 a gallon), our phone rang off the hook,” as firewood dealers sought equipment to keep up with demand. “The next shock wave, though, will be at about $5; then people will be actively looking for alternative heat sources again, such as firewood,” he says. “Nationally, about half the firewood is used for primary heat. And the demand for wood drives the demand for machines,” he notes.

Nonetheless, Hincks looks back on the company’s 18 years in the business and says that more competitors are recognizing the opportunity and “jumping into the market with equipment.”

The market is a bit of a mixed bag. He says, on the one hand, “Trees are hard to dispose of in a landfill. And businesses are turning them into chips and mulch, which works against us for firewood. But more and more, guys make firewood to keep their crews busy at the end of a day, or when it rains or in the winter.”

Another thing Hincks notes is that nurseries and campgrounds are getting into the firewood business because people can’t bring firewood from place to place.

It has gotten to the point, he notes, where “Maine was stopping people with wood at the border last year and making them replace it with local firewood. In Ohio (where they have Asian longhorned beetle), firewood yards have to be inspected. Michigan (where they have emerald ash borer) has signs on the interstate warning not to transport firewood. It has to be very local.”

Therein lies the opportunity.

Hincks says, “Most guys now make firewood for local delivery, and they know, in Massachusetts, for example, that they will get more per cord in Boston than in Worcester and up to $450 on Cape Cod.”

“If we have a tough winter, people will be out of firewood; they’re just not stocking up right now.”

When it comes to purchasing equipment, Hincks and others interviewed for this article are of the opinion that, “People do not know what to shop for. Especially with their first processor and they just do not know what features are important to have.”

For example, cheaper, off-brand processors can cut or split, but not at the same time. “They may be easier than a chain saw, but not truly fast,” he notes. “We have models that will do one to four cords per
hour, all diesel powered and fully hydraulic.”

He warns that throughput (production rate) is also determined by the type of wood being processed and its condition. Therefore, another thing to shop for would be the diameter wood a unit can accommodate. Some machines may be spe’c’d to handle a 15-inch log, but with knots and other irregularities, it might not fit through the processor. Says Hincks, “If you order a load of 16-inch logs, the chances of getting them all that size are slim to none. At Timberwolf, we may call ours a generous 22-inch, but the opening is actually 25 inches.”

Another thing to look for in a processor he says is the size and “heft” of the cutoff saw blade or chain. According to Hincks, “I have seen some chains that look like bike chains. Some of ours are up to three inches. You get what you pay for.”

In advising buyers, Hincks says to “Beware those who sell direct. Buy from those who do not dump and run, who will help you with initial setup and show you ways to maximize your investment and who have parts on the shelf for overnight repair delivery.”

Kurt Kainz, marketing and direct sales manager with Lake Zurich, Illinois-based Echo Bear Cat, says, “While not being able to speak on a national basis, locally, the market for firewood stays fairly strong year round. For example, tourism (state campgrounds) in the lakes areas of Minnesota, summer cabin owners and lake home owners alike create a consistent summer seasonal demand for firewood. Also, demand stays strong in the winter months with a large rural population in northern tier states and Canada using external burning stoves to heat their primary home and garages in the fall and winter months.”

He adds, “Exotic invasive plants and animals have a played a major role in legislation regulating the sale and distribution of firewood. Laws have been put into place in Minnesota making certain areas of the state off limits to tree harvest for firewood. Vendors now have to provide exact harvest location details by county and state.”

All in all, Kainz says, “Prices of products remain steady and are mostly affected by price fluctuations in commodities we use to build the products.”

“Demand for our products remains high,” he says. “On a global level, a large portion of rural populations use methods other than electricity to heat their homes; using wood continues to be one of those methods.”

Kainz says that “ECHO Bear Cat manufactures two log splitters. The LS21 is powered by a 190cc Subaru EA engine and produces 21 tons of splitting force. The LS27 is powered by a 211cc Subaru SP engine and produces 27 tons of splitting force. These models have a user-friendly bed height of 30 inches from the ground and can be operated in the standard horizontal position or in a vertical position to split logs too large to lift. Accessories are available to customize both models to the user’s needs, including a light and fenders kit to make them road towable.”

When asked what things a professional buyer needs to be looking for in log splitters, he lists, “Horizontal and vertical operating capability, splitting force large enough to accomplish the prescribed job or type of wood, options to accessorize/customize for the owner’s needs, quality of workmanship and materials used, footprint of space occupied storing the machine when not in use and cycle time of the
There’s a saying that if life gives you lemons, make lemonade. So it is at Ontario-based Bell’s Machine Welding and Hydraulics.

According to owner Brent Easton, when the Canadian logging industry went soft a few years ago, firewood became a strategic profit center, so he added making firewood processors to a long list of fabrication capabilities.

“I’m a logging contractor by trade. I bought a machine when the economy went bad and created some work. People began liking ours… heavy machines, well built, easy to work, low profile, easy to get around.” Soon the word got out, and now Bell’s is in the firewood processor business, offering six models in addition to a firewood tumbler (a rotating 4-foot-diameter drum that separates debris from cut and split wood) plus grapples and conveyors.

Easton says his 3000/4000 series are big sellers. They feature, among other things, 50 and 60 hp CAT Diesel Engines respectively, an Oregon saw bar that cuts 22-inch wood, an adjustable splitter head and single joystick control, plus a 30-ton, 5-inch splitter cylinder.

When purchasing a splitter, it’s important to maintain consistent, quick cycle splitter pressure. “We do it with heavy cylinders,” Easton says, “because they offer more splitting pressure at greater speed.”

The 6000/8000 series features monster horsepower at 91 and 127 hp, respectively. The 6000 features a 54-inch circular saw that accommodates 23½ inch logs; the 8000’s 60-inch saw manages up to 26½ inches. He notes that all units feature a hydraulic splitting ram.”

For many tree care companies, creating a market for firewood is just a way to use the waste wood from tree jobs. But for operators who have to acquire the wood, they also have to consider the added costs of fuel for a log truck and skidder just to get the wood out of the woods. This has also gone up in price recently, now running about $55-$65 a cord (New Hampshire). Then add the trucking cost to get it from the edge of the woods to the splitting location.

The RCA 400 Joy processor from Tajfun, available from Oesco Inc., a TCIA associate member company located in Conway, Massachusetts, cuts logs up to 15 ½ inches in diameter and 20 inches long. The 13-foot discharge chute has an adjustable conveyor belt speed. TCIA staff photo.

The RCA 400 Joy processor from Tajfun, available from Oesco Inc., a TCIA associate member company located in Conway, Massachusetts, cuts logs up to 15 ½ inches in diameter and 20 inches long. The 13-foot discharge chute has an adjustable conveyor belt speed. TCIA staff photo.
double "grab iron," which grabs a log at a precise measurement, then secures it for a cut.

According to Easton, hourly production depends on what he calls "good wood," which allows for a quick cycle time of 3.5 to 4 seconds. "Straight wood goes through quick with most guys using a loading deck." As far as stated cord-per-hour rates, Easton says, "We want to be fair to customers and not just tell them what they want to hear. We explain that output depends on what wood you have, how ugly it is and how small it is; that all takes extra time to process."

Blockbuster, Inc. headquartered in Mount Pleasant, Iowa, makes a variety of complementary or integrate-able processing equipment. This includes a wide clamshell-style grapple that lifts logs and finished firewood; adjustable-height, 20- and 30-foot elevators; and a half dozen processors that cut log-length material and split it four or six pieces, with some units capable of an 8-way split in one pass.

At the high end of the spectrum is the Model 22-22, an 84-hp diesel-powered machine capable of processing logs up to 22 inches in diameter and 22 feet long. It will split cut lengths of 12 to 22 inches, the company says, and will process three to four 128-cubic-foot cords an hour.

One of the more time-consuming functions in firewood processing is splitting. Paul McCann, president and owner of Bridgewater, Massachusetts-based Supersplitter, Inc. says his company Supersplit comes in three models, all with a fast and reliable rack-and-pinion ram drive system. The first is the J Model with 75-pound flywheel and either a 6-hp Subaru or 5.5-hp Honda option. (McCann says a lot of customers have other Honda-powered...
machines and prefer to stick with a brand with which they are familiar.)

The Heavy Duty model comes with a 90-pound flywheel and 7-hp Subaru engine or optional 6.5-hp Honda.

The last is a Special Edition, largely a custom-built machine with a 100-pound flywheel and a 9-hp Honda engine and featuring a 2:1 gear reduction capability, which allows the engine to “muscle in and power through nasty firewood like elm, pecan, live oak and others.”

McCann says it is important to note in a splitter that efficiency differences derive more from the flywheel than the engine.

Users will need a feed table, which he offers as an option, though some will fabricate or source their own. Prices for his machines range from $2,604 to $4,200.

McCann warns of off-brand qualities. Since the patent on his equipment ran out five years ago, there have been numerous imitators flooding the market with cheap copies available via catalog and home and farm centers. Regardless who the user is, “people need to realize you can’t ever take it easy on a log splitter.” Ironically, he says, other brands are promoting his formerly proprietary technology, and that is actually driving customers seeking a rugged machine to his brand. “Supersplit is designed for guys in the firewood business because of the tree care business; that was our original business. I have customers with more than 10,000 cords of firewood on their machine, and one with 20,000,” McCann concludes.

There is an old saying that “Wood warms you twice, once when you cut it and once when you burn it.” Maybe it should be three times, given that warm feeling you get on the way to the bank after you sell it.

Bell’s 6000 series features 91 hp, a 54-inch circular saw that accommodates 23½ inch logs, and a double “grab iron,” which grabs a log at a precise measurement, then secures it for a cut. TCIA staff photo from the Northeast Forestry Equipment Expo in Essex County, Vermont, in May 2012.
Why should you care?

The ANSI Z133.1-2012 (American National Standard for Arboricultural Operations - Safety Requirements) is a guide for how you can work in the tree care profession and stay alive doing so. It is based on years and years and years of combined experience and lessons learned from the field. If you were to take a listing of all of the tree care-related fatalities and serious injuries over the years, you could find specific sections from the standard that, if followed, would have prevented the incident from happening.

Overview and history

The committee that creates the ANSI Z133.1 is actually older than the OSH Act. OSHA and NIOSH were created in 1970, but the origin of the Z dates back to 1968.

In the late 1960s there were really no safety standards, regulations, rules or laws that were specifically for tree trimmers. The industry was still relatively young, and it hadn’t developed a shared safety culture. That began to change in response to a tragedy that is still all too common.

A young climber was killed when he came into contact with an energized conductor while trimming a tree in New York. In response to this, his mother, Ethel Hugg, lobbied to create the first safety rules for tree workers across the country. Due in large part to her efforts, what we now know as the ANSI Z133.1 was created.

The process started with the creation of the Accredited Standards Committee Z133 on April 4, 1968. This is the official name of the group that creates and updates this standard. The shorthand version of the group’s name is the ASC Z133. Many people refer to it simply as the Z133 committee.

The Z133 group is comprised of representatives from the following sectors:

- Industry (including representation from all aspects of the profession; utility line clearance, commercial arborists, etc.)
- Labor (unions)
- Academia (professors from universities that teach related courses)
- Government (OSHA, the National Park Service and U.S. Forest Service)
- Equipment Manufacturers (many that specialize in tree care-related equipment)
- Insurance
- Other Subject Matter Experts (SME’s) (individuals with expertise in certain aspects of the industry; i.e. cordage, cranes, other equipment, etc.)

The group created and adopted the first consensus standard July 14, 1971. This is not the final step of the process, as it has to be approved by the American National Standards Institute (ANSI), which gives ASC Z133 the authority to create the standard. ANSI approved the first standard on December 20, 1972. It has been revised in 1979, 1982, 1988, 1994, 2000, 2006, and, most recently, 2012. Sometimes, due in part to when it was created, adopted and printed, the year it becomes available isn’t the year that is listed on that revision.

ANSI oversees the creation of many standards and they routinely audit these groups to ensure that all the guidelines are followed. There is no need to go into detail on that process other than to mention that one of the things that they look at is the composition of the group. They ensure that there is a good cross-industry representation and not any dominant group.

Within the structure of today’s Z133 committee are its Task Groups, which focus on specific topics/sections within the standard as well as review new ones for possible inclusion in the standard. There is a Task Group chair and several members from the general committee on each. Others from outside of the committee are welcome and, in fact, often invited to participate in these task group discussions. Many of these are via conference call between meetings, but these groups try to meet in person at least twice a year in conjunction with the overall committee meetings.

The Task Groups that participated in the 2012 revision were: Aerial Devices; Chain Saws and Portable Hand Tools; Climbing and Cordage; Pruning and Cabling; Cranes; Electrical Hazards; General Safety

The new ANSI Z133.1-2012 received final approval in September is now available for sale at www.tcia.org.
Contents of the revised 2012 ANSI Z133

Contents
1. General
2. Normative References
3. General Safety Requirements
4. Electrical Hazards
5. Vehicles and Mobile Equipment
6. Portable Power Hand Tools
7. Hand Tools and Ladders
8. Work Procedures
9. Annexes

3. General Safety Requirements
3.1 General
3.2 Traffic Control Around the Jobsite
3.3 Emergency Procedures and Readiness
3.4 Personal Protective Equipment (PPE)
3.5 Fire Protection

4. Electrical Hazards
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4.3 Storm Work Emergency Conditions: Line Clearance

5. Safe Use of Vehicles & Mobile Equipment Use in Arboriculture
5.1 Vehicles and Mobile Equipment
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7. Hand Tools and Ladders
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7.4 Chopping Tools
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8. Work Procedures
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8.10 High-Pressure Air-Excavation Equipment
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ANNEX A Glossary of Terms

ANNEX B (Informative)
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ANNEX C (Informative)
General Safety Procedures that Apply to All Tree Work
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ANNEX D (Informative) Additional Resources
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ANNEX F (Informative) Aerial Rescue Flowchart

ANNEX G (Informative) Hand Signal Chart for Crane Operations

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ANNEX I (Informative) Fall Protection Systems

Requirements; Government Regulations; Hand Tools and Ladders; Plant Health Care; Removals and Rigging; Saddle Construction and Lanyards; Training; and Vehicular Operations, Chippers, Chipping, Stump Grinders and Winches.

How it works – general
The standard is developed by tree trimmers for tree trimmers. This isn’t some outside entity, or Big Brother telling us what we must do. This is us, telling us, how to be safe. Unlike OSHA standards, the Z is continually reviewed and updated. This way, as we learn more about how incidents occur or as new tools and techniques are developed, we can adapt the standard to fit the changing needs of the industry.

How it works – compliance
The rulebook that an OSHA compliance officer, referred to as a CoSHO (compliance safety and health officer), uses sets priorities for where they look for guidance. They first look to see if OSHA has a “vertical” standard that applies narrowly to the specific type of work. Next they will look at “horizontal” standards – any of their rules that are general and apply to many industries. In our case, some horizontal General Industry standards apply (CFR 29 1910); and at least one vertical standard may apply to us as well, if we are working within 10 feet of energized electrical lines (CFR 29 1910.269.)

If there aren’t any OSHA standards that apply, they then look to see if there is a consensus standard, which the Z is. If there isn’t a consensus standard, they may then look to see if there are any manufacturer’s instructions if there is a piece of equipment or gear involved. Lastly they just look to see if it makes any sense at all.

If OSHA references the Z in a citation, they do so under what is referred to as the General Duty Clause, or section 5(a)(1). This is the section that says that the employer must provide a place of employment free from known hazards. The Z

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identifies these hazards and gives us ways to mitigate them. Any citation in this category is automatically considered “Serious” and can carry up to a $7,000 fine.

OSHA does know about our standard, they even participate in the creation and updates of it. Many OSHA offices have copies of the standard, although they may not have the current edition.

How does it affect me?
Z133 can keep you alive – that is really all that you need to know. As was stated earlier in the article, the Z addresses hazards we face and offers mitigation techniques. It is written by people who do this work and understand what it is like to do so every day.

It is almost a training manual. It is not meant to be a training manual, but it does cover the different aspects of what we do, addressing what can go wrong and how you can prevent it.

How can I affect it?
Unlike OSHA standards, you can have an effect on the standard that affects you! Between revisions, you can use the form at the back of the standard to make comments or suggestions. Just fill it out and send it in to the Secretariat (ISA) and you will receive a response. Your comment will be passed to the chair of the Task Group for the topic that your comment addresses. Depending on the nature of the comment, it may influence what is in a future standard. Either way, you will receive a written response back on your comment.

During the revision process, anyone can attend the meeting as a guest, participate on Task Groups and comment when the draft document goes out for public review. Remember, this is YOUR standard and you can have an effect on what is in it.

I saw a bumper sticker that comes to mind as I write this. It said, “Get involved; the world is run by those who show up!”

Conclusion
My favorite part of the standard will likely always be Section1.4: Responsibilities of the Employee: “Each person (employee or otherwise) shall be responsible for his or her own safety while on the jobsite and shall comply with the appropriate federal or state occupational safety and health standards and all rules, regulations, and orders that are applicable to his or her own actions and conduct.”

At the end of the day, and the beginning and all throughout actually, we are all responsible for our own safety. We also have responsibility to keep others safe as well. It is not my boss’s job, or the company’s, or OSHA’s job to keep me safe. It is up to me. It is up to you.

A good friend and very wise person once said that the Z standard was the best kept secret in the industry. It is time to change that…

Timothy M. Walsh, CTSP, is director of safety operations with Asplundh Tree Expert Co., a 36-year TCIA member company headquartered in Willow Grove, Pennsylvania, and Asplundh’s rep on the Z committee. This article was based on his presentation on the same subject at TCI EXPO 2011 in Hartford, Connecticut.

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Each year the competitive landscape continues to grow and attract new players, while existing players become more sophisticated and savvy. And yes, there will always be those competitors who low-ball prices and perform sub-quality work, but those players will not be around very long.

If you’re not happy with the results that your sales team is producing, YOU may want to take a good look in the mirror. New research shows that 81 percent of sales failure in our industry is attributable to poor, or a complete lack of, sales management. [Note, in the first quarter of this year, the percentage of companies reporting poor sales management practices was at 78 percent, so in just two quarters we are seeing a further erosion in sales management.]

When I analyze companies, less than 8 percent have a well-crafted and targeted sales strategy, and only 4 percent have any semblance of active sales management. How can anybody expect their sales team to be successful without a basic blueprint,

Women and Boomers
Create Growth Opportunities

Most people in our industry don’t know the market dynamics behind the enormous women and “Baby Boomer” opportunities. Additionally, there are many misconceptions about the purchasing power of women, or the “power of the purse.” I have conducted substantial primary research on this market as it relates to the green industry, and the findings [and opportunities] are extraordinary!

Consider these facts. Women control $12 of the $18.4 trillion in global consumer spending. And, by the year 2015, at least $15 trillion dollars will be in the hands [or purses] of Boomer women. Boomers are a demographic group that was born between the years of 1946-1964. Women Boomers are the wealthiest economic group on the planet. In addition to strength of the Boomer women market, young single women purchase twice as many homes than men.

Where are these women getting their money?

Today, 67 percent of all bachelor degrees and 60 percent of all master’s degrees are earned by women. And, in the 22 to 33 age bracket, women earn 8 percent more than their male counterparts. Women in general are also better investors, with women earning 9 percent compared to 5.82 percent.
guidance, training and feedback from an experienced manager? The most common – and frightening – remarks I hear from owners and management are that they hire sales people who don’t need training or oversight and can hit the pavement selling. Sound familiar? These company leaders go on to say that if they need to be watching over their sales people, they might as well do the selling themselves.

Here’s some more data to chew – or choke – on. More than 84 percent of employees who are reported by owners and management to be part of the business development team, when interviewed, stated that they were not in sales and did not have any specific sales goals. Of the 16 percent that stated that they were dedicated sales people, only 11 percent understood the company’s sales strategy and knew their individual sales goals. To add insult to injury, of those aware of their sales goals, only 6 percent knew where they stood compared to budget.

How eye-opening and frightening is that? And yet, owners’ biggest complaints about their sales team were they wasted their time on unqualified prospects, or clients who have no intention of contracting business within the next six-month time frame. That, by the way, translates to more than seven months of non-productivity for the average industry salesperson, who receives more than 70 percent of their compensation as salary! If this sounds like a recipe for disaster…it is!

Remember, selling is a science that requires as much attention, expertise and time as the trees you care for.

Judith M. Guido is chair and founder of Guido and Associates, a leading industry consulting firm that has been successfully helping green industry companies grow their people and profits. She will be speaking on these same topics at TCI EXPO 2012 in Baltimore this fall, November 8-10. For a full TCI EXPO schedule or to register online, visit expo.tcia.org.

Women and Boomers

(Continued from page 44)

for men.

Often people think of women more as a consumer purchasing force versus a commercial one. Currently, women own 35 percent of all businesses, and are starting twice as many new businesses as men. By the end of the decade more businesses will be started by women than men. Women represent 58 percent of commercial purchasing dollars. And companies that have a woman sitting on their board are more profitable. In our industry, women business developers outperform men by 38 percent.

This is just the tip of the iceberg. Women make the overwhelmingly majority of ALL purchases in our country. Hopefully, you can see the implications, and opportunities, that the incredible women’s market holds for you and your company. Whether it is hiring women business developers, or placing them on your board, Women and Boomers are a force that shouldn’t be ignored.

Women and Boomers

(Continued from page 44)
Accident Briefs

Tree worker electrocuted
A contract tree worker died from injuries he sustained from being electrocuted Aug 1, 2012, while working on a college campus in Marshall, Texas.

Michael Noel, 41, an employee of a local tree service, was cutting a tree that had been struck by lightning and was in the process of being removed from the East Texas Baptist University campus. He was in a scissor lift with a bucket, cutting the tree with an extension saw, when he hit the electrical lines, according to a KLTV report.

Tree worker killed in struck-by
A cut tree limb struck and killed a tree worker August 6, 2012, in Monroe, Kentucky, near Henryville. A two-person crew was removing trees damaged in a March tornado when the accident occurred.
The worker was felling a tree and had notched it. As he proceeded to cut it, a limb came from the top of the tree and hit him in the upper body and knocked him down. To make matters worse, the wind then twisted the tree off the stump and it then landed on the victim, pinning him, according to a witness quoted in a WA VE Channel 3 report.

Emergency crews were challenged by the rural location and rugged terrain of the area where the accident took place. His employer described the victim as a family man who had been working with trees all his life.

Tree service owner dies in struck-by
A tree service company owner was killed August 13, 2012, while working in a tree in White County, Georgia. Allan Keith Dodgins, 41, of Habersham County, Ga., died of blunt force trauma to the chest and abdomen.

Dodgins was about 40 feet up in the tree while clearing trees along a roadway in the Skylake community when the tree top rolled and struck him, knocking him inverted.

Another tree climber was in the area and was called to help in the rescue, which included a fire department ladder truck. As rescuers were getting Dodgins down, he reportedly went into cardiac arrest and was transported by ground ambulance to Habersham Medical Center, where he was pronounced dead, according to an accessnorthga.com report.

Homeowner critical in struck-by
A 44-year-old homeowner was airlifted to a hospital in critical condition August 18, 2012, after a limb fell on him while he was cutting trees in Columbia Township, Michigan.

The man had been cutting several trees in his back yard, and had just cut a large tree and was watching it fall when it tore a limb off a nearby tree. The limb fell about 25 to 30 feet, striking him in the head. The man’s wife called 911. Emergency medical
responders found the man unconscious and bleeding severely from the head.

He was airlifted to Bronson Methodist Hospital in Kalamazoo, Mich., where he was in critical condition, according to a report in The Kalamazoo Gazette.

**Elderly man dies after fall from ladder**

A 78-year-old man died on August 20, 2012, when he fell off a ladder while cutting a tree limb at his family’s home in Mount Olive Township, New Jersey. A family member called police and said the Clifton Park, New York, man had fallen 20 to 30 feet. Police found the victim semi-conscious and partially paralyzed from the fall. An aero-medical helicopter was dispatched and transported the man to Morristown Medical Center where he died, according to the *Mount Olive Chronicle* report.

**Tree trimmer shocked by power line**

A veteran tree trimmer was hospitalized after being shocked Aug 21, 2012, while trying to cut down a tree in Fort Lauderdale, Florida. The West Palm Beach-based work crew had spent most of the day trying to take down a 40-foot kapok tree with the help of a crane. The victim was shocked when he grabbed a chain that made contact with a power line, according to a *Sun Sentinel* report.

**Man hospitalized after fall from tree**

A 28-year-old Arlington, Washington, man was flown via helicopter to a Seattle hospital August 23, 2012, after falling from a tree. The man was cutting the top out of the tree when he fell about 25 feet, suffering a possible head injury, according to *The Daily Herald*.

**Tree worker dies in fall**

A man died August 27, 2012, after he fell from a tree during a work-related accident in Rock Hill, South Carolina. Kenneth Vinson, 49, of Fort Mill, S.C., and who had been working with a tree service company when he fell, was pronounced dead at Piedmont Medical Center after the fall, according to a report in *The Herald*.

**Homeowner injured by cut tree**

A homeowner was airlifted to a Vermont hospital following a tree-cutting accident August 31, 2012, in Lake Placid, New York. Don Mellor, a well-known rock climber and the author of the “Climbing in the Adirondacks” guidebook as well as “American Rock,” was listed in good condition the next day.

Mellor was injured while cutting down a tree at his home. Firefighters said part of a cut tree struck Mellor and knocked him to the ground. Emergency personnel had to remove sections of the tree before Mellor could be extricated. An ambulance then transported him to a nearby field where a North Country Life Flight helicopter was waiting, according to a *Lake Placid News* report.

Send your local accident reports to editor@tcia.org.
Robert A. Good, Jr., president of Good’s Tree Care, Inc. in Harrisburg, Pennsylvania, has goals, and he doesn’t waste time achieving them.

He graduated from Penn State’s Landscape Contracting program in 1991 and became an ISA-certified arborist in 1992. He founded his own company in 1995, and joined TCIA (then NAA) just one year later. The company became accredited in 2005, the year after the program began.

“I was in a hurry,” he says. “I wanted to be a leader in the industry.”

The majority of the company’s work is general tree care: pruning, cabling, removals and stump grinding, in the Central Pennsylvania area. They also do tree planting projects, which includes everything from site analysis and recommendations for suitable species to planting and follow up care.

“Probably 30 to 35 percent of our revenue is PHC,” Good says. This includes fertilization and aeration to diagnose and treat root problems. “Girdling roots are a chronic problem. Nine out of 10 trees are planted too deep.”

In their IPM program, they’ve tried to be a leader in minimizing the use of harmful substances on trees, he says. They prune out insect infestations whenever they can and use beneficial insects such as ladybugs, predatory mites, nematodes, green lacewings and recently, a parasitic wasp. In the fall, they use a horticultural oil to manage mites and dormant insects. The program has grown significantly in the past year, especially on LEED (Leadership in Energy and Environmental Design) properties and on commercial properties where the managers and owners don’t want to use insecticides.

“It’s all about balance,” Good says. “Some customers want no insects at all, but the more environmentally sensitive ones are willing to listen.”

Good’s fall PHC program consists of sampling and testing the soil and, when necessary, tree tissue. Based on the analysis, they treat the soil with organic, biological and micronutrient amendments. They apply an anti-desiccant on plants that may dry out during the winter.

Their consultation services also are growing. Most of their tree management plan clients are commercial sites, such as golf courses and campuses, that value beautiful trees. The service includes an evaluation of the landscape, a plan for IPM and PHC, and a tree inventory to identify the quality and long-term viability of the trees.

“We have three certified tree risk assessors, which enables us to go in with a credential to do tree assessment,” Good says. “They assign priorities for the work that has to be done, assess them for hazard evaluation and put them on a pruning cycle. It helps us prioritize.”

They also do tree preservation for construction projects, project management and landscape assessment planning, tree appraisals, valuation and damage assessment.

Two years ago they added lawn care, and it quickly became their fastest growing service. Almost 100 percent of their existing tree care clientele signed up for it, he says. “It’s a great service to have without having to market.”

Some 85 percent of their business is residential and the rest is commercial. Close to 85 percent is from repeat customers and referrals. They advertise on the Web and plant trees in the community, for schools and community groups such as horticultural societies, boroughs and churches.

Good’s has 22 employees working in the field. Eight are ISA-certified arborists, one is a board certified master arborist and one is going through the Registered Consulting Arborist program. Employees include certified professional horticulturists, certified tree workers and licensed pesticide applicators. All crews train with TCIA’s Electrical Hazards Awareness Program.
“I’m proud to have people who are well educated, dedicated to their profession and really care about doing things the right way,” Good says. “In order to grow, you have to put people in the field who you aren’t supervising and rely on them to do things the right way. As long as we have good people, we’ll continue to grow. It’s not just me anymore. It’s the team.”

The company’s success begins with its recruiting program: Every spring and fall, they spend the day up in the trees with the local arboriculture students during their career fair.

“It’s been a great way to develop young people,” Good says. They look for employees who will stay with the company, and the company provides them with a very good benefits package, he says. There’s very little turnover with the tree crews, and one employee has been with the company since the year after it started.

In October 2005, Good’s became accredited. Keeping its employees safe, especially by having a good safety pro-

EMPLOYEE TRAINING

program in place, was the most important reason, Good says. Being a leader in the industry was another reason.

“We’re the only accredited company within a 20-mile radius. It sets us apart. It also holds us accountable with our peers. It’s a great thing to be on the same level as companies that are at the top of the industry.”

The process took six to seven months. “We learned a tremendous amount about worker safety and documentation,” he says. “The hardest part was putting together the record keeping, safety plan and company manual and doing all the OSHA reporting.”

Good discovered more advantages to being accredited as time went on.

“As we grew, Accreditation became more and more important every day, because we had more and more liability every day,” he says. “Accreditation helps us keep records up to date and do everything the right way, as well as provide great customer service.”

And although they already had a business plan, Accreditation forced them to create one that was current as well as more complete.

“Our business plan changes every two to three years,” Good says, “and that’s a difficult thing to keep up with. When times are good, you don’t worry about not having one, but then when times are bad, you have nowhere to go. Our business plan has enabled us to get through some hard times.”

Janet Aird is a freelance writer living in Altadena, California.

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Since the mini, or backyard, aerial lift is a totally new class of equipment with extreme performance capabilities in what once were considered inaccessible areas, it means we are in uncharted territory in terms of where the lift can go and also in terms of safety. The technology of such lifts is “pioneering,” and as such, new issues, especially in the area of safety, present themselves.

There are many things to be concerned about in addition to those outlined in the most recent TCI Magazine article (“Mini Aerial Lifts Present New Safety & Training Concerns,” September 2012) on the subject. For example, there are jobsite areas not designed to support the weight of equipment, such as lawns with hidden sinkholes and drywells, often unknown to the operator. Here is where extreme caution comes into play. Always use plywood or other supplemental outrigger pads under the machine’s factory outrigger pads in uncertain situations to better distribute the weight and help ensure the stability of the lift. This is different than with truck-mounted aerial lifts, or bucket trucks, which rely on the sheer weight of the truck for stability more than their outriggers.

Because mini lifts can traverse extreme terrain in ways other heavy equipment lifts cannot, the jobsite needs to be analyzed for a host of potential dangers. One safety concern is the lift’s stability on excessively uneven terrain or going over obstacles while moving from place to place on the jobsite. We have ways of mitigating those dangers, such as partially deploying the outriggers, which helps prevent tip-overs, especially driving along a side slope.

Another consideration is the use of bridging or cribbing lumber at places the lift needs to travel, such as steps. This procedure should be standard for all crews using these lifts.

Additionally, maintenance has to be part of the safety process. Mini lifts have vastly different maintenance procedures than a conventional bucket truck lift. Most have a telescoping boom that needs occasional adjustment and lubrication. Also, servicing the main rotation bearing is the single most important thing one can do for annual maintenance. That means not only lubricating but also torquing down the bolts that secure the boom to the main rotating bearing. This is the most critical part of a mini-lift assembly to ensure stable and proper rotation.

Yearly safety certifications on mini lifts can be self-administered, unlike with dielectric testing for truck-mounted booms. The important thing operators need to be mindful of for safe use is that mini-lift operating systems are different than those of traditional aerial lifts. Outside of simple live-hydraulics found on some of the smaller mini-lifts, many bigger lifts are operated by electric-over-hydraulic systems with joysticks or radio remotes. These systems introduce a new level of complexity for the user to be aware of in order for them to work properly and to keep them properly maintained and, therefore, safe.

Indeed the mini lift opens up new worlds of access and new levels of performance, but awareness of one’s surroundings, preventive maintenance, common sense and forethought are what will keep you safe.

Mike Hrycak is president of Tracked Lifts, Inc., a TCIA associate member company located in Syosset, New York, U.S. importer and supplier of Omme tracked multi-terrain and trailer mounted aerial lifts.
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By William J. Lynott

Conflicts between two employees or between an employee and management can be damaging to everyone involved and to your business as well. Sometimes it’s nothing more than a simple feud between two or more employees. Perhaps more serious are those conflicts that result from a misunderstanding between one or more employees and management. Either way, these workplace conflicts can be time-consuming for the business owner and seriously damaging to the business.

“Workplace conflict is inevitable, especially in a challenging economy,” says Craig Runde, director of the Center for Conflict Dynamics at Eckerd College in Florida. “Organizations have fewer employees, doing more work, under more pressure. Pressure makes it tougher to think clearly. Emotions get the better of us.” And, of course, conflict between two employees can be dangerous in a tree care situation. We may not like conflict, but we’re going to have to deal with it one way or another.

“Even something as simple as hurt egos can result in a loss of revenue and a lot of aggravation for many small business owners,” says Tina I. Hamilton, president and CEO of hireVision Group, Inc. “And that’s exactly what happens when conflicts get out of hand. There are studies that show that egos cost organizations hidden losses in tens of thousands or more. It happens at all levels of organizations, because when there is conflict, it is likely that there are people holding on dearly to their own ideas, perhaps to the point where they are no longer able to fairly consider opposing points of view. Then egos step in and all reason is put aside.

“You would be surprised at how often I see companies where management is either unskilled or not trained on how to deal with conflict,” says Hamilton. “They are missing opportunities to remedy issues before they can ever appear. Regardless of your personality type, conflict management skills can be learned and utilized to the benefit of you and your company.”

Like most tree care business owners, you probably do not see conflict resolution as one of your primary jobs, but as the experts tell us, conflict in every workplace is inevitable, so it makes sense to do whatever you can to sharpen your skills in calming troubled waters.

As owner or manager, you have a special responsibility to avoid the appearance of unreasonable bias in dealing with emotionally charged disputes, even when you are directly involved. Ideally, your approach will respect the dignity of others while emphasizing that solving the dispute is the goal – not finding a winner or loser.

It’s also important to make sure that good relationships are your first priority. Be respectful of the other person and his or her viewpoint.

If you’re holding on to old hurts and resentments, your ability to see the reality of the current situation will be impaired. Rather than looking to the past and assign-
ing blame, focus on what you can do in the here-and-now to solve the problem.

Pick your battles

Conflicts can be draining, so it’s important to consider whether the issue is really worthy of your time and energy. For example, maybe you don’t want to surrender a parking space if you’ve been circling for 15 minutes. But if there are dozens of spots nearby, arguing over a single space isn’t worth it.

Be willing to forgive

Resolving conflict is impossible if you’re unwilling or unable to forgive. Resolution lies in releasing the urge to punish, which can never compensate for our losses and only adds to our injury by further depleting and draining our lives.

Know when to let something go

If you can’t come to an agreement, agree to disagree. It takes two people to keep an argument going. If a conflict is going nowhere, you can choose to disengage and move on.

It also helps to attack the problem or the issue, not the other person. Wherever possible, start with a compliment and be sure to listen without interrupting.

According to Anna Maravelas, founder and president of Thera Rising Inc., the average person faces 30 frustrations (disagreements, disappointments, delays, etc.) a day. “We have a built-in negativity bias, and negative experiences are five times more powerful than positive events. That’s why small disagreements can become so destructive,” she says.

“It’s important to remember that human nature is deeply flawed in this regard. We all have moments when we lack skill, insight and courage, but exaggerating the impact of an event, blaming and backstabbing doesn’t solve the problem. These behaviors lead to factions, ineffectiveness and the breakdown of trust.”

To help deal with human nature’s failings in this regard, Runde offers these tips for owners and managers thrust into the position of conflict referees:

Adjust your attitude

People have this idea that conflict is always negative. But that’s not the case. Whether conflict is good or bad depends on how you manage it. If you think it’s going to be terrible, it will be. But, in fact, conflicts can result in positive outcomes.

Don’t ignore your emotions

Conflict is all about emotion, yet, in almost every organizational conflict, people will try to suppress their feelings. Either they’re fearful they’ll look weak or their workplace culture doesn’t support expressing emotions.

But if you don’t deal with your emotions, they’ll deal with you.

Want more help? Here’s some additional reading:

How to Reduce Workplace Conflict and Stress: How Leaders And Their Employees Can Protect Their Sanity and Productivity From Tension and Turf Wars (Career Press, 2005) $14.99 By Anna Maravelas, L.P., M.A.


But don’t act out

As a result of not managing emotions when feeling scared or angry, those feelings will simmer. Negative emotions end up driving behaviors that almost always result in poor outcomes. For example, a person might display their anger, demean colleagues or try to avoid the other person. Unmanaged emotions lead to poorly conceived behavior. Cool down. Slow down. Reflect on what’s going on and consciously choose to do something more constructive.

Have a plan

Managers usually have some sort of implicit way to deal with conflict – too often by trying to avoid it. Rarely is there an expressed set of actions for “here’s what we do when we have conflict.” Have a road map, a process, a way of legitimizing effective responses when conflicts pop up.

It’s obvious that having a plan for dealing effectively with workplace conflict requires time and effort. However, as the experts tell us, there is no way to avoid coming face-to-face with conflict. If we have to deal with it, it’s best to prepare ourselves to resolve internal disputes before they escalate to the point where they cause permanent damage to the business.
Where’s the hearing protection?

I enjoy your magazine, I received this month’s (September 2012) issue today.

In the cover photo, I can see straight into that climber’s (Jeff Thierbach’s) ear canal while the saw dust is flying...

I’m surprised you missed this.
Xavier E. Desrosiers, ISA Cert. Arborist
Xavier Services, Inc., TCIA member
Reston, Virginia

Dawn Thierbach, Jeff’s wife, responds:
Jeff is wearing ear plugs, (safety hearing protection). In fact, he wears hearing protection many times in the house; he has tinnitus (ringing in the ears). It has been getting worse, so Jeff wears the hearing protection, 90 percent of the time when he is not working because it seems to be lessening the ringing.

I have attached a photo of the modified hearing protection in Jeff’s ear in the photo, and a photo of the modifications and what he carries them in in his pocket, no matter where he goes. The ear buds are purchased from arborist supply stores and he modifies them so that no one can see them (he blackens the end with a sharpie).

Because he wears them even when he is not working, Jeff became a little vain. He bought hearing protection (ear buds) and used a magic marker to make the outside part of the ear bud black. This way no one can tell he has them in.

Jeff started his career in that era when much of the safety equipment was ignored. So, therefore, he has suffered hearing loss. Ear plugs/hearing protection have become second nature to him, even for concerts and such. Wearing them seems to be helping with lessening the ringing, even when he is not around loud noises...

Jeff is never without his hearing protection.

Dawn Thierbach, CTSP, ISA Cert. Arborist
Victorian Gardens, TCIA member
White Lake, Michigan

Editor’s note: Dawn also related that an OSHA inspector stopped by a work site recently and was going to cite them for not having hearing protection, until Jeff came down and pulled out his ear buds to show the inspector.

Clarification for biochar article

Unfortunately, there were some inaccuracies in the TCIA Magazine article “Biochar for Arborists,” in the September 2012 issue, regarding my work.

In the section called “Biochar and special tree problems,” the second paragraph should read:

“Zwart inoculated red maple and red oak seedlings with Phytophthora cactorum and Phytophthora cinnamomii, respectively, with strains of each pathogen that had been isolated from bleeding cankers on mature trees of the same species. He inoculated stems above ground, while applying biochar to the potting media, theorizing that any disease reduction would be due to a systemic response, and not a direct effect of biochar on the pathogen in the soil. His results show that biochar amendment reduced canker size compared to non-amended controls. He also found that several other physiological
parameters of plants growing in biochar-amended potting mix were improved compared to non-amended controls in a similar manner as was seen after treatment with the fungicide Agri-fos.”

Thanks for the opportunity to participate.

Drew Zwart
Bartlett Tree Research Laboratories, Ph.D. candidate, plant physiology
University of Washington, Center for Urban Horticulture

What is the correct chain saw grip?

I just opened my (September) issue of TCI Magazine and see in the July (2012) “Hi-Lights” (page 66) explanation that it is not pointed out that the worker is holding the chain saw in a left-handed position. Though not specifically mentioned in the 2006 edition of the Z133, the 2011 proposed revision does include the following:

6.3.6 When operating a chain saw, the arborist or other worker shall hold the saw firmly with both hands, keeping the thumb and fingers wrapped around the handle. A chain saw shall be operated with the left hand and thumb gripped firmly around the forward handle and the right hand and thumb gripped firmly around the rear handle, unless it is not practicable and the employer demonstrates that a greater hazard is posed by operating the chain saw that way in that particular situation.

I then noticed that the aerial worker on the cover of the magazine is also holding the chain saw with a left-handed grip. Chain saws are designed to be operated with the right hand on the throttle and the left hand on the forward grip. The worker on the cover perhaps is doing so because he has poor work positioning for the cut he is making.

Zeb Haney, owner
Tree Resource, TCIA member company
Federal Way, Washington

Peter Gerstenberger, TCIA’s senior advisor for safety, compliance & standards, responds: In my opinion, both illustrations are perfect examples of why there is a “not practicable/greater hazard” exception in the Z133 Standard, which by the way has now been adopted and published.

In the September cover photo, the climber has positioned himself to be out of the way of the piece as it comes off, and so that his lanyard does not have to be near the chain saw. This necessitates cutting “cross-handed.”

In the Hi-Lights picture, there really is no other way to put the second, level cut of the face cut into a stem that size. If the operator reaches his left hand all the way across to the front handle, it’s very awkward ergonomically and he loses strength and control. If he cuts from the opposite side of the stem, the saw’s power head and front handle bump into the trunk flare and he loses “reach,” and he probably can’t get the saw’s dogs (bumper spikes) to bite into the bark.

On a smaller stem, you can use the Soren Ericksson/Tim Ard/GOL (Game of Logging) technique of making all your cuts from a kneeling position behind the stem with hands in the “proper” position.

Another situation where the cross-handed technique comes into play and makes sense is flushing a stump.
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By Tamsin Venn

In 1985, Bruce Powell was working on a project with his crew clearing back trees on Route 185 in Simsbury, Connecticut. He was the tree manager for the Tree Division of the Butler Company. He brought his crew some water in a park along the Farmington River. They were all leaning up against a big tree having lunch and one his workers said, “This is a cool tree, I wonder if anyone is working on this.” Powell wondered, too, and an idea took hold. He started calculating expenses of what it would take for his company to donate services for the tree’s upkeep. He then took the figures to his boss, Bill Butler.

Powell told him, “I think this is what we should do, how much fertilizer and spray.” Butler was very positive about the idea.

And so began Powell’s stewardship of the Pinchot Sycamore, the oldest tree in Connecticut, named after Simsbury native, Gifford Pinchot, who became the first chief of the U.S. Forest Service.

When in 2007 Powell moved to SavATree, which bought the Butler Tree Division from the Butler Company, he told Daniel van Starrenburg, president and CEO of SavATree, what they had been doing, and his new boss said, let’s keep it up.

“It’s a grand ole lady, and nothing is going to happen to her on my watch,” says Powell.

In a state known for its stately trees on campuses and old estates, the Pinchot Sycamore stands tall.

One reason the tree is in such good shape is SavATree’s customized fertilization program. Right now the program is to inject the roots with ArborKelp, a trademark product of SavATree. It’s made with Atlantic sea kelp along with other nutrients that stimulate growth in the root system.

“One of the company’s basic principles is a strong root foundation. The stronger the foundation, the stronger the house,” says Powell. “The kelp gives the tree nutrition and allows the roots to shoot out more hairs, to take in nutrition, and ultimately to anchor the tree to the ground better.”

Storm damage required crews to cut off 20- to 40-foot sections of some limbs. Nature left no choice but to make heading cuts, with the future strategy being to allow sprouts to occur, then manage the sprouts through reduction and removal to create a dominant leader.

This photo and the one below of the Pinchot Sycamore were taken in March 2012, after the damage from the October storm was pruned. The sycamore Bruce Powell calls “Dad” is at back left. Both photos courtesy of Steve Grant.

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Table: Tree Job Profile

This photo and the one below of the Pinchot Sycamore were taken in March 2012, after the damage from the October storm was pruned. The sycamore Bruce Powell calls “Dad” is at back left. Both photos courtesy of Steve Grant.
ArborKelp is 100 percent natural, is collected in an environmentally responsible manner, and can be administered throughout the year, as long the ground is not frozen. The company injects the liquid fertilizer into the ground under pressure. This method replenishes the soil but also disperses and aerates compacted soil, allowing water and oxygen to reach the root hairs. Depending on the tree/soil analysis, SavATree also might apply macronutrients, micronutrients and mycorrhizae.

One result of the fertilizer program is an increased ability to recover from stress, according to Powel. And the Pinchot Sycamore was nothing if not stressed.

Things were going well for the tree, an American sycamore (Platanus occidentalis) native to North America identified by its peeling, mottled bark and huge height and width. It stood at about 100 feet high, or about the height of a 10-story building. Then last October, on Halloween, New England was hit by a freak snowstorm, which loaded leaves with heavy snow and ice that cracked and broke limbs and trees

(Continued on page 64)
Yard trees available for
ALB-impacted areas in Ohio

A pilot project will make available a limited number of landscape trees to Clermont County property owners who had trees removed from their lawns as part of eradication efforts to keep the Asian Longhorned Beetle from spreading across the state, according to the Ohio Department of Natural Resources.

ALB was initially discovered in Tate Township in Clermont County in June 2011. The invasive beetle has no known natural predator, and, it poses a serious threat to Ohio’s 7.8 million acres of hardwood forests as well as the state’s $5 billion nursery industry, which employs nearly 240,000 people. The Ohio ALB Cooperative Eradication Program in Clermont County has been working to survey, detect and remove trees infested with ALB. As of Sept. 4, the program removed 8,716 infested trees out of 170,575 trees surveyed. ALB has infested more than 8,879 Bethel area trees affecting 314 properties.

“This pilot project is meant to show appreciation for the cooperation being provided from the Bethel community in this eradication effort, which is critical to the continued health of hardwood trees throughout the state,” said Robert Boyles, state forester and chief of the ODNR Division of Forestry.

The pilot tree replacement project is jointly implemented by ODNR and the Ohio Department of Agriculture. It would allow affected landowners to obtain up to 10 landscape trees with an average height of 5-feet. Information on how to apply can be found at ohiodnr.com/forestry or by calling (513) 932-6836.

In addition, landowners with woodlots impacted by the eradication efforts may request to have a forester provide them with technical advice on their woods and about how best to obtain federal, land improvement funds. USDA NRCS funds are available to treat weed species and noxious plants growing in a woods’ understory.

ODNR Division of Forestry staff will provide details about the program and the replacement trees being offered.

Pinchot Sycamore

(Continued from page 63)

across the region.

When Powell and his wife could get out of the driveway that October morning, they drove to the sycamore to see how it had fared. It looked terrible, branches broken under the weight of the unexpected snow. Would the oldest tree in Connecticut survive?

SavATree got to work. It did hazard reduction pruning and some other selective pruning, but mostly worked getting rid of broken branches and doing reductions to promote new growth and to reduce the weight load. By one estimate, the tree lost 35 percent of its canopy in the snowstorm.

Crews were forced to cut off 20- to 40-foot sections of some limbs. Other limbs were lost entirely.

One reason it ultimately survived was its strong root system, according to Powell. In addition, part of the tree’s staying power, according to Powell, is that the tree is located about 100 feet from the Farmington River, so its root system has a good source of water. The alluvial riverbed soil also helps because it’s porous and has a good organic base to it.

“She,” aka “Mama,” is not the only sycamore in what is called Pinchot Sycamore Park. Nearby is another large sycamore Powell calls “Dad,” and about seven smaller sycamores, about 24-36 inches in diameter referred to as the kids. Mama lost a lot at the top and is probably no longer 100 feet tall, but is thriving with the use of selective cables and fertilizer.

Dad is thinner in diameter but thicker in the shoulder, says Powell.

In the spring many of the local trees are bare due to the fungal attack of anthracnose, but Mom and Dad and the offspring always have their full leaves, thanks to SavATree’s care, Powell says.

“A lot of people are in love with that tree. It’s the pride of the valley,” Powell says.

Powell, who has been in the tree care business for 32 years, measures the tree every July 4. He estimates the tree to be 450-500 years old based on a tree ring growth of ¾ to ¾ inch a year. He can’t send
Connecticut has huge sycamores, along canopy diameter of 140 feet. This part of around and 95 feet tall, with an average give out their age. be 350 years old. The Simsbury Historical Society has in its possession documents that refer to the grand tree along the Farmington River Bank dating to the late 1600s and early 1700s.

“I think we’re talking about the same tree,” says Powell.

Other estimates put it at 200-300 years old. The “Buttonball Tree” in Sunderland, Massachusetts, said to be the biggest sycamore on the East Coast, is estimated to be 350 years old.

Ultimately, older women don’t like to give out their age.

In 1998, the Connecticut Botanical Society measured the tree to be 26 feet around and 95 feet tall, with an average canopy diameter of 140 feet. This part of Connecticut has huge sycamores, along nearby Route 10, that are thought to have been planted by the early colonists by seed along the main trail, but they are only a quarter size of the Pinchot Sycamore, says Powell.

SavATree, whose name embodies the company’s mission, also has other clients with trees known to be the largest in Connecticut. Those clients include two hospitals in Hartford. One was a former estate and the other is the Institute of Living. SavATree also tends the famous Bedford Oak near the company’s headquarters in Bedford Hills, New York.

Dane Buell, a director with SavATree, is very familiar with the Pinchot Sycamore. “Bruce has been managing that tree since 1986,” says Buell. “He takes it on like one of his kids.”

It’s an historic tree that went through traumatic damage in a storm that was unprecedented, “beyond anything I’ve seen in my career,” says Buell. He adds that every tree in his neighborhood in northwest Connecticut still has damage to some extent or another from that storm. But the sycamore is “an old soldier.”

SavATree’s preventative maintenance has definitely helped the tree’s endurance, as has its installation of supplemental support cables, ongoing maintenance on those cables, as well as the fertilizer program and regular pruning.

What’s next for Mama? “Our next approach will be to thin selectively the new growth and build better structure,” says Powell. Thinning was scheduled for the first week in September.

“Right now she looks just amazing,” says Powell.
How Do You Compete with Unlicensed Competition?

By Bob Appelbaum

"How do you compete with the unlicensed tree expert? You can’t!"

This was the opening statement from one of the Maryland Department of Natural Resources (MDNR) news bulletins. The article goes on to urge the licensed tree experts to keep a watchful eye out for unlicensed (and probably unemployed but highly skilled) tree professionals and the gypsies who work in our market areas (usually on weekends and after big storms with lots of damage), and report them to a certain MDNR telephone number so they can dispatch an MDNR police officer to the job site to issue a citation and take what other actions they deem necessary. So now we do immigration control, child support enforcement, work release program warden du jour as well as play a role in busting our illegal competitors.

We have tried to comply with their requests but to no avail. By the time they dispatch, the gypsies are gone. Most of the time, we see them in traffic not at a job location. So here is a suggestion to consider, not just for Maryland but for all municipalities across the country. Not just regarding unlicensed “tree experts,” but to protect those professional business owners who are playing by the rules and absorbing all the costs of being a legal, reputable, professional business. This would protect the unsuspecting public from unlicensed, uninsured and unemployed plumbers, electricians and “home improvement contractors” as well.

I propose the use of “bait houses.” Every municipality across the country has numerous foreclosed houses sitting vacant. Rather than chasing the “gypsy tree experts” all over town and usually to no avail, why not utilize these unoccupied houses (or some version thereof) as sites to invite an estimate “to prune a tree in the front yard,” ostensibly, “to get the house ready for sale.”

In Maryland, anyone who is licensed and insured to do tree work is required to post his license number on all of his trucks, advertisements, flyers, business cards estimates and invoices. Newspapers are not supposed to display advertisements that do not post the required license numbers (but they often turn a blind eye and a deaf ear for the sake of advertising revenue).

Here’s how it works. A licensed and insured tree expert sees an obvious gypsy in traffic, or at a job site. Perhaps he sees a flyer on the mailbox or at the front door when he goes to leave his business card or written estimate. He notes there is no tree expert license number posted on the side of the truck or on the flyer or business card. The licensed contractor records the address, description, license number, make, model and color of truck, etc. and calls it into the appropriate DNR telephone number.

DNR checks the computer to be sure the suspect is not, in fact, licensed. If he is not licensed they call the telephone number on the side of the truck, the flyer, the business card or newspaper advertisement and request an estimate be done at one of these bait houses. After the suspect submits his estimate he is authorized to come to the designated address at a designated time. Perhaps he is told to begin work, for example, at 9 a.m. on Wednesday. He is told that his customer may be a few minutes late but that it is OK to begin work without him. The DNR (customer) shows up at 9:15 a.m. and can issue citations as deemed necessary.

This seems a more efficient way to catch these guys. Rather than chasing them around town, they are enticed to come to you.

This will have a double effect on “the gypsies.” Because they will not know who is a potential customer and who is a trap, they should be less likely to so fearlessly invade our market areas. As it is, they are jeopardizing our livelihoods, distorting the fair market value of our services (considering what it costs the legitimate tree service to be in business).

The public needs to be reminded (on a regular basis) of the benefits of hiring a licensed and properly insured tree expert versus the risks of hiring the unlicensed and uninsured gypsy tree expert based solely upon who has the cheapest price. If anything goes wrong, if someone gets seriously injured, maimed or killed or if there is serious damage to the property due to a tree failure, rigging failure or climber’s miscalculation, the homeowner risks being sued for medical coverage and/or making a claim against his own insurance company to repair the damages caused by the unlicensed and uninsured tree expert.

Bob Appelbaum is president and owner of Jackstraw, Inc., a TCI member company located in Damascus, Maryland.

TCI will pay $100 for published “From the Field” articles. Submissions become the property of TCI and are subject to editing for grammar, style and length. Entries must include the name of a company and a contact person. Send to: Tree Care Industry, 136 Harvey Road, Suite 101, Londonderry, NH 03053, or editor@tcia.org.
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