

MAY/JUN 2024

Volume 15

Number 3

# UTILITY ARBORIST NEWSLINE

FOCUS ON SAFETY

## A NEW PERSPECTIVE TO SAFETY

WOMEN IN SAFETY  
THINK, ACT, AND LEAD  
DIFFERENTLY

## CYBERSECURITY SAFETY

LEARN MORE ABOUT  
THE RISKS IN THE UTILITY  
INDUSTRY

## BACK TO BASICS

IMPORTANT SAFETY BASICS IN THE  
WORLD OF TECHNOLOGY

## DISTRACTED DRIVING IS MULTITASKING WORTH THE RISK?





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Field Safety Support,  
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We are an organization of over 5,000 individuals with interest in, and a commitment to, the maintenance of trees and other vegetation for the purpose of ensuring the safe and reliable distribution of energy, including electric, oil, and gas, to business and residences.

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Turn to **page 24** to read how basic safety is important, preventing everything from falls, ticks, and poison oak contact.



Learn about the role satellite data plays in the managing vegetation risks on **page 32**.



Strengthen your organization's cybersecurity safety with industry-expert guidance on **page 36**.

**This is a list of common industry terms and acronyms frequently used in this magazine.**

Artificial Intelligence (AI)  
Best Management Practices (BMPs)  
Environmental, Social, and Governance (ESG)  
Integrated Vegetation Management (IVM)

Light Detection and Ranging (LiDAR)  
Occupational Safety and Health Administration (OSHA)  
Personal Protective Equipment (PPE)

Rights-of-Way (ROW)  
Subject Matter Expert (SME)  
Utility Vegetation Management (UVM)  
Vegetation Management (VM)

PRESIDENT'S MESSAGE



Brandon Hughson

## Advancing Safety in Utility Vegetation Management: From Safety I to Safety II

**S**afety is not just a priority—it's a core value that underpins everything we do in the utility vegetation management industry. As the president of the Utility Arborist Association, I am committed to leading our organization in championing safety as a unified effort across the industry. Our mission is clear: to move from Safety I to Safety II, where safety is not just a checkbox but a deeply ingrained culture that permeates every aspect of our work.

At the UAA, safety is not merely an afterthought; it's a dedicated focus area. One of our committees is entirely dedicated to safety, reflecting our steady commitment to ensuring the well-being of our members and the communities they serve. But as an industry, we recognize the need to go beyond individual company manuals and establish a unified standard for safety practices. Our newest director, also the safety champion, Sara Dreiser, is leading the charge as we navigate the path forward. We have a long history of dedication to safety. As Will Nutter, a stalwart advocate for safety in our industry, often said, "We are our brothers' and sisters' keepers." It's about leaving every jobsite better than we found it and looking out for each other's well-being every step of the way.

Creating industry-wide safety standardization is no small feat, but it's a challenge we are ready to tackle head-on. We believe that collaboration and collective input are key to developing comprehensive safety guidelines that address the diverse needs and challenges of our industry. That's why we're reaching out to all stakeholders—companies, individuals, experts—to gather their insights and ideas on what safety looks like in UVM. If you want to contribute in providing content, ideas, or inspiration, send them to [office@gotouaa.org](mailto:office@gotouaa.org).

Advancements in mechanical equipment are revolutionizing how we approach safety in UVM. New tools and devices are making it easier for climbers to access trees safely and remove dead trees without putting themselves at risk. Additionally, improved personal protective equipment is providing workers with better protection against hazards, ensuring their safety in the field.

But safety doesn't stop when we leave the jobsite. We must also prioritize office safety and protect our technology infrastructure. In light of recent events, such as active shooter situations, building safety has taken on increased importance. Implementing measures like "police" alarms alongside fire alarms can help pinpoint the location of threats, enabling a swift and coordinated response to protect lives.

Our industry operates in a compliance-driven environment, where adherence to safety standards is nonnegotiable. From insurance requirements to cybersecurity protocols, every aspect of our work is scrutinized for compliance. Technology plays a crucial role in tracking our safety records and shaping business decisions based on our safety outcomes and experiences.

In conclusion, safety is not just a box to check. It's a mindset, a culture, and a way of life. Moving from Safety I to Safety II requires a collective effort, with each member of our industry playing a vital role in shaping our safety practices and standards. Together, we can create a safer, more resilient future for utility vegetation management—one where safety is ingrained in everything we do, from the field to the office and beyond. Let's continue to work together, share our ideas, and champion safety as the cornerstone of our industry. 🌱

*Brandon Hughson*



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EXECUTIVE DIRECTOR MESSAGE



Dennis Fallon

Humans are gregarious by nature; we want and like to have other humans around us. This community need likely has roots in safety and the idea that “many hands make light work.” We are often most comfortable in familiar groups or groups with aligned values. The UAA is a group where folks know they can network with other folks working in the same field on similar issues, and more importantly, work communally to make things better in our industry and at our workplaces.

One of the goals the UAA is working hard on is brand feel and branding. It is important for any community to entice new members and bring new ideas. A good way to attract people with similar values or work is to have the UAA external-facing materials look and feel familiar to the observer. A climber can quickly recognize a tool or device they may use daily in their work and, conversely, can quickly recognize things that are not used in their work. Think recreational climbing saddles versus work climbing

saddles. These two items are easy to distinguish by the trained eye. If the *Utility Arborist Newsline* cover had four climbers on a rock face with Black Diamond saddles, dynamic climbing lines, and belayers, tree climbers would not feel any familiarity with that image and/or their worksites.

While the utility arborist is integral in every corner of society where energy is used, imagery of utility arboriculture is not readily available to the public. In fact, when searching some of the resources where the rights to use images publicly are available, many of these images capture safety violations, worn or damaged equipment, or settings inconsistent with our work. To help overcome the difficulties in finding images that represent our community and our work, we would like to enlist your help by encouraging you to send us some of your best worksite photos.

The content of the photos should show our industry at work, highlighting the skills, tools, and equipment working tirelessly to ensure a reliable and quality energy supply is getting to our communities. These images should also dignify your employers and coworkers, their values, and their policies. Please keep a keen eye out for images leadership may have concerns with having published to larger audiences. Remember, the goal is to have UAA external-facing materials exemplify the great work our industry does and attract new members to our community. Technical parameters and how to submit

images follow the same guidelines as the *Newsline* cover art submissions, (measuring 7.5" x 9.875"; portrait mode; 300 dpi or higher; submit to [newsline@gotouaa.org](mailto:newsline@gotouaa.org)).

There are a few other ways you can help advance the UAA community coming up. Later this fall, the annual UAA election for two board members and a vice president will take place. Nominations for these roles are now open. An email was sent out to active members on May 1, 2024. Please keep your email addresses up-to-date, spam filters open to UAA emails, and an eye out for communications on when and how to nominate your leadership.

Annually at the Trees & Utilities Conference, the UAA recognizes outstanding industry performance and impact through the UAA Awards process. Nominations for the UAA Awards open this month. Think about who has positively influenced the industry and nominate them for an award. If it helps, get a few folks together and make it a group effort to submit a nomination. More information on the UAA Award categories can be found on the website at [www.gotouaa.org/awards-recognition](http://www.gotouaa.org/awards-recognition). Another great way to advance the industry is to refer a friend or colleague to join the UAA or gift a rising star in your circle a membership in the organization.

Continue working towards excellence and thank you for your impact on our UAA community! 🌳

*Dennis Fallon*

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**NOW OPEN**

**May 1-22,  
2024**

## **BOARD NOMINATIONS**

### **THE UAA EXECUTIVE BOARD POSITIONS WILL BE OPEN FOR VOTING SOON.**

The UAA Board of Directors is responsible for the sustainable operation of the UAA including finances, day-to-day operations, and guiding the future direction of the association. Check your email that UAA has on file and be sure to nominate yourself or another individual before May 22, 2024.

**Vice President  
Directors (*two openings*)**

For more information, please contact us at [office@gotouaa.org](mailto:office@gotouaa.org).



**COMING SOON**

**July 15-31,  
2024**

## **BOARD ELECTIONS**

### **THE UAA EXECUTIVE BOARD VOTING WILL BE OPEN SOON.**

As UAA Members, you are encouraged to update your online profiles with current information (email, address, etc.) in the member portal ([gotouaa.org/member-portal](http://gotouaa.org/member-portal)). You will receive an email with a link to cast your votes for the following open positions on the UAA Board.

**Vice President  
Directors (*two openings*)**

For more information, please contact us at [office@gotouaa.org](mailto:office@gotouaa.org).

## SAFETY COMMITTEE UPDATE

By Tim Walsh, 2023 UAA Safety Committee Champion and UAA Past President

**S**afety is the bedrock of the utility arboriculture industry, and the UAA Safety Committee remains steadfast in its commitment to advancing safety practices and standards. Over the past year, the committee has been diligently working on a range of initiatives aimed at enhancing safety across the sector. Let's take a closer look at some of the key topics discussed and actions taken during committee meetings.

### Serious Injury and Fatality (SIF) Prevention

One of the primary focuses of the Safety Committee has been SIF prevention. Recognizing the importance of identifying and addressing serious incidents, the committee has been actively engaged in developing strategies and best practices to mitigate risks and prevent SIFs within the industry. By sharing lessons learned and promoting a proactive approach to safety, the committee aims to reduce the occurrence of serious injuries and fatalities among utility arborists.

### Public Service Announcements

Communication plays a crucial role in promoting safety awareness and education. The Safety Committee has been instrumental in developing and disseminating public service announcements (PSAs) aimed at raising awareness about key safety issues within the industry. These PSAs serve as valuable tools for educating both industry professionals and the general public about best practices and safety guidelines.

### Safety Education

Education is key to fostering a culture of

safety within the utility arboriculture community. The Safety Committee has been actively involved in developing and promoting safety education programs and resources for industry professionals. From online training modules to in-person workshops, these initiatives are designed to equip utility arborists with the knowledge and skills they need to work safely and effectively.

### Safety Summits

Safety summits provide valuable opportunities for industry professionals to come together and discuss emerging safety trends and challenges. The Safety Committee has been instrumental in organizing safety summits in various locations, including Minnesota, Indiana, Florida, Ohio, New York, and Pennsylvania. These events bring together experts from across the industry to share insights, best practices, and innovative approaches to safety.

### Updates to the ANSI Z133 Safety Standard

As the industry evolves, so too must safety standards and guidelines. The Safety Committee has been actively involved in reviewing the updates to the ANSI Z133 safety standard to ensure that it remains relevant and effective in addressing current safety challenges. By staying abreast of emerging trends and technologies, the committee aims to ensure that the safety standard

continues to serve as a comprehensive resource for utility arborists.

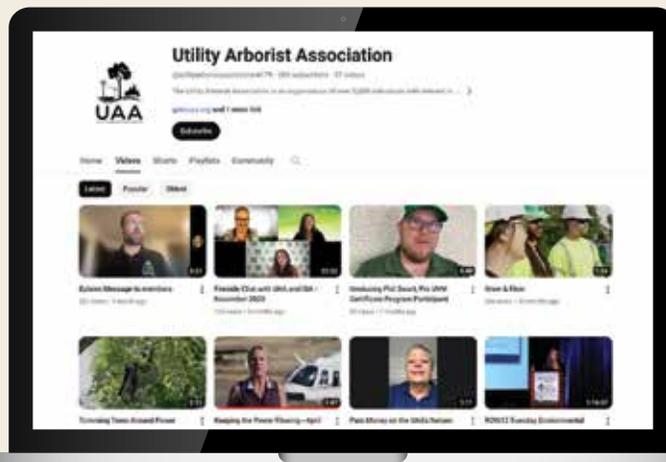
### Use of the Energy Wheel from CSRA

The Energy Wheel from the Construction Safety Research Alliance (CSRA) has emerged as a valuable tool for assessing and managing safety risks within the utility arboriculture industry. The Safety Committee has been exploring the use of the Energy Wheel as a proactive approach to identifying and mitigating potential hazards. By leveraging this innovative tool, utility arborists can enhance their safety performance and minimize risks on the job.

In summary, the UAA Safety Committee remains at the forefront of efforts to promote safety within the utility arboriculture industry. Through its initiatives focus on SIF prevention, public service announcements, safety education, safety summits, updates to the ANSI Z133 safety standard, and the use of innovative tools like the Energy Wheel, the committee continues to drive positive change and improve safety outcomes for industry professionals.

As we move into 2024, the leadership has changed on the committee. Sara Dreiser is now the committee champion, and we have two co-chairs, Dan Shaw and David Hawley. We are looking forward to an exciting year! Please join us if

you have the time and interest. 🙏



Check out the UAA YouTube channel here!





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## WOMEN IN VM



Sara Dreiser

## Making Utility Vegetation Management a Career

### Sara Dreiser

By Sara Dreiser, Senior Program Manager, ComEd Vegetation Management

**M**y love of nature began at a young age. I had a preschool teacher who used to lead us on nature walks through the woods, identifying every native wildflower along the way. As if seeing the alien form of an early season Jack-in-the-pulpit wasn't exciting enough, she would reward our patience with chocolate at the end of the walk. In high school, my biology teacher used to take us on walks to identify all the nearby street trees. There was no chocolate this time, but an excuse to leave the building and get some fresh air was enticing enough. I decided that I was going to pursue a bachelor's degree in biology.

During college, I spent my summers interning at the Morton Arboretum, working for a root biologist and soil scientist. It was a beautiful place to spend my breaks, and I was introduced to some of the foremost thinkers in the green industry. I had plans to pursue a PhD and find a career in research or work for an environmental nonprofit. I wanted to play outside and save the world, but I had a very narrow idea of what that meant. For starters, I needed to pay my rent.

Fueled by my financial reality, I decided to pursue a temporary opportunity with Davey Resource Group as a work planner. It was meant to be a bridge to something more aligned with my vision of service work—but I loved it. I had autonomy in my day-to-day schedule and got to spend the entire week looking at trees.

I spent over a decade working for Davey. I grew quickly with the company, learning about the industry, understanding the challenges of utilities, and developing leadership skills as I took on managing my own team. I realized that if I wanted to have a positive impact on our world, there was no better place than utility forestry. I loved working with people from all different backgrounds who were passionate about trees, interested in minimizing our impact

on the natural world, and acutely aware of the ever-increasing demands for energy.

Two years ago, with a growing family, I decided it was time to change pace. I was very fortunate to find an opportunity with my local utility, ComEd. In my new role, I continue to be impressed with the passion of my teammates. We manage a massive urban forest (34,000 linear miles!), and every utility forester I have had the pleasure of working with is committed to making sure our impact is a positive one.

A job that was supposed to be a temporary detour ended up becoming an incredibly rewarding career that has challenged me to grow personally and professionally, has rewarded me with opportunities to give back, and has allowed me to financially provide for my family. This job and industry grant me the ability to continue to engage in research, working with academics and scientists to explore our learnings from interruption investigations and to learn more about tree biomechanics. I've had the opportunity to travel the nation as a regional supervisor, present at conferences and leadership trainings, and did one very special Florida tour for Hurricane Irma. Last year I was able to connect with Chicago Public Schools and bring utility foresters into classrooms to share the opportunity this industry has provided for us. I have had the pleasure of engaging at an industry level, sitting on the Illinois Arborist Association board for two terms, participating in the UAA Women in Utility Committee, and recently joining the UAA board.

When I was twenty-two, I didn't even know that utility forestry was a field, let alone what a career in this field would look like. I didn't know about the professional opportunities, financial benefits, or the ecological impact. I am so pleased that I took that temporary job—it became a permanent career that I plan on building for years to come. 🌱

## Let Grow: A Revolutionary Approach to Vegetation Management

In the world of vegetation management along utility rights-of-way, we face a daunting challenge: how to make crucial decisions about vegetation treatment that protect both the integrity of critical infrastructure and the delicate ecosystems through which we operate. Advanced integrated vegetation management techniques prioritize the retention of *compatible* plants, not only the removal of *incompatible* plants that present potential hazards. Letting beneficial compatible plants grow on the ROW can enhance biodiversity and provide a biological control against tall-growing, woody species. Additionally, a focus on stewarding the “good” vegetation is inherently more rewarding than the indiscriminate eradication of “bad” vegetation and helps build pride and ownership among the boots on the ground.

Grow With Trees has been providing training to utility field crews for the past seven years. In this time, we have come to see plant identification skills as both the greatest learning need and the key to successful adoption of IVM. Every day, field crews encounter a complex landscape of plant species, each with its own set of risks, ecological significance, and management requirements. Without a solid foundation in plant identification, field crews are forced to navigate in the dark.

When it comes to learning plant identification skills, nothing beats on-site, hands-on training. As a second best, online training that is highly interactive and engaging can also be successful. Grow With Trees relies on dynamic multimedia, such as videos, graphics, and simulations, in addition to humor, repetition, and friendly competition to enhance learner engagement and retention in its online training products. We also offer physical and electronic field guides to assist field crews on the ROW with plant identification. However, our new interactive app brings it all together in one powerful tool. Say hello to **Let Grow**, a digital plant guide and training app designed to help your teams learn both *compatible* and *incompatible* plants and make informed decisions about appropriate management practices.



Let Grow

### Cultivate Knowledge, One Plant at a Time

Let Grow features a searchable plant directory customized to your utility's ecoregions and plants of interest. The app's intuitive filters allow you to pinpoint specific plant characteristics and find the information you need swiftly. Alternatively, you can snap a photo and within seconds, Let Grow suggests possible matches based on an integrated image recognition technology. Detailed information is provided about each plant species, including recommended best management practices tailored to your utility's goals.

### Learning Made Fun

Let Grow invites you to test your knowledge on compatible and invasive plants. Customized games offer a unique and engaging way to learn. Can you identify the plant and respond with the appropriate treatment? Compete to see who knows their plants best!

### Seamless Messaging

Let Grow provides a messaging platform for one-on-one and group messaging, including a built-in Spanish-English auto-translator. Send

targeted content to your entire team, share insights, answer questions, and keep everyone on the same green wavelength. It's like having a horticultural chat room right in your pocket!

### Complements Online Learning

Let Grow is the perfect companion to the Grow With Trees online learning platform. Dive into interactive instructional modules covering everything from plant identification and monitoring to terrain maps and safety guidelines.

**Let Grow** is a significant step forward in the integration of technology and environmental stewardship. By harnessing the power of smartphone technology, Grow With Trees offers a tool that not only improves IVM practices but also promotes a culture of conservation. Email [support@growwithtrees.com](mailto:support@growwithtrees.com) to get started with Let Grow today and embark on a journey where every leaf tells a story. Let's grow together! 🌱

## SAFETY TOOLS

## Enhancing Safety, Quality, Efficiency, and Client Satisfaction through HOP in UVM

By Tim Walsh, Vice President of Safety and Training, The Townsend Company

In utility vegetation management, safety, quality, efficiency, and client satisfaction are paramount considerations. As utility arborists navigate the complexities of their profession, they continually seek methods to optimize their performance while ensuring the highest standards of safety and service. One approach that has proven invaluable in this pursuit is Human and Organizational Performance (HOP).

HOP is a systematic and proactive approach to managing human performance within organizations. It is NOT a program, an initiative, or a flavor-of-the-day; it is a "process of integration."<sup>1</sup> Human and Organizational Performance recognizes that individuals and organizations are fallible and that errors are inevitable. However, by understanding the underlying factors that influence human behavior and organizational systems, proactive measures can be implemented to mitigate risks and enhance overall performance.

HOP takes us away from trying to "prevent" all incidents and focuses on ensuring that we have controls in place. As Todd Conklin said in a recent podcast,<sup>2</sup> "prevention is necessary, but not sufficient." It isn't about if something bad happens but *when* it happens. We know that there will be errors, mistakes, failures in our work, but if we have controls in place, we can fail safely. Fall protection isn't worn to keep us from falling, it is to keep us from hitting the ground.

Safety is the cornerstone of any utility arborist's work. By adopting

HOP principles, organizations can cultivate a culture of safety that empowers employees to identify and address potential hazards before they escalate into incidents. This proactive approach to safety not only reduces the likelihood of accidents but also fosters a sense of responsibility and accountability among team members.

Furthermore, HOP emphasizes the importance of communication and collaboration within organizations. By promoting open dialogue and knowledge sharing, utility arborists can leverage the collective expertise of their team to improve decision-making processes and enhance overall efficiency. Effective communication also plays a critical role in client satisfaction, as it ensures that customer needs are understood and addressed in a timely manner.

Quality is another key aspect of utility arboriculture that is greatly influenced by HOP principles. By focusing on continuous improvement and learning from past experiences, organizations can refine their practices and deliver consistently high-quality services to clients. This commitment to excellence not only enhances customer satisfaction but also strengthens the reputation and credibility of the organization within the industry.

Efficiency is essential for utility arborists who often work in dynamic and demanding environments. By optimizing work plans and streamlining processes, organizations can maximize productivity and minimize downtime. HOP encourages organizations to identify and eliminate unnecessary barriers to

efficiency, whether they are related to equipment, procedures, or organizational structures.

Client support is ultimately the cornerstone of success in the utility arboriculture industry. By prioritizing the needs and expectations of clients, organizations can build long-lasting relationships based on trust and reliability. HOP emphasizes the importance of understanding client requirements and delivering tailored solutions that meet their specific needs.

In conclusion, Human and Organizational Performance offers a comprehensive framework for enhancing safety, quality, efficiency, and client satisfaction in the field of UVM. By adopting HOP principles, organizations can cultivate a culture of safety, foster collaboration and communication, improve quality, optimize efficiency, and provide exceptional support to clients. In doing so, they not only elevate their own performance but also contribute to the overall advancement and professionalism of the industry as a whole.

1. Berry, C., Wilson, A., and Conklin, T., Do Quality Differently: The Playbook for Creating More Success in Biopharma (or Any) Manufacturing (self-pub., Berry and Wilson, 2023).
2. Conklin, T., host, "One More Discussion of Fatal Events—and This Is Just for Us," Pre-Accident Investigation (podcast). March 2, 2024. <https://preaccident-investigation-podcast.onpodium.co/episodes/papod-486-one-more-discussion-of-fatal-events-and-this-is-just-for-us>.<sup>†</sup>

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**OUTREACH COMMITTEE UPDATE**

By Michelle Lejins, Outreach Committee Chair



Michelle Lejins

**OUTREACH COMMITTEE**

- Amanda Opp, Champion
- Michelle Lejins, Chair
- Cameron Shankland, Co-Chair
- Jim Brown
- Paul Karpel
- Kim Laing
- Jen Leman
- Jamie McMillan
- Jared Rumfelt
- Jeff Wissing

**CANADIAN TASK FORCE MEMBERS**

- Codie Anderson
- Brent Bencharski
- Jim Brown
- Riley Burns
- Bob Collinge
- Francois Desjardins
- Shawn Duby
- Chris Gamache
- Darrell Gaudet
- Patrick Howe
- Steve Kerr
- Jeff Labelle
- Kimberly Laing
- Etienne Langdeau
- Steve Later
- Ludovic Légaré
- Andrea Mattioli
- Orville McLean
- Jake McClelland
- Jennifer Powell
- Cameron Shankland
- Darcy Soderstrom
- Chris Staby
- Greg Tipman

The Outreach Committee has been assembled for 2024 and we are on our way to completing annual tasks outlined in our strategic plan. This committee has had their first meeting of the year, and members from across the United States and Canada have volunteered to participate. We also receive support from our committee champion, Amanda Opp, who helps facilitate communication between our committee and the UAA board, in addition to providing support with strategic goals, objectives, and annual tasks.

The Outreach Committee was founded to broaden industry adoption of utility vegetation management best practices by actively engaging, exchanging information, and educating peer groups within the broader vegetation management community. This year, the committee has been tasked by the UAA board to expand UAA influence through focused outreach. The committee will also continue to facilitate engagement with UAA members and committees and review goals to assure we are aligned with the strategic vision.

In 2023, subcommittees were created to establish channels for targeted outreach. The subcommittees focus on membership surveys, cooperative utilities outreach, Canadian outreach, and college educator and student outreach.

**Membership Survey**

In January, the membership survey subcommittee finalized question recommendations for a member-wide survey that will be sent to UAA Members this year. Our goal was to identify affiliate groups the UAA should seek to collaborate with and identify most-valued UAA offerings from the members' perspective.

In December, we met with the UAA marketing team, TRG Marketing, to discuss survey strategy. There was good discussion around question phrasing and how to build upon results from the last UAA member-wide survey that was conducted in 2021. With help from the marketing team, the committee developed survey questions covering member benefits, UAA offering gaps, career challenges, and affiliate groups.

**The Canadian Task Force**

The Canadian Task Force was formed in 2023 to carry out a short-term initiative of identifying industry gaps and drafting recommendations to submit to the board for review. Gaps were identified in resource adequacy, industry awareness, collaboration

with Indigenous communities, and other industry organizations. The gap analysis was presented to the board along with recommendations for input.

The task force has been very successful with their initiative in 2023 and has gained momentum and membership along the way. A survey was conducted among task force members to determine if the task force should continue into 2024 to complete tasks identified in the gap analysis recommendations. The group was in favor of continuing efforts and is keeping the momentum going in 2024. Their ultimate goal is trade recognition in Canada and to attract, recruit, and retain talent. I'd like to acknowledge the amazing people who carry out this important work in our Canadian Task Force.

**Collaborating with UAA Affiliate Groups**

The Outreach Committee has been working on identifying ways to engage with and market to UAA affiliate groups. Our journey began with Co-Chair Cameron Shankland and me meeting with members from all the UAA committees. In addition to offering outreach support, we looked to identify affiliate groups that UAA committees desire to collaborate with and potential avenues for outreach.

During these meetings, we identified one potential avenue for outreach: interviewing groups, organizations, or people of influence in affiliated industries. The interviews will serve to establish or strengthen partnerships with organizations or individuals. Our goal is to highlight and interact with a diverse group of organizations that have a direct or indirect impact on UVM.

There was lively discussion around which entities to target at our January meeting. Affiliate groups identified include those from the natural gas and oil industry, urban forestry, public agencies, colleges, transportation, right-of-way agent associations, and many more. The committee is excited about engaging with new and influential groups through interviews. Highlights from the interviews will be published in future issues of the *Newsline*.

The committee remains committed to taking steps to facilitate engagement within the UAA membership and the broader vegetation management community. If you are passionate about engagement, exchanging information, educating per groups, and interested in helping the UAA expand its reach, we are always looking for passionate, enthusiastic participants. Please reach out regarding your interest and feel free to contact any of us on the Outreach Committee with your opinions or ideas. 🌲



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MAY 1-22

## ANNUAL AWARD NOMINATIONS

The UAA annually recognizes select individuals who have made significant contributions to the field of utility arboriculture. Current UAA Members have the opportunity to nominate fellow members who are active and in good standing for the following awards:

**Will Nutter Silver Shield  
Utility Arborist  
Education Award  
Lifetime Achievement  
Rising Star**

Watch for more information in your email, UAA member portal, Association Happenings, and social media!

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scholarship fund and  
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the bidding!**



# An Opportunity for Long-Term Safety

## Using a Data-Driven Approach to Identify Gaps and Successes in Safety Systems

By Rigo Ortiz, Sr. Manager—Vegetation Management Construction Management, PG&E, and James Beery, Sr., Safety Lead, Wright Tree Service

In the challenging realm of arboriculture work conducted for a utility company, Pacific Gas & Electric (PG&E), in collaboration with Wright Tree Service (WTS) and its other contractors, has embarked on a journey to use a data-driven approach to change the safety game forever. They all believe that working in alignment is the future for both the utilities and tree service contractors, and it's about so much more than building a good working relationship.

Throughout history, tree work has been recognized as an inherently perilous occupation. The risks associated with this line of work are deeply rooted in the variability, uncertainty, complexity, and ambiguous nature of the job itself. The work involves management of a multitude of species of trees and trees in varying states of health and stability needed for the work, often at considerable heights and in restricted areas of access. A sad record of property damage, fires, injuries, and fatalities is part of our industry's identity.

Low and high energy each pose a unique risk. Many hazards arise from working with heavy machinery, exposure to unpredictable and ever-changing environmental conditions, as well as inherently dangerous equipment and tools.

An increasing concern for both utilities and contractors is the rapid expansion of the workforce to meet the expanded needs of utilities. As workers move in and out of contracts and utility footprints, they bring different levels of knowledge, training, education, experience, skills, ability, and habits.

A contractor like WTS is challenged with working inside the budget and timelines of the utility while carving out the necessary time to train, educate, and assess. Even when the challenge is taken on with vigor, the work it takes to influence significant and lasting change is daunting.

Consequently, tree work professionals on both sides of the contract must find the means to maximize the limited resource of time to get to the heart of the matter: skill development and error reduction. For PG&E and WTS, a data-driven approach is wildly successful as both a starting point and a continued driver. By leveraging data collected from various sources including customer usage patterns, infrastructure performance, and environmental factors, PG&E and contractors can identify larger trends, forecast demand, and optimize resource allocation.

A data-driven approach enables PG&E

to effectively manage its operations, mitigate risks, and ensure reliable delivery of electricity and gas services to its customers. Tree work is a huge part of that. By conducting an in-depth analysis of the problem at hand, individuals and stakeholders can achieve a comprehensive understanding of both intricacies and root causes.

Thorough examination of these shared data points facilitates the development of a unified approach that fosters cooperation and coordination among all involved parties. By pooling expertise, resources, and perspectives, stakeholders can work toward establishing a shared vision and common goals, thus further enabling alignment. Such collaborative efforts not only enhance the effectiveness of problem-solving but also promote a sense of ownership and commitment among participants, ultimately leading to the successful resolution of issues. Training programs at the contractor level, proper use of personal protective equipment, and adherence to industry standards and regulations are just the starting point.

Both PG&E and WTS, with other contractors as well, routinely use the following methods in a collaborative and aligned program.

**1. Skill Assessment Yard in Oroville, California**

Tree workers come to this multi-station skill assessment facility where their skills are evaluated using current industry standards and practices. Workers leave the assessment with a pass or fail and are informed of their assessed skill level. They leave with an understanding of their skill gaps and can focus their practice on those areas.

**2. Assessments by Contractor Safety Personnel**

Wright Tree Service has skills stations assembled in various yards, designed to mirror the assessments in Oroville. Wright has graduates of the Oroville assessments assigned in tandem with safety personnel to do follow up with workers under actual production conditions.

**3. Contractor Safety Quality Assurance Review**

The value of the Contractor Safety Quality Assurance Review (CSQAR) program is that it places WTS and the utility in a collaborative position to be completely transparent about gaps

and successes of safety programs. Pacific Gas & Electric and WTS identify gaps and opportunities and set goals to improve where needed and to celebrate success.

**4. Contractor Forums**

Contractor forums bring both parties together in a team environment, where issues are discussed and feedback is welcomed. It is a monthly learning team where PG&E and contractors continue to share gaps and successes. For example, PG&E has invited WTS to demonstrate the advances they have made in defining and documenting methods for storm calls where trees have fallen on the conductors or communications lines and have a tremendous amount of stored SIF level energies—and where OSHA laws prohibit tree workers from tying down the lines. Wright willingly shares these methods to all contractors at the forum and provides data to support them.

**5. Weekly Safety Calls**

Incidents and lessons learned are discussed during weekly safety calls. Trends by incident type and by error

type are shared, and contractors can then return to their workers and share and address the potential for similar incidents.

**6. Subject Matter Expert Task Force**

Wright Tree Service has joined several task forces with PG&E to tackle specific issues where it is difficult to establish a written procedure and to explain. Tree work policies and Safe Work Procedures (SWP) on both sides often contain error traps and ambiguity due to how difficult they are to write, which can lead to workers being confused and struggling to interpret and adapt on their own, often leading to errors.

Utilities and tree contractors working together is the future. As a team, both can gather, evaluate, and share data that serves each other's goals of keeping workers safe and reducing incidents across the board.

A data-driven approach provides a starting point for discussions, setting goals, and moving forward, and as a means to keep it going. Our shared vision, goal, and result will be a powerful drive towards an environment where everything and everyone can be safe. 🌱



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## Fact or Fiction: Distracted Driving Is a Problem

By Paul Hurysz, Department Manager—Safety Consulting Services, Davey Resource Group



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**M**ost of you reading this article would probably agree, at least in principle, that distracted driving is a problem. However, does that stop you from doing it? Most of you are also probably aware that thousands of people die every year in the U.S. at the hands of distracted drivers. As a matter of fact, according to the National Highway Traffic Safety Administration (NHTSA), 8% of fatal crashes, 14% of injury crashes, and 13% of all police-reported motor vehicle traffic crashes in 2021 were reported as *distraction-affected* crashes. What should those percentages mean to you? In simpler terms, there were 3,522 people killed—with an additional 362,415 people injured—as a result of traffic crashes that involved one or more distracted drivers in 2021.

The bottom line: the chances are high that you know someone who has been affected by a distracted driver event in the last five years. Davey Resource Group knows all too well the pain

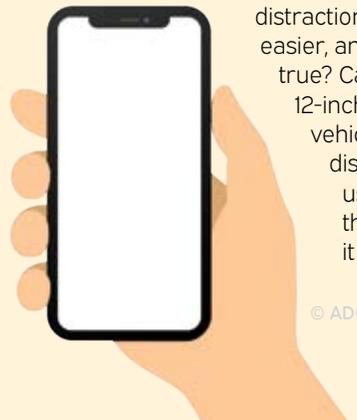
associated with losing a coworker due to a distracted driving event. As you can imagine, the impact of such an event ripples well beyond the victim to friends, family, as well as coworkers. With that said, 2021 was not an anomaly. As you can see in Table 1 (see page 20), the NHTSA data shows us that this problem/trend isn't going away any time soon.

So why on earth do we allow ourselves and encourage other drivers to drive with distractions if we know it is the wrong thing to do? Furthermore, why is it so hard to understand that we don't have the capacity to multitask at a high enough level to keep ourselves and others out of harm's way while driving? It may not register in our brains as a "distraction," but most, if not all of us, do it because we feel like it is part of our job or we can manage that risk.

Let's be honest with each other for a moment—how many of you take a good look at a right-of-way crossing

or at ROW conditions while driving on the freeway at 70+ mph? In some organizations, multitasking on the job is almost like a badge of honor to be able to do two or more things at once (driving and observing ROW conditions at the same time).

Could it also be that maybe the X, Y, and Z generations have all been trained (intentionally or unintentionally) to believe that high-level performers are good, if not great, if they are multitaskers? It seems like over the last few decades, as technology has changed our world (e.g., smartphones, the need for instant communication via texting, social media, emails), we have tricked ourselves into believing that those advances/distractions make multitasking easier, and even safer. Is that true? Can smartphones and 12-inch screens on our vehicle dashboards (a.k.a. distractions) really help us to drive safer? No, they cannot. But isn't it interesting that our



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GeoSpatial Innovations, Inc.

## GSI Forester: Enhancing VM for Safer Utilities

**G**SI Forester is a comprehensive software platform designed to manage, monitor, and track all UVM workflows with remarkable ease. Whether you're a large utility company or a smaller cooperative, Forester streamlines your VM workflows.

GSI Forester allows IOUs, muni's, and co-ops the opportunity to elevate their safety efforts with many features utilized within the Forester web-based portal and the mobile field application. Office administrators, utility foresters, and contracted vendors are using Forester to get real-time insights. Having live risk assessment information with regards to vegetation risks near powerlines presents the crews the information needed to ensure the proper preparation

for equipment and PPE needed on the worksites.

Electric utilities are planning their VM efforts within GSI Forester and providing the field crews with vital information to ensure the safety of the crews and electric customers. We are informing crews of dangers, letting them plan accordingly and reduce their risks even before arriving on-site.

GSI Forester, developed in partnership with utility vegetation managers, helps utilities maximize both the reliability of their network and work towards ensuring the safety for both employees and electric customers. Forester supports the efforts of a utility to protect any sensitive areas as well as provide your field crews detailed work plans to



further understand risks associated with UVM.

GSI is a private, woman-owned company providing software and services to electric and natural gas companies across North America. Learn more about GSI Forester at [www.gsiforester.com](http://www.gsiforester.com) and talk with our team to understand how Forester can further improve your reliability and environmental stewardship. 🌱

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- Nitrogen fixing plant



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**Table 1. Fatal Traffic Crashes, Drivers Involved in Fatal Crashes, and Fatalities in Distraction-Affected Crashes, and Cell Phone Use by Distracted Drivers, 2017-2021**

Year	Total	Distraction-Affected (D-A)		Cell Phone in Use	
		Number	Percentage of Total	Number	Percentage of D-A
<b>Fatal Traffic Crashes</b>					
2017	34,560	3,003	9%	418	14%
2018	33,919	2,645	8%	356	13%
2019	33,487	2,872	9%	395	14%
2020	35,935	2,889	8%	355	12%
2021	39,508	3,211	8%	377	12%
<b>Drivers Involved in Fatal Crashes</b>					
2017	52,752	3,065	6%	421	14%
2018	51,905	2,704	5%	361	13%
2019	51,302	2,979	6%	399	13%
2020	54,165	2,977	5%	357	12%
2021	60,904	3,346	5%	382	11%
<b>Fatalities</b>					
2017	37,473	3,242	9%	450	14%
2018	36,835	2,858	8%	393	14%
2019	36,355	3,119	9%	430	14%
2020	39,007	3,154	8%	397	13%
2021	42,939	3,522	8%	410	12%

Source: National Center for Statistics and Analysis (May 2023). National Highway Traffic Safety Administration.



brains are constantly looking for opportunities to create shortcuts all in the name of “efficiency and performance improvements”?

The truth of the matter is that “Multitasking is a myth,” according to Dr. Sahar Yousef, a cognitive neuroscientist at UC Berkeley.

“In reality, it’s rapidly switching from one task to another, and then back again. And every time you make that switch, you pay a ‘tax’ on both your time and your energy. For that reason, it’s almost always more efficient to monotask: focus on one thing and move on when you’re done, so you don’t pay unnecessary switching taxes.”

OK, so can we all reasonably agree that distracted driving is a real problem with real and potentially catastrophic consequences, and not just a risk we are conditioned to accept? The next natural question then is *What can we do about this problem to fix it?* Is the answer to develop and engineer more controls into the automobile system, giving us more capacity to fail safely (e.g., seat belts, lane-detection warning systems, crumple zones, airbags, etc.)? Maybe, however, automobile engineers can’t force us to drive safer; safety is a conscious choice we must make. So, wouldn’t it be better for all involved to just eliminate the risk of

distractions altogether and minimize the consequences associated with that risk?

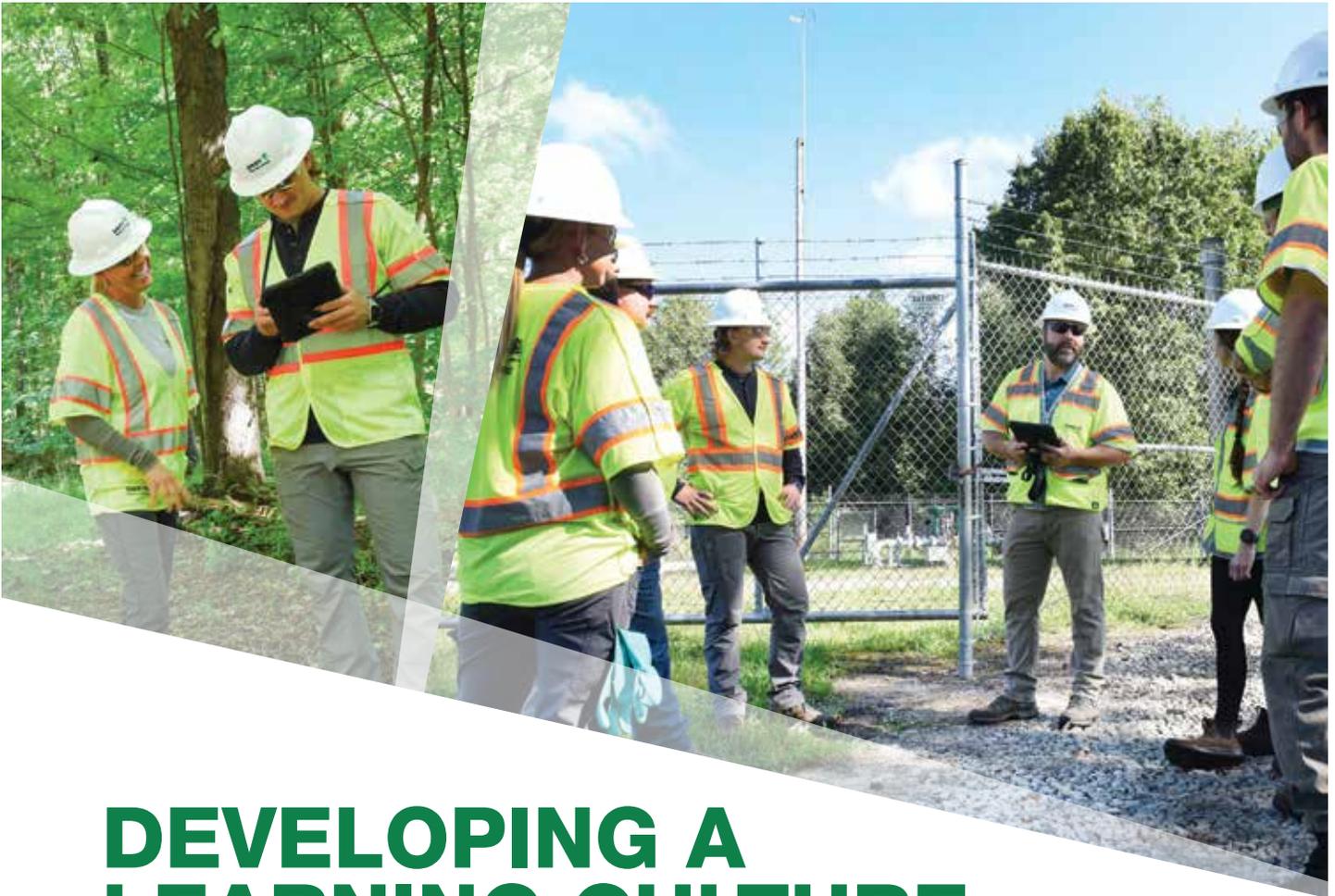
There are things we can all do that won’t cost a fortune or involve cushioning someone head to toe in Bubble Wrap to keep them safe. For example, phones and distraction management services have settings and functionality that mitigate distractions by blocking notifications while your vehicle is in motion. Additionally, software services have the technical capability to sense what you’re doing to limit what applications can or can’t be used on your phone based on your administrative control policies. For example, when you’re in a specific environment (i.e., car, office, warehouse, etc.) during working hours, only designated phone apps would be functional. Furthermore, there are also services that give you the ability to provide weekly, monthly, or quarterly driver feedback reports based on any number of different measures, such as hard braking, excessive speed, and miles driven. Feedback of this type can certainly modify behavior, especially if you “gamify” or incentivize that behavior or performance with other team members.

Then again, if that is too intrusive for your liking, consider a job briefing with your coworkers or family members before you leave for your destination. They can hold your phone or give you feedback on things that may be distracting

you as a driver as they occur. So, if they see you distracted (e.g., reaching for your ringing phone, looking at an overgrown ROW, or just adjusting the temperature or radio in the vehicle), you can give them permission to relieve you of the responsibility as the driver or urge you to refocus on your task of driving.

In conclusion, take the time to share with others how you are making a difference in mitigating driving distraction risks at work and at home. Feel free to reach out to me on LinkedIn, the UAA Safety Committee, or drop me a note at [paul.hurysz@davey.com](mailto:paul.hurysz@davey.com). I’d be happy to share with you what we in the industry are doing to improve the driving experience by mitigating distractions. Lastly, always, *always* give thanks for any feedback you receive, even if you disagree with it. The gratitude that you share with your teammates and family members for their feedback will help ensure that you will continue to develop a culture of learning within your operation for generations to come. 🙏





# DEVELOPING A LEARNING CULTURE

DRG believes that a Human and Organizational Performance (HOP) philosophy creates a new pathway to safety and organizational performance.

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Mark (right) with Bob Richens receiving his Silver Shield award



## Remembering Mark Kimbrough: A Legacy of Safety and Dedication in Utility Arboriculture

By Amy Townsend, President and Chief Operating Officer, The Townsend Company, LLC, and Renée Bissett, UAA Newline Chair

**M**ark Kimbrough, Vice President of Safety and Training at The Townsend Company, LLC, and co-chair of the Utility Arborist Association Safety Committee, passed away on April 3, 2024. He leaves behind a profound legacy in the utility vegetation management and tree care industry.

With deep roots in the industry, Mark's journey began alongside his father, who worked for Townsend. Growing up immersed in the world of utility arboriculture, Mark's career path was set. In 1998, he joined Townsend in a leadership role and became increasingly focused on safety initiatives.

Tragically, Mark's perspective on safety was forever changed in 1998 when the company experienced a fatal accident. Witnessing the devastating impact on the victim's family, Mark made it his mission to prioritize safety within the company and the industry at large. He spearheaded safety initiatives and presentations, earning him recognition as a safety leader.

Mark's dedication extended to his involvement with the

UAA, where he played a pivotal role in advancing safety initiatives. He emphasized the importance of field personnel involvement in safety summits, encouraging collaboration and ownership of best practices. He was the 2019 recipient of the UAA Silver Shield Safety Award (now the Will Nutter Silver Shield) and was a member of the organization's Safety Committee.

Under Mark's guidance, UAA Safety Summits evolved to better serve the needs of utility arborists, transitioning to outdoor settings for increased engagement. Despite challenges, Mark remained committed to fostering a culture of safety, advocating for volunteer involvement in safety committees to drive industry-wide improvements.

Mark Kimbrough's legacy serves as a reminder of the critical importance of safety in utility arboriculture. His contributions have left an indelible mark on the industry, inspiring others to prioritize safety and professionalism.

Mark is survived by his wife, Misty; his children Josh, Andrew, and Keri; and his grandchildren. 🌲



Mark (right) with Dan Mekkes at Trees & Utilities (both Will Nutter Silver Shield recipients).



Mark working the Townsend live line at a UAA Safety Summit in Indiana.



Rest in Peace, Mark.  
We'll Take it From Here.

**Mark Kimbrough**  
1962-2024

**TOWNSEND**





As people of the twenty-first century, we often look to technology as a silver-bullet solution to our most persistent challenges. At first glance, this seems to make sense. Technology is the space of new solutions, and because so many of humanity's stubborn problems have always existed, it seems logical to think maybe we can solve an old problem with a new gadget. While technology will continue to serve an important role in health and safety, it cannot make up for an absence of the basic elements. As with any process of improvement, it may be tempting to implement an easy shortcut, but it's always better to ensure that the fundamentals have been mastered. In an effort to get back to safety basics, let's take a look at some common field hazards and prevention methods in the utility vegetation management industry.

# Getting Back to Safety Basics

By Bill Spencer, Safety Manager, CN Utility Consulting

## Slips, Trips, and Falls

Slips, trips, and falls continue to be one of the largest contributors to serious injury in utility arboriculture. Every fall incident is a high-risk situation, even for workers who do not perform work at heights. For utility foresters performing ground-based inspections, one of the primary root causes of fall incidents can involve multitasking while performing tree risk assessments. A utility forester spends much of their time looking upward—looking at tree branch unions and attachments, potential defects, and inspecting utility hardware. As a result, many fall incidents occur because the person's feet are moving while their attention is focused on the tree canopy or while looking at a tablet or circuit map. It's a bad habit for any worker to move their feet while their eyes are looking away from the walking-working surface, but it can easily develop due to the perceived benefit of saving time. When performing any inspection or tree risk assessment, one should keep their body position static with their feet firmly planted, and only take steps or reposition when their attention is on the walking-working surface and the proximal workspace around them.

Another common contributing factor to fall incidents can involve workers donning improper footwear for the assigned duties and associated hazards of the job. While OSHA 1910.132(h)(2) does not require employers to provide employees with non-specialty safety-toe protective footwear under most circumstances, this can create challenges when it comes to verifying that every employee is wearing the appropriate footwear for their assigned task. With so many footwear brands, styles, and choices, it's not uncommon for a worker to purchase footwear that might look like work boots but, in fact, does not provide adequate protection.

Footwear should conform to American Society for Testing and Materials (ASTM) F2413-18 standards for protective (safety) toe cap footwear, according to the Occupational Safety and Health Administration as of February 2024. ASTM F2413-18 covers the minimum design, performance, testing, and classification requirements and prescribes fit,



function, and performance criteria for footwear designed to be worn to provide protection against a variety of workplace hazards.

Remember to look for ASTM F2413-18 markings on the boot label when selecting footwear to ensure it will provide the appropriate protection from the hazards to which the wearer will potentially be exposed. Other factors to consider include boot tread, which should be adequate and designed for outdoor use, and boot uppers, which should extend at least above the wearer's ankle to provide additional support. Remember, footwear should be comfortable and fit snugly, but not too tightly. Developing a company clothing program that includes a selection of work boots is a good practice to help guarantee workers have access to proper safety footwear.

## Poisonous Plants

While avoiding poisonous plants altogether is a best practice, it can be nearly impossible in certain stretches of rights-of-way. Urushiol-induced dermatitis, resulting from contact with poison oak/ivy/sumac, is a regular occurrence in vegetation management, and not much has changed over the years when it comes to prevention. It tends to be a literal "gap in the armor" that causes exposure to these plants, often when an individual opts not to use the appropriate barrier creams or selects clothing that does not provide adequate coverage of the skin. Neglecting to quickly wash off the urushiol oil when one encounters it is another common cause. When urushiol comes into contact with a person's skin, a "clock" starts ticking. Every person's clock is a little different, but the goal is the same: get the urushiol oil off your skin as soon as possible to prevent a rash from developing. Remember that urushiol is a sticky oil and will wash off much better in the presence of a soap or cleanser and something abrasive, like a washcloth, to help break up the oil. There are many different soaps and cleansers for removing urushiol, but good old-fashioned dish soap and cold water can easily get the job done.



### Insect Hazards

Mosquitos, ticks, and other insects are more than just a nuisance, they can also be carriers of dangerous diseases. As with poisonous plants, avoiding these critters in the field can be difficult and it's important to utilize both physical and chemical barriers to keep these pests at bay. Select clothing that covers up the skin and is made from materials that will provide a good bite/sting barrier. Remember that bee and wasp nests are not always easily seen when working in the ROW and it's critical to look and listen for their activity, because it's often the sound of a buzzing hive that alerts a worker to its presence.

Ticks are especially hazardous because they can transmit diseases to the bite victim such as anaplasmosis, babesiosis, Rocky Mountain spotted fever, and Lyme disease. The Centers for Disease Control and Prevention caution that the longer a tick is attached to the victim, the more likely a transmission event occurs. For this reason, it's vital to perform periodic tick checks throughout the day and do a thorough full-body inspection at the end of your workday to see if any ticks are still attached. If you do find a tick on you that has been attached for an unknown



length of time, you can save the tick and send it in to be tested to determine if it's a carrier of disease. When it comes to insect repellants, be sure to do your research and select a repellant that you are comfortable using and one that controls for the insects you're likely to encounter. Most repellants will require periodic reapplication throughout the workday and it's important to understand the strength, mode of action, and potential harmful effects of any insect repellant you may decide to use.

### The Mind Is What Matters

Regardless of the tasks and hazards associated with any work, the most important safety tool on any jobsite is the mind of the workers involved. There's no substitute for a positive attitude, good situational awareness, and reliable communication between crew members. These qualities cannot be replaced by gadgetry, and they are as important to health and safety as they are work quality and efficiency. A successful safety culture means all workers understand their roles, responsibilities, and expectations and are encouraged to communicate openly about safety concerns without fear of retaliation. Remember, when it comes to safety, workers are never the problem—workers are the key to solving the problem! †

**REGISTRATION IS OPEN!**

# TREES & UTILITIES

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Krystee Van Den Bosch



## 2024 Richard E. Abbott Safety Scholarship Recipient: Krystee Van Den Bosch

There's nothing more important than sending people home safe at the end of each day. One way we demonstrate our commitment to safety and the development of our employees is showcased through the Richard E. Abbott Safety Scholarship: a \$1,000 award that is dedicated to ACRT Services' founder. The scholarship is granted annually to an employee who is seeking to further their career development and commitment to safety.

ACRT Consulting Utility Forester Krystee Van Den Bosch strives to put her team first. She understands the risks and challenges faced when working remotely in the wilderness, leading her to apply for funding to put towards Wilderness First Aid Responders training. Van Den Bosch plans to bring what she learns from the training back to her local team in Northern Florida and host safety tailboard sessions to share highlights—especially the pertinent information that relates to their day-to-day roles as foresters.

"I appreciate being selected as a scholarship recipient, and respect the Abbott family and their contributions to the industry," said Van Den Bosch.

The Manitoba, Canada native noted that she has worked in several different industries, from horticulture to agriculture, and welcomes the heightened focus on health and safety within ACRT and the arboriculture industry. Van Den Bosch, who also serves as an Area Safety Representative (ASR), explained, "The perspectives and engagement demonstrated by all of the other ASRs inspire me monthly, and I am able to bring a sense of enthusiasm and energy back to the team I work with."

ACRT Operations Manager Lee Romanello also shared that Van Den Bosch does "a great job reinforcing the importance of our culture of safety to other employees while participating and engaging with other employees."

Learn more about ACRT and our safety philosophy at [acrt.com](http://acrt.com).

# THE LEADING EVENT FOR ALL THINGS URBAN ARBORICULTURE

Join us for engaging workshops and multi-track educational sessions. This year, we're welcoming keynote speaker, former NFL cheerleader, and motivational speaker Shannon McKain as she gives you the tools to gain yardage in the game of life and harness your full potential.

## WHAT'S HAPPENING THIS YEAR?

In addition to networking opportunities and trade shows, get to know the latest in: utility arboriculture research, best management practices, environmental concerns, vegetation management trends, and continuing education credits.

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# Women in Safety: Thinking Differently, Acting Diversely,

By Alaina Ziegler, Director of Safety and Human Performance, Lewis Services



Alaina Ziegler

**Imagine this:** Steve Harvey—America’s gregarious game show host, comedian, and author—has been asked to serve as a guest speaker at the 2024 Trees & Utilities Conference in Fort Worth, Texas. To kick things off on a fun note, Harvey calls two companies up to the stage to play a quick round of *Family Feud*. After some good-natured tree puns that were “oak-kay,” Harvey poses the following question: “We asked 100 people, what comes to

mind when you think of safety?”

Both companies immediately hit their buzzers and excitedly rattle off answers like hard hats, harnesses, drop zones, and all-stops, while audience members eagerly add 360 Walkaround, pre-job surveys, flaggers, and gear checks. Harvey’s eyes grow wide as he slowly turns to face the enthusiastic crowd and teasingly quips, “Not the answers I would get from MOST people... You folks sure have an interesting way of looking at things!”

## Thinking Differently

In this fictitious yet fun scenario, Harvey seems to suggest that people in the utility vegetation management sector think about safety differently than the general population, and he would be correct! Thinking *differently* (and perhaps more importantly, thinking *diversely*) is necessary for creating an environment that fosters innovation, collaboration, and inclusivity—all critical conditions for advancements in safety.

Today’s evolving UVM workforce is becoming increasingly diverse in its cultural, racial, and gender makeup. At my company Lewis Services, a 100% employee-owned company with 60% minority workforce, greater diversity at all levels of the company has positively impacted how we view everything from communications to training, from policies to processes. Lewis and our vegetation management colleagues are continuously investing in diversity, equity, and inclusion (DE&I) programs because it’s the right thing to do, the smart thing to do, and yes, the “safety” thing to do.

As a female professional who has dedicated my entire career to safety in “traditionally male” sectors, it is gratifying to see more women pursuing careers and leadership positions in industries such as UVM, construction, manufacturing, auto tech, and skilled trades. Organizations like the Utility Arborist Association are helping to shepherd this movement by shining a light on women in UVM through events like the Women in Vegetation Management Workshop at the annual Trees & Utilities Conference and a dedicated “Women in VM” column in

every issue of the *Newsline*. It’s a privilege for me to contribute this article to those efforts.

## Acting Diversely

The need for more women in predominantly male sectors is not exclusive to the VM industry. According to a report by the Bureau of Labor Statistics in 2023, less than 30% of the manufacturing workforce is represented by women, and that statistic falls to just 11% in the construction sector. The percentage of women in UVM hovers around 22%. With chronic labor shortages in these fields, accelerated recruitment of women candidates is not only necessary from an operations standpoint but critical from a diversity standpoint.

Heather Steranka, Lewis’ Director of Diversity, Equity, & Inclusion, points to research that further illustrates how diverse leadership provides many benefits for businesses. “McKinsey & Company have compiled and analyzed compelling data over several years that shows, without a doubt, companies with higher gender, racial, and ethnic diversity on their executive teams are more than 25% more likely to have above-average profitability than companies that don’t.” And while many companies see the value of developing a diverse workforce to build culture and impact, they may not be as aware of the safety benefits connected to diversity—benefits that are amplified with women at the table.

In an *EHS Today* article (Valentic, 2019), the American Society of Safety Professionals (ASSP) CEO Jennifer McNelly stated, “Diversifying the safety profession is not about meeting quotas. It’s really about safety.” She continued, “We want to create work environments that ensure that all employees are safe. If women—or any other group—don’t have a voice at the table, then their perspectives are lost, along with opportunities to protect the workforce at large.”

From a historical perspective, women have been behind some



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## Leading Decisively

of the most transformative safety standards that continue to impact our world today. In the article “Women’s Achievements in Safety” (ASSP, 2019), the American Society of Safety Professionals pays homage to women who have improved safety through inventions such as the first railroad crossing gates (Mary Riggin) and a maritime navigation system using pyrotechnics (Martha Costen). The article recognizes Rebecca Lukens, who greatly improved safety conditions at the Lukens Steel Company iron and steel mill that she owned and managed until 1847, and Emily Warren, the chief engineer during construction of the Brooklyn Bridge from 1872–1883.

### Leading Decisively

The trails blazed by these enterprising women are now championed by a new generation of women in safety. Today’s women are advancing safety protocols in medicine, transportation, government, and even outer space. Women like Elizabeth Dole, who successfully implemented the mandatory third brake light on all passenger cars while serving as the first female U.S. Secretary of Transportation, and Hilda Solis, the first Hispanic woman to serve as U.S. Secretary of Labor who lobbied for stricter safety regulations and penalties for those who violated wage and hour regulations (ASSP, 2019).

As Director of Safety and Human Performance at Lewis, I am excited about the advancements in safety that are taking place in our company and across the sector. A balanced blend of compliance and human performance (HP) shifts us from a blame-based culture to a learning organization that drives continuous improvement. As a female safety leader, I see significant benefits to this holistic approach to safety and firmly believe that compliance and HP have a place in every department, not just in the field. In the same way that we implement HP tools on jobsites to mitigate risks, we have the opportunity to leverage the tenets of HP to reduce financial, compliance, and technological risk across the entire organization.

Together, women in utilities are improving and innovating company-wide safety narratives that adopt a comprehensive view of safety, integrate the principles of HP and DE&I, and provide a safer space for all. With women holding leadership positions across the sector, the horizon is big and bright for women in UVM and safety.

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Valentic, S., “Women in Safety: How to Attract, Retain, and Develop a Diverse Workforce,” *EHS Today*, September 27, 2019. <https://www.ehstoday.com/safety-leadership/article/21920367/women-in-safety-how-to-attract-retain-and-develop-a-diverse-workforce>.  
“Women’s Achievements in Safety,” *American Society of Safety Professionals (ASSP)*, March 8, 2019. <https://www.assp.org/news-and-articles/women’s-achievements-in-safety>. †

## Leadership in Action—Leaders at Every Level

Lewis is a company of leaders—a place where bold, diverse, experienced leadership is found across the entire company. It’s engrained in our culture. It’s tangible. And it’s unique in the industry.

This year, Lewis is taking leadership to the next level with **Leadership in Action**, a company-wide initiative that is moving the needle on leadership and uplifting leaders at every level. Throughout the year, we will be highlighting Lewis’ **seven leadership principles** and showcasing them through special leadership profiles.



Jeff Kyles, Lewis VP of Finance

At Lewis, “Must be present to win” is a Leadership in Action principle we strive to put into practice every day. What does this principle mean? For Jeff Kyles, Vice President of Finance, it’s all about purposeful presence. Kyles’ commitment to being fully present is rooted in his upbringing and evident in his professional and personal life.

As a finance executive, Kyles advocates for “the human side of finance” and telling the story behind the numbers so that information is accessible, understandable, and relatable. As a leader, Kyles actively engages his team in problem-solving to encourage perspective. He explained, “If we don’t have open dialogue, we lose diversity of thought, diversity of opinion, and the ability to make well-informed decisions.”

We recently sat down with Kyles to discuss the “Must be present to win” principle and why it’s important in all areas of his life. As a former college football player, professional football official, and successful financial executive with more than 25 years of business leadership experience, Kyles has successfully led teams—on and off the field—with a compelling combination of teamwork, collaboration, and a commitment to purposeful presence.

Check out the full interview with Jeff Kyles and learn about Lewis’ seven leadership principles at [www.lewisservices.com/leaders-in-action-page](http://www.lewisservices.com/leaders-in-action-page). †

# Deploying Satellite Data to Manage Vegetation Risk

Liberty Utilities Launched a Pilot Project to Identify High-Risk Vegetation near Powerlines with Satellite Imagery

*Steep embankments can pose a challenge for height measurement.*

By Jason Grossman, Vegetation Control Coordinator, Liberty Utilities, and Nick Ferguson, Vice President Infrastructure, LiveEO

This article was written specifically for and originally published in *T&D World's* Vegetation Management supplement, [www.tdworld.com](http://www.tdworld.com).

On a crisp, clear day in November 2020, a team gathered in Joplin, Missouri, to confirm what everybody hoped: that by using specially trained artificial intelligence to analyze satellite imagery, it would be possible to overcome the problems of scale confronting every utility vegetation manager: too many trees located over too many miles too far away.

At that point in time, LiveEO had already done many field validations. Its Vegetation Management Insights program locates and measures

individual trees, and its vitality monitoring module assesses tree health on three continents. During this project, however, the company was testing a new species identification technology to track seasonal changes in foliage and identify the genus. While this AI technology had yielded positive results in Europe, the data-hungry algorithm required extensive training when applied to a new environment. Rural Missouri, with its dense, high-variety forests, was a new playground.

For Liberty, the pilot represented the company's second foray into the world of satellite imagery. The first satellite project had failed to meet the needs of its already well-established integrated vegetation management program, but the utility was determined to give it another shot.

## Launching the Pilot Project

By using AI to analyze satellite imagery, the utility could infuse technological innovation into its vegetation management program. Liberty aimed to improve processes and gain efficiencies by taking a quick, reliable snapshot of vegetation conditions along the entire grid. In addition, the utility was also searching for a tool capable of prioritizing risks and generating work orders to tackle them.

At the start of the pilot project, the team traveled to several areas of interest to inspect specific locations and validate the assessments made by the company's Vegetation Management Insights solution. For example, they checked the information available in the app against what is known as the "ground truth," or the reality on the ground.

The inspections zoned in on three key factors: tree location and height, essential to measuring vegetation-conductor distance and fall-in or grow-in potential; tree vitality, which singles out potential fall-ins most likely to fail; and tree species, a determining factor in growth rate. The species is also a critical piece of work order information in the event of a cutback.

During the project, the utility's employees tested the mobile app in the field. For added reassurance, the app includes a feedback function by default, not just for validations, but also

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Screen captures from the app in the actual area of interest show four vegetation layers in LiveEO's Vegetation Management Insights program.

to allow contractors in the field to flag inaccuracies or errors. As the mechanism by which AIs improve themselves, feedback is critical to machine learning. Making it as easy as possible for users to provide feedback to the algorithms ensures the machine analysis gets increasingly more accurate every time it is used.

### Evaluating Trees in Decline

Height and location proved highly reliable for the most part. A few miscalculations occurred near steep embankments, but they were quickly rectified. The most challenging aspect was getting everyone to agree on the height of the trees. To provide guidance, an experienced field validator volunteered to step in as a human yardstick.

Traveling across the service territory, the team began evaluating trees flagged by the app as “in decline.” In several cases, the trees’ low vitality was obvious. These trees clearly needed some attention to eliminate the risk of an outage, and even an inexperienced ground patrol would have spotted them straight away.

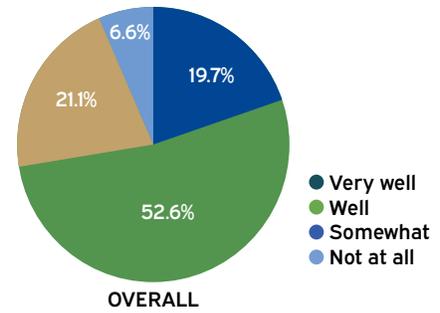
This was not the case with all the trees in decline. With a satellite resolution of 50 cm, even minor limb dieback showed up. The team required a more in-depth visual inspection to confirm the vitality decrease picked up by the AI. Even so, it was beneficial to highlight these declines before the process began. The accuracy of the plant vitality and change detection highlighted changes that weren't readily identifiable with the naked eye.

While walking away from the ailing tree, it occurred to the team that their vision of the environment was almost magically augmented, allowing them to see things that human sight alone could not. As that first day wrapped up and they made their way back to their vehicles, they reviewed the events of the day.

They may not have achieved perfect results, but they targeted areas for improvement. Because the model had performed so well on species it recognized from previous projects, it suggested it was a matter of calibration and training. LiveEO’s project manager defined the steps to improve the AI’s training on dense/high-variety woodlands like in Joplin, Missouri. For a start, they knew they had to double the length of their local species list.

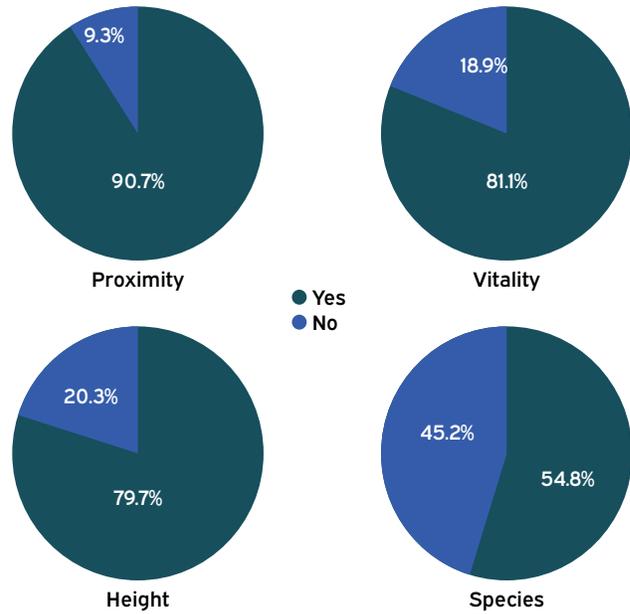
Meanwhile, the team from Liberty talked numbers. Would the day’s results hold up their projections? With the time and money they’d save cutting overflights, how many more of those critical fall risks could they get to—all of them? It felt like the conversation was only starting.

Over the following months and a series of reruns, species identification accuracy improved in large steps. Seeing how fast the AI technology evolved and improved felt more exciting than the high accuracy the established modules had displayed. This was no regular tool Liberty was adding to its tool kit. This tool was self-improving, and it was a fast learner too.

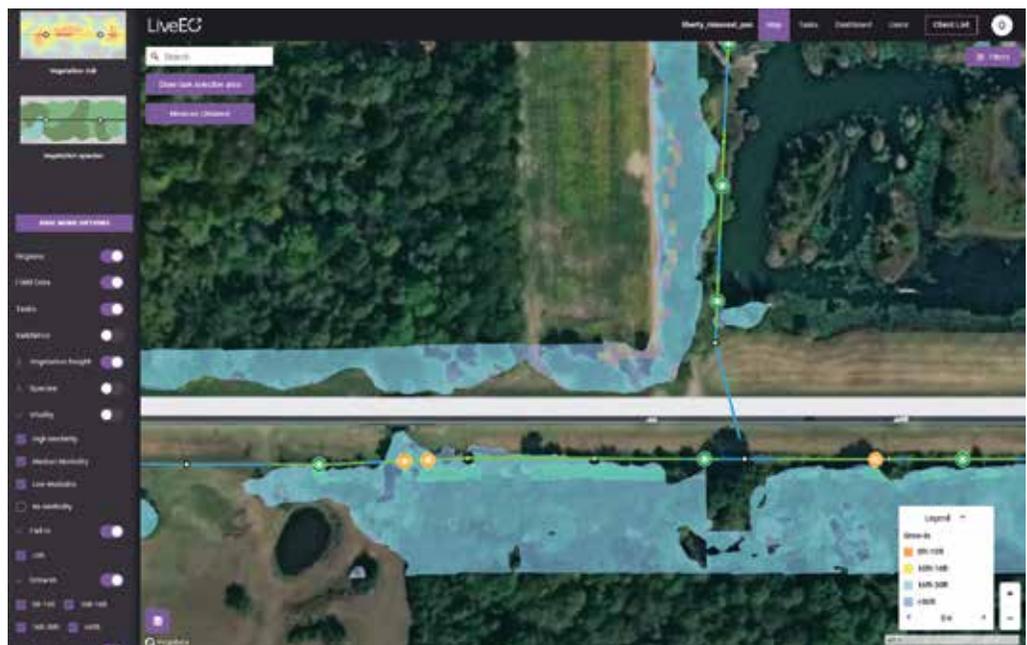


OVERALL

### Did the situation on the ground match the satellite analysis?



This shows the results of Liberty’s 2022 LiveEO pilot project and the ground truth validation.



Risk analysis is performed on Liberty’s distribution lines in LiveEO’s vegetation management software.



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Missouri's forests feature high tree density and species variety.

**About the Authors**

**Jason Grossman** ([jason.grossman@libertyutilities.net](mailto:jason.grossman@libertyutilities.net)) is the vegetation control coordinator for transmission for Liberty. He started working in utility forestry in 2006 as a contractor with Environmental Consultants, Inc. and joined Empire District Electric in 2008 as the distribution coordinator. Grossman earned his degree in agricultural science and natural resource management from Oklahoma State University. He is a founding member of the City of Joplin Tree Board, for which he served as chairman from 2009–2013.

**Nick Ferguson** ([nick.ferguson@live-eo.com](mailto:nick.ferguson@live-eo.com)) is vice president infrastructure at LiveEO GmbH, a company specializing in using AI to analyze data from earth observation satellites. He is also the co-host of the CEU-accredited *UVM Podcast* which won the UAA Education Award in 2022. With a bachelor's and MBA degree, he has an academic background and interest in the application of innovative spatial technologies to generate value for electrical utilities. He has worked alongside utilities with global exposure to best practices in the United States, Canada, Australia, the U.K., the Middle East, Africa, and India. 🌱



Left to right: Larin McCulley, Tom Waddington, Jason Grossman, and Todd Lushinsky on-site during the pilot project

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## 2023 GRANT RECIPIENTS



**Jack Kimmel International Grant Program**  
**\$7,800**

**Dr. Petr Hedenec**

University  
Malaysia  
Terengganu

Light-side of the termites: Distance effect of termite nests on tree growth and pathogen resilience of tree species in Taman Botani at UMT.



**Bob Skiera Memorial Fund Building Bridges Initiative Grant Program**  
**\$29,040**

**JD Brown**  
University of Virginia

Valuing Retention of Mature Trees



**Ohio Chapter ISA Education Grant Program**  
**\$5,000**

**Benjamin Dolan**  
University of Findlay

Arcadia Arbor-Team



**Utility Arborist Research Fund Grant Program**  
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**Dr. Gregory Dahl**  
West Virginia University

Determining failure characteristics from distribution outage reports



**John Z. Duling Grant Program**  
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Our next grant application cycle begins on August 1, 2024. See website for details.

# Wired for Safety: Navigating Cybersecurity Risks in the Utility Industry

By Ron Gallimore, IT Cybersecurity Manager, ACRT Services

**S**afety and cybersecurity are closely linked, as both practices aim to protect assets and individuals from harm or threats, despite existing in different domains.

The significance of cybersecurity should be understood by all. It is required to maintain a reliable energy supply for American homes, businesses, and communities. The investment into cybersecurity is also crucial as it allows for the management of various cyber threats across energy systems—from generation to delivery, to ensure security and reliability.<sup>1</sup>

If you find yourself wondering *What classifies as a cyberattack?* the National Institutes of Standards and Technology (NIST)<sup>2</sup> provides clarity stating, “An attack, via cyberspace, targeting an enterprise’s use of cyberspace for the purpose of disrupting, disabling, destroying, or maliciously controlling a computing environment/infrastructure; or destroying the integrity of the data or stealing controlled information.”

## Threats to the Utility Industry

Utilities and other industry organizations are increasingly becoming targets of cyberattacks, putting their entire value chain at risk, including the following:

- **Generation**—Disruption of service and ransomware attacks against power plants and clean-energy generators
- **Transmission**—Large-scale disruption of power to customers through remotely disconnecting services
- **Distribution**—Disruption of substations that leads to regional loss of service and disruption of service to customers
- **Network**—Theft of customer information, fraud, and disruption of services

Naturally, utilities operate a geographically distributed infrastructure. For example, the average span of a top 25 U.S. power company includes 121 plants spread across 94,000 miles of distribution, making it difficult to maintain visibility across information technology (IT) and operational technology (OT) systems.

These organizations are also at risk of additional

susceptibilities due to geographic vulnerabilities in consumer-facing devices (either utility-owned or grid-connected) and organizational complexity as many utilities “rely on several different business units to refine, generate, transmit, and distribute energy and resources.”<sup>3</sup>

## What Steps Are Being Taken at the Government Level?

Earlier this year, the U.S. Department of Energy (DOE) announced \$45 million in funding for 16 projects across the nation to better protect the energy industry from cyberattacks. The selected projects intend to develop new cybersecurity tools and technologies designed to reduce cyber risks and strengthen the resilience of America’s energy systems—including the power grid, electric utilities, pipelines, and renewable energy generation sources.<sup>1</sup>

The DOE, in partnership with the Office of Cybersecurity, Energy Security, and Emergency Response (CESER) also announced up to \$70 million in funding, with opportunities ranging from \$500,000–\$5,000,000 to advance the next generation of innovations that will help strengthen the resilience of our energy systems.<sup>4</sup>

Funding like this is vital, as energy sector cybersecurity preparedness is one of the three key areas CESER’s cybersecurity program supports.<sup>3</sup> Energy sector cybersecurity preparedness includes addressing situational awareness, information sharing, and risk analyses. Due to the “highly dynamic technology and threat environment,” continuous assessments and sharing of information between the energy industry and government is crucial in determining threats and developing mitigation strategies promptly.

## What Role Will Artificial Intelligence Play in the Industry?

Artificial intelligence adoption around the world seems rapid, but within utilities and other industry organizations is proving to be laced with challenges and uncertainties. A report by the Boston Consulting Group predicts that through scaling-proven applications and technology, AI could potentially mitigate 5–10% of greenhouse gas emissions by 2030.<sup>5</sup>

Endeavor Business Media’s Vice President of Content–Energy



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Teresa Hansen explained in a *T&D World* op-ed how AI can aid in enhancing resilience against Black Sky hazards, facilitating the integration of intermittent renewable energy, optimizing grid balancing, and enhancing the efficiency of existing fossil-fueled plants. However, the adoption of AI will undoubtedly pose challenges and concerns—especially in terms of oversight and cybersecurity.<sup>6</sup>

### Taking Steps to Improve the Security of the Grid

While the utility industry is especially vulnerable to cyberattacks, these risks can be significantly reduced with certain steps, such as a three-pronged approach.<sup>3</sup>

#### 1. Strategic intelligence on threats and actors before attacks on the network

Companies must move beyond reactive measures and take a forward-looking approach to security that integrates the security function into critical decisions about corporate expansion and the accompanying increase in infrastructure and geographic complexity. In parallel, leaders must develop security-minded plans to address “known unknowns” as attackers continue to find and utilize new attack vectors.

#### 2. Programs to reduce geographic and operational gaps in awareness and communication, creating a culture of security

A high-functioning utility security apparatus should be aligned to ensure that the best minds across the enterprise—not just in security—are aware of threats and have robust processes to report potential vulnerabilities and emerging incidents. Furthermore, technical systems should provide security with a common operating picture of sites across geographies and business units to detect coordinated attack and reconnaissance campaigns.

#### 3. Industry-wide collaboration to address the increasing convergence of physical and virtual threats

Industry partnerships, as the eyes on the ground for leading-edge technologies (and corresponding

vulnerabilities) should engage in regular dialogue on how to secure the delicate ties between physical and virtual infrastructure, as well as IT and OT networks.

As a collective industry, we must take a proactive approach toward cyber threats facing our companies and networks. This might look like employing analytic teams to “monitor threats across the industry and region, including intelligence about technical vulnerabilities and the various factors (e.g., geopolitical, economic, legal) that shape the threat environment.”<sup>3</sup>

It is also recommended that utilities should begin with a holistic cybersecurity maturity assessment to evaluate their current cybersecurity maturity, benchmark capabilities against industry peers, and identify opportunities to build incremental capabilities.

Organizations that are taking the initiative to develop a strategic threat intelligence program should follow these steps:<sup>3</sup>

1. **Identify gaps and opportunities** based on the company's existing threat intelligence program to increase situational awareness across teams and identify areas where information sharing can be improved internally as well as externally with other utilities, vendors, and service providers.
2. **Define a robust threat intelligence program**, including identification of tactical, operational, and strategic threat intelligence topics, products, and artifacts and a corresponding cadence for release of each product.
3. **Conduct a detailed review** of enablers to the strategic threat intelligence program, including the threat intelligence team's operating model and knowledge-sharing capabilities.
4. **Train key threat intelligence stakeholders** on product development and information-sharing best practices.

### Powering a Secure and Resilient Future

As time goes on, cybersecurity will likely continue to be a critical concern for the utility industry. There will always be the potential for disruptions to essential services and infrastructures, but by remaining vigilant, educating stakeholders, and prioritizing

proactive risk management, our industry can mitigate the impact of cyber threats and ensure the reliable delivery of essential services to communities the communities we serve.

### About the Author

An IT security leader with over 25 years of experience, **Ron Gallimore** has tackled diverse IT challenges, from managing networks for large corporations to overseeing cybersecurity for thousands of employees across multiple locations. Currently the Manager of Cybersecurity at ACRT Services, he spearheads security initiatives for over 1,500 employees and a vast network infrastructure. His accomplishments include leading a successful Azure tenant migration, integrating new acquisitions into existing systems, and implementing advanced security solutions like multi-factor authentication and next-generation anti-malware solutions. Through training and simulated phishing attacks, he has successfully reduced failure rates from 35% to less than 2%.

Gallimore also possesses a strong foundation in IT infrastructure, having served as a network administrator and IT manager for various organizations. In these roles, he demonstrated his ability to manage complex server environments, deploy secure networks, and troubleshoot technical issues. Gallimore's numerous certifications include CISSP, Microsoft Azure Administrator, and Azure Security Engineer Associate. He also actively participates in forums in the IT security community, contributing his expertise. Beyond his professional pursuits, Gallimore volunteers his time with the local national park and as a locomotive engineer.

<sup>1</sup>T&D World Staff, "DOE Announces \$45M to Protect Americans from Cyber Threats," *T&D World*, February 27, 2024. <https://www.tdworld.com/smart-utility/grid-security/article/21283565/doe-announces-45m-to-protect-americans-from-cyber-threats>.

<sup>2</sup>Computer Security Resource Center, "Cyber Attack," Glossary, *National Institute of Standards and Technology*, n.d. [https://csrc.nist.gov/glossary/term/cyber\\_attack](https://csrc.nist.gov/glossary/term/cyber_attack).

<sup>3</sup>Bailey, T., A. Maruyama, and D. Wallace, "The Energy-Sector Threat: How to Address Cybersecurity Vulnerabilities," *McKinsey & Company*, November 3, 2020. <https://www.mckinsey.com/capabilities/risk-and-resilience/our-insights/the-energy-sector-threat-how-to-address-cybersecurity-vulnerabilities>.

<sup>4</sup>T&D World Staff, "DOE Announces \$70 Million Research Funding for Cyber and Physical Threats," *T&D World*, January 9, 2024. <https://www.tdworld.com/smart-utility/grid-security/article/21280398/doe-announces-70-million-research-funding-for-energy-sector-cyber-threats>.

<sup>5</sup>Dannouni, A., S.A. Deutscher, G. Dezzaz, A. Elman, A. Gawel, M. Hanna, A. Hyland, A. Kharij, H. Maher, D. Patterson, E. Jones, J. Rothenberg, H. Tber, M. Texier, and A. Ziat, "How AI Can Speed Climate Action," *BCG Global*, November 20, 2023. <https://www.bcg.com/publications/2023/how-ai-can-speedup-climate-action#:~:text=AI%20can%20also%20contribute%20to,climate%20education%2C%20and%20fundamental%20research>.

<sup>6</sup>Hansen, T., "My Top Three Predictions for 2024 Trends," *T&D World*, January 17, 2024. <https://www.tdworld.com/utility-business/article/21279256/top-three-predictions-for-the-energy-industry-in-2024>. †



## 2024 Richard E. Abbott Safety Scholarship Recipient: Kayla Spratt



Kayla Spratt

**D**edication to safe practices is a core value of the organization that is ingrained in our DNA and a nod to our founder Richard E. Abbott, who was instrumental in the development of the ANSI Z133 Tree Trimming Safety Standards through the American National Standards Institute. His influence on

safety set a precedent for our industry. Our commitment to safety and the development of our employees is showcased through our organization's Richard E. Abbott Safety Scholarship: a \$1,000 award that is granted annually to an employee who is seeking to further their career development and commitment to safety.

"I love helping people—it's my favorite thing to do. I love putting smiles on people's faces," shared 2024 scholarship recipient Kayla Spratt, a pre-inspection manager (PIM) at ACRT Pacific. "As a PIM, I'm able to mentor the vegetation management inspectors (VMIs) I supervise. I have the opportunity to help them grow their career paths."

Being of service to others is what inspired Spratt, who serves as the secretary for ACRT Pacific's Safety Committee, to apply for funding to pursue a Wilderness First Responder (WFR) recertification course. Her way of helping others is through safety, whether it's personally or professionally.

She noted, "Being on the Safety Committee isn't about me. I'm a representative for my team. I care about people and that everyone gets home safely. People always ask the question, 'Why do you work safely?' My first thought always goes to friends and family. It's always about people. It's about our futures."

M.K. Youngblood, ACRT Pacific safety manager and tribal liaison, shared, "I have had the privilege of working alongside Kayla for two years, and her commitment to safety, leadership, and community service is truly exceptional. Her commitment to safety within ACRT Pacific is not only evident through her personal accomplishments but also through her numerous contributions as an Area Safety Representative (ASR)."

Learn more about ACRT Pacific and our safety philosophy at [pacific.acrt.com](http://pacific.acrt.com). †



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*PG&E has designed an innovative Competency Assessment Yard with engineered assessment stations, including analog trees and vegetation.*

PHOTO COURTESY OF MARK THAU PHOTOGRAPHY.

## Enhancing Safety and Efficiency in Vegetation Management

*By Rigo Ortiz, Sr. Manager-Vegetation Management Construction Management, PG&E*

**P**acific Gas & Electric Company (PG&E) proactively created a vegetation management competency assessment program to boost worker safety, reduce wildfire risk, and demonstrate its commitment to customers and communities.

To address safety incidents, inefficiencies, and overall performance in evaluating, pruning, and removing trees around the electric system, PG&E looked at patterns in the utility line clearance industry and their workforce. This examination revealed gaps in the skills and knowledge of contract workers and the defensibility of the utility's oversight of tree crews and pre-inspectors. In response, PG&E pioneered a vegetation management assessment qualification program, ensuring consistent and objective verification of the skills and capabilities of contracted tree workers.

### Competency-Based Assessments

This newly launched assessment process evaluates workers against a regulation- and procedure-based benchmark, minimizing potential skill gaps or subjectivity. The evaluation now centers on 19 utility line clearance tree crew and 12 pre-inspector core tasks, specifically targeting high-risk and policy-governed requirements. Critical steps are prioritized in assessments with clear pass-fail criteria, establishing an objective standard. Incorporating intentional scripting and prompting ensures a uniform delivery and evaluation of skills. Furthermore, PG&E restructured contracts with more than 30

vendor companies, mandating that their contractors undergo the assessment process, solidifying the utility's dedication to safety and wildfire mitigation.

### Competency Assessment Yard

The tree crew and pre-inspector assessments take place in a controlled environment, allowing participants and evaluators to focus on demonstrating baseline skills without distractions. PG&E has designed an innovative Competency Assessment Yard with engineered assessment stations, including analog trees and vegetation. The design of the yard allows PG&E to deliver assessments in a consistent and repeatable manner. Participants demonstrate competency in daily tasks such as tree felling, chipper operations, climbing, and removing limbs that overhang electrical lines.

### Procedures and Safe Work Practices

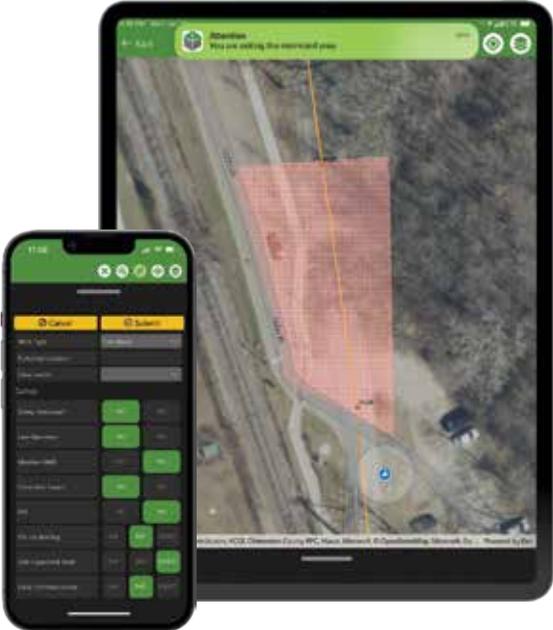
A comprehensive strategy was developed for creating and sustaining procedures and safe work practices, addressing gaps in accessibility and development, and establishing benchmark standards for process mapping, roles and responsibilities, defensibility, and overall sustainability. The utility is actively aligning its procedures and safe work practices with industry best practices and standards to ensure a uniform and efficient approach to vegetation management across its extensive network.



# Rooted in Safety

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PHOTOS COURTESY OF MARK THAU PHOTOGRAPHY.

*The design of the yard allows consistent and repeatable assessments, where participants demonstrate competency in tree felling, chipper operations, climbing, removing limbs that overhang electrical lines, and more.*

**Onboarding for a Bilingual Workforce**

Acknowledging the diverse nature of its workforce, including many bilingual employees, PG&E designed short, interactive online onboarding items covering key safety regulations and company policies for tree crews and pre-inspectors, offered in both English and Spanish. These resources facilitate a smoother onboarding process, prepare workers for assessments, and enhance safety practices in the field, emphasizing the utility’s commitment to a safety-centric culture among contractors.

**Qualifications with Real-Time Data**

Digital qualification cards were introduced to improve the transparency and accessibility of worker qualifications. These cards provide safety observers and inspectors with real-time data on workers’ capabilities based on the successful completion of assessments. This innovative approach facilitates agile decision-making in the field,

guaranteeing that tasks are assigned to personnel whose skill sets and proven competencies align with the job requirements.

**Collaborative Governance**

PG&E initiated collaborative program-level planning and governance with its vendors and the Joint Apprenticeship and Training Committee (JATC) to foster a commitment to the qualification program and to manage a significant increase in assessment volume. The JATC offers a utility line clearance tree trimmer certification program, and they have partnered with PG&E to ensure the curriculum sets workers up for success and safety in the field and at the Competency Assessment Yard. This alignment equips workers with the knowledge and experiences necessary for safe operations while validating existing and newly trained skills. Tree crew vendors have been engaged throughout the assessment program’s

implementation, allowing them to visit the assessment yard, ask questions, and provide feedback. This collaboration between PG&E, vendors, and the JATC is working towards changing the industry, not just individual companies.

**Benefits and Impact**

The successful optimization of the vegetation management assessment qualification program underscores PG&E’s commitment to safety, efficiency, customers, and the communities they serve. Since its inception, there has been a notable reduction in safety incidents and fatalities related to vegetation management. A clear correlation is emerging, highlighting the connection between enhanced safety measures and increased productivity.

The strategic focus on competency-based assessments, procedural sustainability, and real-time qualifications mitigates risk and generated value for utilities and its vendors. †

## Explore Evolving Safety Imperatives with UVM Thought Leaders on *Trees & Lines*

“We’ve gotten so good at safety, people don’t think they need it anymore,” Utility Business Media’s Director of Education David McPeak explained when he joined us on the *Trees & Lines* podcast. “That’s a challenge that people need to realize. The more people feel protected, the less they feel the need to protect themselves.”

As utility vegetation management evolves, so do the unique challenges. On *Trees & Lines*, we’re constantly exploring how the industry is changing through in-depth conversations with thought leaders about important UVM topics, and safety is one topic we keep coming back to. From international differences in safety practices to the way Safety II is revolutionizing UVM safety culture, our hosts—industry veteran Phil Charlton and Iapetus Infrastructure Services COO Tej Singh—are getting together with some of the brightest safety minds to dive deep into the areas that are redefining safety culture.

One particularly fascinating conversation was with human

performance expert Beth Lay, who talked about how the industry is moving away from punitive approaches to safety in favor of environments where learning is the priority.

“A really good way you can tell if you have trust is the quality of the close calls that are being reported,” Lay revealed. “If you’re barely hearing about any close calls, then you know something’s probably broken, because they are occurring.”

Industry legend John Goodfellow, UAA Research Chair Dr. Anand Persad, and Iapetus Infrastructure Services’ own Steve Hallmark have all discussed various aspects of UVM safety on *Trees & Lines*, too. Ready to start exploring the safety side of the industry with us? Head on over to [treesandlines.com](http://treesandlines.com) to find all our episodes and be sure to subscribe so you never miss the latest! 📻



Check out the *Trees & Lines* YouTube channel.

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# Mechanized Vegetation Management Technologies

By Andrew Mertz, Customer Delivery System Forester, Duke Energy, and Duane Dickinson, Vegetation Strategist, National Grid

**A**fter the 2023 UAA System Utility Vegetation Managers Summit in Akron, Ohio, we presented a three-part series relating to the topics discussed during the event. Part two of this series recapped the presentation about mechanized vegetation management, which covered an expansive summary of equipment types, the pros and cons of each, and the safety issues surrounding equipment use. One theme that was apparent throughout the presentation was how many variations there are when it comes to the understanding of safety in and around various types of machines. Because we were unable to cover all the discussions in part two of the UAA System Utility Vegetation Managers Summit series (titled “Mechanized Vegetation Management Technologies” in the January/February 2024 *Newsline* issue), we set out to follow up with an article outlining some of the safety conversation.

Within the discussions, we realized the utility vegetation management industry has come a long way in the past 30 to 40 years. As our industry continues to change and evolve, we must keep asking the hard questions needed to continually improve our vegetation management programs’ reliability metrics, efficiency, and customer experience. During these past decades, mechanical equipment has made significant inroads into UVM. Lack of skilled labor, cost control measures, and technological advances have accelerated this movement. This transition has led to more scrutiny of the use of this equipment in terms of safety.

Presently, there are variations of accepted safety practices around mechanical equipment, and it appears to cause some confusion within the industry. Maybe it is time to take a hard look at standardizing the industry’s safety practices related to mechanized vegetation practices.

Inconsistencies regarding safety messaging and operation manuals of mechanical pruners and forestry mowers must be addressed. Current messaging—specifically that which calls for a 300-foot radius clear of people and other potential targets—is not tenable in many circumstances. Different sizes and makes of machines, including backyard machines and remote-controlled equipment, have further complicated this issue. There are also inconsistencies between the working heights of forestry mowers. Many machines state that the bottom of the mower should not be more than 18" above the ground—however we have seen videos of the machines made by a manufacturer showing the machine working well above this height.

So, what might be done to address this? Consistency of operator manual verbiage between manufacturers of similar equipment is a good place to start. For mechanical pruners, developing reasonable and consistent standards for “drop zones” for all sides (front, back, left, right) of working equipment

that does not compromise safe use of the equipment is needed. Perhaps developing spotter requirements with electronic communication guidelines is needed. For mechanical mowers, we should have consistent language among the manufacturers for what the maximum height that a mower head should be off the ground while engaged is. These procedures should also consider remote-controlled equipment where the operator may be closer to the equipment.

With the evolution of diversity of equipment, we now have smaller and remote-operated machines which can operate in tight and difficult locations. Because of these abilities, the verbiage in the ANSI A300 standards has been revised. Previously, the ANSI A300 standards restricted mechanical work to “rural/remote locations.” This verbiage has now been removed in the revised standards, thus allowing more latitude and discretion where mechanical methods can be utilized. With this change, we potentially have now created additional exposure to the public and infrastructure.

Mechanical methods are very important to

our industry. However, are we walking a tightrope when determining safety and exposure to the public? In many instances there is a 300-foot operating distance for workers. But when working along a roadside, how do we protect pedestrians, cyclists, and automobiles? This topic is not going anywhere soon—and this article posed more questions than answers. Let’s all continue the conversation and include manufacturers, contractors, and others to find some solutions to these issues.





GeoSpatial Innovations, Inc.

## GSI Forester and Environmental Stewardship

By Max Cunningham, Forester Program Manager, GeoSpatial Innovations

It comes as no surprise that the top priority for a utility is the reliability of both their distribution and transmission networks. Vegetation managers have taken on the never-ending task of finding the balance between providing the public with their utility needs and maximizing the social benefits that thriving vegetation can provide for a community.

Spend time with a utility forester and it becomes extremely clear that their efforts are guided with environmental stewardship in mind. The alternative to this would be for the utility to just go ahead and remove all vegetation near utility assets and long gone would be the cycle-based approach. Utility foresters are well trained in understanding vegetation species, growth rates, soil conditions, and their ecologies to make the most well-informed decisions with regards to both keeping the power on and allowing the vegetation to flourish.

GSI Forester, developed in partnership with utility vegetation managers, helps utilities maximize both the reliability of their networks as well as provide the benefits of proactive environmental stewardship programs. Forester supports the efforts of a utility to protect any sensitive areas as well as provide your field crews detailed work plans to make sure only the necessary work is completed.

GSI is a private, woman-owned company providing software and services to electric and natural gas companies across North America and Australia. Learn more about GSI Forester at [www.gsiforester.com](http://www.gsiforester.com) and talk with our team to understand how Forester can further improve your reliability and environmental stewardship. 🌱



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## SPOTLIGHT ON THE ENVIRONMENT

# Environmental Stewardship and Safety

By Anna Davis, Operations Manager, ACRT Services and Adrienne Jones, UAA Rising Star Award Recipient and Safety Manager, ACRT Services

**S**afety and environmental stewardship go hand in hand. While a utility's objective for controlling vegetation along rights-of-way may be to increase service reliability, prioritizing safety and environmental stewardship emphasize *how* ROW are maintained. Much in the way that safety promotes the well-being of crews, utility employees, property owners, and the general public, environmentally conscious maintenance methods promote and protect ecosystems along the utility corridor. We've all heard the saying "It's not what you do, but how you do it and why." Emphasizing safety and environmental stewardship focuses on both the *how* and the *why* behind the effort. After all, safety is not just about physical habits but also our attitudes and emotions. Our attitude affects almost all that we do and *how* we do it. If you have a positive safety attitude, it's more likely that you'll exhibit safe behaviors and inspire others to do the same. In this same manner, we each can implement and model environmental stewardship along with safe work practices in order to cultivate and inspire change in our profession.

Our behavior informs and influences our thoughts and feelings. We have much more power than we realize to consciously choose behaviors that will affect our attitude and influence the everyday emotions that can get in the way of our goals and objectives or compromise our safety or commitment to sustainable principles. It simply takes practice.

Thinking and behaving safely is a choice. Managing with an emphasis on environmental stewardship is also a choice. Gone are the days when taking shortcuts and bypassing safe work practices is acceptable. We are at that same precipice with environmental practices. Bat surveys, integrated vegetation management, and pollinator studies are just a few ways to begin to choose environmental stewardship. Resources like the Best Management Practices–Integrated Vegetation Management provide a strong foundation and practical approaches for IVM and can serve as a jumping-off point for managing ROW sustainably. Integrated vegetation management drives efficiencies surrounding safety, reliability, costs, and compliance, among other things. While the full scope of IVM's capabilities is far beyond what can be encompassed in an article, managing ROW with a selective eye promotes forward-looking behavior. Managing ROW with IVM at the forefront moves away from reactive management and into proactive management.

Environmental stewardship continues to be a focal point for many companies and with investors who

emphasize the importance of environmental, social, and governance and sustainable investing. In the utility realm, ESG considers how we are impacting the natural world around us. Investors build entire profiles on a company's environmental policies, and the utility world cannot avoid this.

Ultimately, environmental stewardship is about protecting and maintaining our planet for future generations. There are many decisions we can make, both as individuals and as a part of a team, to support these goals, just as we do when it comes to a positive safety attitude and taking responsibility for the choices we are making. Toward this effort, the practice of pausing is a powerful one. When we catch ourselves with our head out of the game, we can stop and take four seconds to clear our head, refocus, check our surroundings, and review the task at hand. Some important questions we can ask ourselves when it comes to safety are:

- *Am I putting myself or others at risk?*
- *Am I prepared to continue to work safely?*
- *Am I focused on what needs to get done?*
- *Am I ready to act to do it safely?*

Much like safety, we can ask important questions on our path to sustainability:

- *How can I consider the environmental impacts?*
- *Am I following the requirements of regulatory agencies?*
- *How can I avoid shortcuts that may result in adverse outcomes for this ecosystem?*
- *How can I cultivate compatible and native species on the ROW?*
- *What are my objectives for biodiversity?*

Making safety a core value can help to drive sustainability by providing people with the resources they need to do their work without fear of getting hurt or facing repercussions. An influence like time pressure can also wreak havoc on a safe or sustainable mindset. To prevent workplace incidents and enhance sustainability, we can shift our focus towards a more proactive process. This means taking time to consider the options rather than regressing to the autopilot mentality of "We've always done it this way." If we always do what we've always done, we will always get the same results, for better or for worse.

Much like safety, education is power when it comes to environmental stewardship. Educate yourself and others! Understanding local ecosystems and the impact we make on them is the first step to making lasting



change. Ask yourself, how does your program measure up on environmental stewardship, and what can I (or my organization) do to promote sustainability and biodiversity? The UAA Environmental Stewardship Committee has numerous resources to begin answering many of these questions ([www.gotouaa.org/environmental-stewardship-resources](http://www.gotouaa.org/environmental-stewardship-resources)).

Safety is something that we would never say is “complete” or “finished.” Safety and environmental stewardship are not items to be checked off a list—they are ongoing, continual process improvements. As we gain knowledge and understanding of best practices for environmental stewardship, it is our obligation to leverage that knowledge and implement environmentally sustainable principles and practices. At the end of the day, what we do is important, but it is also *how* and *why* we do it that matters. 🌱

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# PRO-UVM

## CREDENTIALING PROGRAM

The **Professional Utility Vegetation Management Credentialing Program** provides comprehensive training to plan, communicate, and manage sustainable UVM plans. Designed and facilitated by industry professionals, the courses enhance the understanding and application of industry best practices, including safety, stakeholder engagement, integrated vegetation management, project management, and sustainable utility corridor planning. This 100% online program is asynchronous and can be completed in two years. It features three components: two certificates and one credential preparation course taken in sequential order. The successful completion of all three components demonstrates the competency required for the Certified Utility Vegetation Management Professional credential offered through the Utility Arborist Association/Utility Vegetation Management Association (UVMA).

### Who Is It For?

This program is a pathway for career development and advancement. The Utility Vegetation Management certificate program is designed for individuals working within the utility and arboricultural industries who wish to develop and enhance their knowledge and skills related to developing and implementing UVM programs. 🌱



For more details and to enroll, scan here to visit the University of Wisconsin-Stevens Point program website!



Tim Walsh

**TOWNSEND**



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## Walsh Named VP of Safety and Training at The Townsend Company, LLC

**T**im Walsh, a professional with experience in environmental, health, safety, and compliance in utility vegetation management, has joined The Townsend Company, LLC, as its next vice president of safety and training, effective April 1, 2024.

Walsh has built a presence across all phases of the industry, from his early days teaching climbing and rigging to leadership positions with the Asplundh Tree Expert Company and The Davey Tree Expert Company, where he recently served as its vice president of health and safety. At Davey, Walsh was responsible for safety oversight, governance, development, implementation, and evaluation of safety programs for more than 12,000 employees. He developed comprehensive safety and health programs for vegetation management in the oil, gas, electric, highway, and railway industries.

In addition to being a sought-after speaker on various safety topics, Walsh is actively engaged in several national organizations, including serving as the past president of the Utility Arborist Association; as a member of the *Tree Care*

*Industry Magazine* Editorial Advisory Committee; and a member of the American Society of Safety Professionals. In 2022, he was awarded the prestigious Will Nutter Silver Shield Award for safety by the UAA.

"Tim is committed to safer work environments across our industry," said Amy Townsend, president and chief operating officer of The Townsend Company, LLC. "He will work with our safety trainers directly to ensure we are current on our training practices and with our safety compliance specialists and field leadership to support them with many safety communications, trainings, goals, and tasks."

He has bachelor's degrees in urban forestry and forest management from the University of Wisconsin-Stevens Point, a master's degree in urban forestry (UWSP) and ergonomics (University of Massachusetts, Lowell), and is a doctoral candidate in ergonomics and safety at UMASS-Lowell.

Walsh is excited to join the team at Townsend, noting it is "both an honor and a challenge to follow in the footsteps of Mark Kimbrough," who held the position for 26 years. 🌱



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## OPINION EDITORIAL

## UVM Should Be Safety-Based

Randy Miller, Director of Research and Development, Eocene Environmental Group



Randall H. Miller

**O**n my first day of work in utility vegetation management, a seven-year-old girl was fighting for her life in a critical burn unit 200 miles from home. A few days earlier she had climbed a tree, reached out, and contacted a single-phase high-voltage distribution line maintained by my new employer. She was blown out of the tree and fell 30 feet to the ground. Somehow, she survived the electrical contact and fall, but suffered permanent, grim injuries. In these types of instances, many fare worse. During my ensuing 23-year career at that utility, four people lost their lives due to tree and powerline conflicts. Two were tree workers, which is a serious matter. Dr. John Ball tells us that electrocution is the third-most common cause of work-related fatalities in the tree care industry. Furthermore, tree and powerline conflicts have caused ruinous fires, resulting in catastrophic loss of life. Little wonder why utilities throughout western North America have put priority on proactive prevention of fire caused by vegetation conflicts with powerlines.

### Safety Is a UVM Priority

Safety is a priority in utility vegetation management. That should be evident with the articles in this *Utility Arborist Newsline* issue, which is devoted to safety. We emphasize safety for ourselves and those who work in our industry, and every utility and UVM contractor stresses safety as a core value. Utility Arborist Association

meetings begin with a safety message, and UAA Executive Director Dennis Fallon admonishes us to “make it a safe day” in all his correspondence. For over a decade, the UAA has also hosted safety summits involving frontline workers—it’s clear we take our responsibility to reduce safety risks seriously. We also understand fire risks, a threat that is made more acute by climate change, poor forest health, and an expanding urban wildland interface as people move out of cities and into forested areas.

### Reliability Focus?

Transformative research on vegetation-caused outages by Dr. Don Russell at Texas A&M University (Russell 2011) and John Goodfellow established it is rare for outages to be caused by vegetation growing into three-phase lines and nearly impossible on single-phase lines. Rather, vegetation-caused outages are most often the result of trees or tree parts falling and mechanically tearing down electrical facilities. The evidence is mounting that 80% or more of vegetation-caused outages are caused by trees from off the right-of-way.

In response, reliability-based scheduling is gaining acceptance. In this approach, limited human and equipment resources are strategically deployed to optimize reliability. Stress is placed on tree risk assessment. Further, three-phase lines are prioritized with emphasis on aligning vegetation management

with protective device coordination to moderate the number of customers potentially affected by vegetation-caused outages. It works. I know from experience that if improving outage metrics is the priority, reliability-centered scheduling is effective. Decades ago, I worked on a system where nine years lapsed between scheduled distribution vegetation maintenance. Trees encroached to the extent that every time there was more than a breeze, lines were torn down. Tree-caused outages happened almost nightly. We responded by focusing on three-phase lines for a year, and the positive results on reliability metrics were dramatic.

### Unintended Consequences

As a result of the mounting evidence that vegetation-caused outages are so seldom caused by ingrowth, we increasingly hear that “the problem isn’t around the lines.” It seems more and more vegetation managers are concluding that systematic, routine maintenance “only buys clearance” and resources should be directed into mitigating tree-failure risks—it’s troubling and shortsighted. Line clearance cannot be deferred indefinitely. We know tree growth is relentless and, if left unchecked, the utility forest inevitably entangles powerlines, which is counterproductive from both safety and reliability perspectives. Furthermore, there is added cost. Browning and Wyant (1997) demonstrated decades ago that deferring maintenance beyond the



point where trees encroach on high-voltage distribution lines dramatically increases the cost of maintenance, to the point it far overtakes any short-term savings of postponing work. The most appropriate frequency of maintenance undoubtedly varies from one area and utility to another, but the point remains that regular cycle work is cost effective. Failure leads to hot spotting and a spiral of decline as problems mount.

Some argue that reliability and safety go hand in hand. However, there are nuances in emphasis. For example, if reliability is the primary objective, single-phase maintenance can be de-emphasized because the risk of outages due to vegetative growth is statistically insignificant. However, allowing the utility forest to encroach into single-phase lines can provide access to them, as happened with the seven-year-old girl at the beginning of my career. As she learned at such great cost, contacting single-phase lines can leave a person as injured, maimed, or dead as contacting multi-phase lines. Further, as trees are allowed to grow and entangle powerlines, the risk for severe injury increases to qualified line clearance arborists who work for us. It also intensifies for our municipal and commercial colleagues as high-voltage lines are hidden by vegetation. Maintaining space between vegetation and powerlines keeps them visible and top of mind so they can be discussed in pre-job briefings and workers can keep minimum approach distances maintained. If we are committed to safety, we should not allow unreasonable working conditions, like high-voltage lines engulfed in

vegetation, to develop.

### Best Management Practices

A solution is to apply integrated vegetation management best management practices (Miller 2021) to distribution facilities. Integrated vegetation management BMPs advise us to set clearly defined management objectives based on the intended use of the site. Risk mitigation should be a primary objective of any UVM program. Tolerance levels and action thresholds should be established and determined by optimizing the timing and cost of IVM against the risk of unacceptable consequences. Those consequences should be consistent with objectives and ought to prioritize safety over reliability and other concerns. That doesn't mean reliability should be disregarded. Rather, safety should come first, and once that is met to an acceptable level, reliability can be addressed. The BMP also advises us that schedules should not be based on strict time intervals. The focus should be on areas of greatest need and based on site and workload evaluations. Tolerance levels and work thresholds can be adapted to circumstances. For example, to mitigate safety risks, tolerance levels and work thresholds can be stricter for trees in areas like playgrounds or parks that are frequented by children, as well as for readily climbable trees and fire-prone locations. For reliability, tolerance levels and action thresholds might be tighter for three-phase lines, particularly between the substation and first protection devices, and modified from there.

Finally, UVM programs should maintain systematic project level

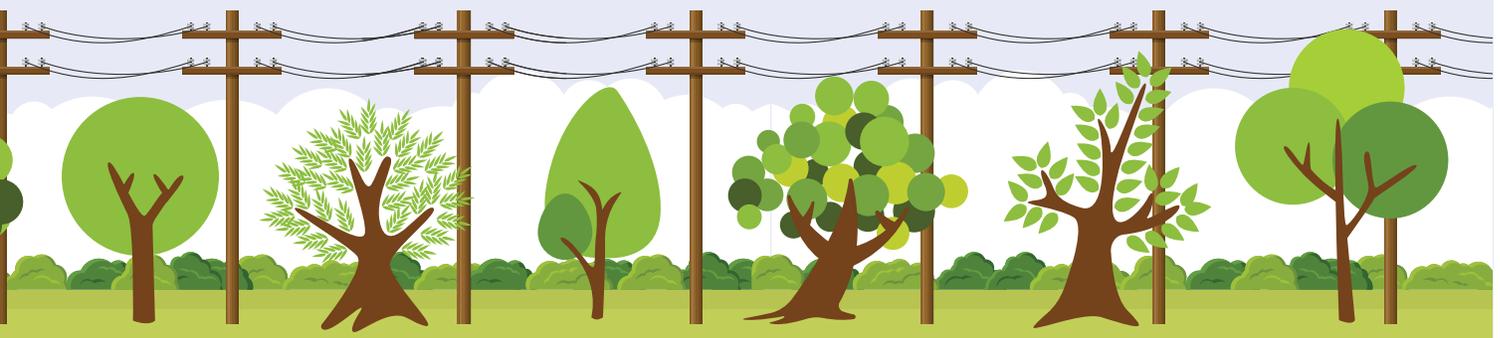
maintenance, avoiding reactive work (hot spotting). Reactive work is detrimental as it can cost five times as much as systematic, routine maintenance (Miller and Kempter 2018).

### Conclusion

Utility arborists put a priority on safety because we recognize our responsibility to mitigate safety risks for those who work for and with us, as well as for the public. Accordingly, mitigating safety risks should be the priority of UVM programs. Reliability-based scheduling is gaining traction based on sound science. While reliability and the science leveraged to help drive effective VM is critically important, it should be secondary to safety. That is because somewhere in thousands of miles of line, a seven-year-old girl is climbing a tree in proximity to a high-voltage line, and she deserves to go home safely.

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