MAR.APR 2024
Volume 15
Number 2

UTILITY ARBORIST NEWSLINE

FOCUS ON ENVIRONMENTAL STEWARDSHIP

DEALING WITH CHANGE IN SAFETY

HOW TO MAKE A POSITIVE CHANGE IN A RESISTANT WORKPLACE

THE NEW GENERATION

A NEW APPROACH FOR THE FUTURE OF VM

URBAN FORESTRY

GETTING BACK TO BASICS

CLIMATE ACTION PROGRAMS

A MULTIDISCIPLINARY APPROACH HELPS WITH THE BIG PICTURE

UAA®
UTILITY ARBORIST ASSOCIATION

BEYOND COMPLIANCE

FOCUSING ON ENVIRONMENTAL STEWARDSHIP FOR A HEALTHIER ROW

Environmental compliance is critical, but at Davey, we take a different approach. We manage each ROW site according to its characteristics to maximize the well-being of the ecosystem, to support our clients' social responsibility goals.

Environmental Consulting Expertise:

- Wetland and stream consulting, mitigation, and restoration
- Invasive vegetation management
- Natural areas management
- Endangered species consulting

Learn about Davey's natural resource solutions by scanning the code.

DAVEY®
Proven Solutions for a Growing World

VEGETATION MANAGEMENT
ENVIRONMENTAL CONSULTING
LINE CLEARANCE
STORM RESPONSE
ASSET MANAGEMENT
COMMUNICATIONS CONSTRUCTION
TECHNOLOGY & SOFTWARE SOLUTIONS

DAVEYUTILITYSOLUTIONS.COM

The *Utility Arborist Newsline* is published bi-monthly by the UAA
2009 W. Broadway Ave., Suite 400, PMB 315, Forest Lake, MN 55025
ISSN Print: 2770-5927 | ISSN Digital: 2770-5935
Cover Photo: © ACRT Services/Josué González

CONTENTS

Turn to **page 16** to learn how to gain biodiversity through climate action programs.

Read about marketing to the next generation for VM careers on **page 22**.

Read more about utility arboretums on **page 28**

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

PRESIDENT'S MESSAGE

Brandon Hughson

©ISTOCK/JPCHRET

Balancing Act: Environmental Stewardship in Right-of-Way Management

In the intricate dance of maintaining right-of-way corridors for utility arboriculture, the delicate balance between ecological sustainability and operational necessities becomes paramount. The tools we use, the fuel that powers our equipment, and the very methods employed to manage these spaces all leave an imprint on the environment. As we navigate the challenges of ROW management, a chorus of considerations echoes through the industry, from the need for more sustainable practices to the pivotal role of education in fostering eco-friendly landscapes.

Right-of-way management requires tools large and small, and while there's a notable trend towards more sustainable, battery-powered options, the environmental footprint persists. For large equipment manufacturers, the challenge lies in the very fuel that powers their indispensable vehicles—often diesel. As technology integrates into every facet of our day-to-day, from our phones and work tablets in the field to the way we're collecting data from boots on the ground to cameras in the sky, we need to ensure we're doing the best for the environment around us. While the industry is increasingly exploring alternative, greener options, the transition is complex.

Balancing the immediate operational needs with the long-term environmental benefits poses a formidable challenge, yet one that demands our attention and innovation. Utilities must balance an increase of demand on the grid. Charging infrastructure must adjust for more electric vehicles (EVs), including installing public charging stations, facilitating workplace charging, and managing load to ensure a consistent and reliable power supply for all customers.

Pre-inspection companies face a unique challenge in navigating the delicate equilibrium between beautification efforts and compliance imperatives. Ensuring rights-of-way are not only functional but also eco-friendly demands a nuanced approach. The juxtaposition of native, thriving ecosystems against invasive species requires not only the right approach but also a commitment to educating property owners on the importance of a thriving biodiverse ecosystem.

In the battle against unwanted vegetation, herbicides play a pivotal role. Adopting sustainable practices, such as using returnable and reusable containers for herbicides, is a step towards minimizing our impact. Moreover, promoting herbicides that allow grasses and burrowing habitats to thrive becomes essential for maintaining the delicate balance of the ecosystem. Many burrowing animals, including foxes, owls, and raccoons, rely on decaying trees with hollowed-out interiors for survival. As we engage in ROW management, preserving these habitats becomes crucial. Recognizing the symbiotic relationship between vegetation management and wildlife habitat preservation is a testament to our commitment to a holistic and sustainable approach.

Incorporating and preserving biodiversity within utility ROWs is essential for promoting ecological health, enhancing ecosystem services, and fostering positive relationships with communities. It contributes to the sustainability and resilience of these spaces, aligning with broader goals of environmental conservation and responsible land management.

Environmental, social, and governance ratings have emerged as a benchmark for organizations committed to sustainability. The pressure to disclose carbon footprints and outline plans for reduction is pushing utility arboriculture companies towards greater transparency and accountability. This shift not only aligns with industry values but also positions companies as responsible stewards of the environment.

The Utility Arborist Association stands as a beacon of environmental stewardship within the industry. Its core values, encompassing a culture of safety, environmental sustainability, education, and operational excellence, form the bedrock of the organization. Through initiatives like Tree Line USA and events like Trees and Utilities, the UAA actively highlights and promotes environmental stewardship. The pursuit of accreditation for sustainability further underscores the organization's commitment to a greener, more sustainable future.

The challenges and opportunities within ROW management call for a comprehensive and environmentally conscious approach. From rethinking the tools we use to promoting sustainable herbicide practices and embracing electric vehicles, the industry is on the cusp of transformative change. As we navigate this journey, the commitment to environmental stewardship is not just a responsibility—it's a legacy we leave for generations to come. The Utility Arborist Association, through its unwavering dedication to sustainability, serves as a guiding light for the industry, demonstrating that the delicate dance of ROW management can harmonize with the rhythms of nature.

Brandon Hughson


THE RIGHT WAY
Featuring BIOaudit™
"A complete biodiversity management solution..."
"Provides ecological quantitative metrics!"
"Helps with ESG reporting and compliance."
"Enhances cost-savings and public perception!"
★★★★★
ACRT
BIOaudit™ Assessments | Safety Services | Integrated Vegetation Management
Geospatial Analytics | Pre-Inspection & Auditing | Contract Utility Foresters
Storm & Emergency | Arborist Training | Workflow Management Software
LEARN MORE:
GET EVERYTHING YOU NEED TO MAXIMIZE THE SUCCESS OF YOUR VM PROGRAM
800.622.2562 | info.acrt.com/bioaudit

EXECUTIVE DIRECTOR MESSAGE

Dennis Fallon

> The UAA committees are as much an opportunity for like-minded industry opinion leaders to work on emerging opportunities as they are a place for folks to gain some professional development.

Since the fall of 2021, the UAA has been working hard on our internal structure to help ensure long-term stability in the organization. Those efforts are setting a foundation for growth in the areas of outreach, awareness, and reputation as the UVM industry thought leader. These efforts include defining processes, creating repeatable strategic review opportunities, as well as developing and tracking metrics used to analyze the health of an initiative.

Creating documented committee guidelines that lay out the formality of how UAA committees are structured, governed, and assigned strategic initiatives was one of the first efforts undertaken. Committee leadership was supplied with a framework for succession planning, which allows for fresh ideas and hedges off the potential for burnout within the committee volunteers. Committees have outlined formal roles and are assigned a Board of Directors champion. The committee itself is expected to assign chairs, co-chairs, a notetaker, a task manager, a blogger, and an outreach volunteer.

The co-chair role moves into the chair role after a term of no more than 24 months. As the chair moves out of the formal leadership role, this individual is highly encouraged to stay on as a committee member to offer their input and guidance for the next chairs and other leadership roles within the committee. The UAA committees are as much an opportunity for like-minded industry opinion leaders to work on emerging opportunities as they are a place for folks to gain some professional development. Exposure to working with folks who bring perspectives and experiences from across the industry may not be accessible from within an individual's organization.

The committee notetaker is responsible for documenting meeting discussions, decisions, and progress. They also have a direct hand in creating agendas and acting as a historical resource as the keeper of recent meeting notes. The task manager takes on the role of keeping the committee on task and documenting action items that come forward during committee work. The blogger and the outreach volunteer are responsible for keeping the UAA membership apprised of committee work and their progress toward goals. They seek opportunities to share messages and eliminate potential redundancies with other ongoing UAA initiatives.

The committee chairs, co-chairs, and champions also participate in UAA leadership committee meetings where committees with similar areas of focus, like member education or best practices, share their progress, challenges, and offer peer support across committee boundaries. These meetings provide committee leaders with direct access to board directors and create a space where the groups can review their progress toward the UAA board's current strategic goals.

The board has adopted an annual strategic planning session where they meet face-to-face, typically in May, to review opportunities, potential industry disrupters, and market challenges that are used to set near- and far-term organizational priorities. These sessions are typically carried out over a 24-hour period with two six-hour workshop-style sessions. The board will use the products of these sessions to set committee goals for the next 12 to 18 months. The goals set at this time are brought back to the committees via the leadership team meetings where committee leaders are read in on the board's strategic near-term vision, and then they can begin to formulate actions plans to meet the strategic objectives.

Volunteers are the engine of this organization and add significant stability to the industry. Formalizing the structure of the UAA between the board's strategic objectives and the committees' work assignments ensures a direct linkage between the individual's working within our committees and the board's strategic direction for the organization. If you have ideas about where the organization should be going or what our committees should be working on, reach out to a director and share your ideas with them.

Dennis Fallon

Nelsen Money

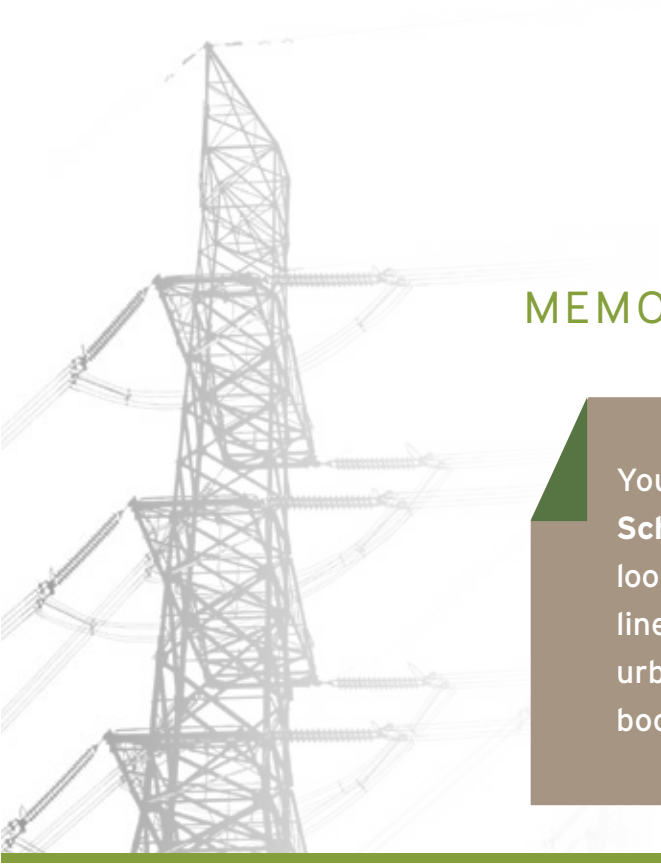
UAA
UTILITY ARBORIST ASSOCIATION

SCHOLARSHIP APPLICATIONS

Applications open now thru April 15, 2024

The Nelsen Money Scholarships support college students looking to pursue careers in utility line clearance, UVM, arboriculture, forestry, urban forestry, or related fields to help boost our ever-changing industry!

For more information, visit *www.gotouaa.org/scholarship-program*



Nelsen Money

UAA
UTILITY ARBORIST ASSOCIATION

MEMORIAL SCHOLARSHIP FUND

Your donation to the **UAA Nelsen Money Scholarship Program** supports students looking to pursue various careers in utility line clearance, UVM, arboriculture, forestry, urban forestry, or related fields to help boost our ever-changing industry!

DONATE NOW!

EVENTS COMMITTEE UPDATE

Lucas Beane

At this point we are well into 2024, but I'd like to begin by sharing what a success 2023 was for the Events Committee. Over the course of the year, six successful regional events were held in New York, Ohio, Texas, Arizona, Tennessee, and Missouri. I am extremely appreciative to the UAA Members who helped coordinate, speak, and attend these meetings to make them successful. Your hard work and dedication are exemplary! Additionally, thank you to all the sponsors, utilities, and vendors that helped make these meetings something special.

We have been able to get a jump start on our planning for 2024 and are excited for how the year is shaping up. We are planning on having six regional meetings in 2024, with five locations determined and the sixth location still being discussed.

Gettysburg, Pennsylvania
Eugene, Oregon
Calgary, Alberta, Canada
New York
Ohio

Amazingly, we already have event chairs who have volunteered for all the events, which will allow planning to be expeditious.

At these events in 2024, we will be focusing on finding some unique speakers and topics and will be reaching out to some unconventional stakeholders in the areas that may find the event to be a great opportunity. Local tree boards, DOTs, railroads, gas companies, and more are some of the targets that we would like to incorporate into these meetings to discuss utility vegetation management, since we all face the same challenges.

Many of our industry events and conferences are held in the fall of each year. The Events Committee is hopeful to have the opportunity to make one of these regional meetings a spring event in 2024 to help disperse the schedule—stay tuned.

If you live or work nearby any of the locations above and would like to lend a hand in planning, speaking, or perhaps sponsoring a 2024 meeting, please reach out to the UAA or to me directly at *lbeane@lucastree.com*. We would love your help.

Lastly, I'd like to thank everyone on the UAA Events Committee one more time for all your hard work—2024 is looking to be an outstanding schedule. Thank you!

UAA 2023 PA Safety Summit with Duquesne Light Company

CLEARION

Environmental and Sustainability Solutions

A Single Solution for Sustainability and Field Operations

- Integrated Monarch CCAA Monitoring
- Native & Invasive Species Management
- ROW Stewardship Accreditation
- Canopy Preservation Partnerships

Connect Everyone
from the Office to the Field

clearion.com

WOMEN IN VM

Maegan Mullinax

Maegan Mullinax

Bridging Green Industries: A Journey from Horticulture to Utility Vegetation Management

By Maegan Mullinax, Business Development Manager, ACRT Services

I started my career working in agriculture in Northwest Georgia before moving into commercial horticulture. My grandfather created a solid baseline for me by passing on his passion for working the land. He taught me much about land management and sustainable gardening techniques using permaculture and biointensive methods. I also worked as a consultant with a local organization called HATponics, a not-for-profit organization that aimed to and succeeded at feeding 20 million people by 2020 by installing comprehensive hydra-, aqua-, and terraponics systems.

As an instructor, I worked closely with my local arboretum, participated in several STEAM (science, technology, engineering, art, and math) projects, and worked for the National Garden Clubs of America. My courses focused on grafting, production, integrated pest management, landscape design, and exotic plant care.

After a decade in commercial horticulture, I secured my International Society of Arboriculture Arborist Certification and began work as a city arborist for my local municipality. I was introduced to the utility vegetation management industry when my local electric cooperative invited me to apply for a system arborist position. After my employment at the cooperative, I joined ACRT's Ready Force® team, a group dedicated to supporting utilities with a variety of immediate response needs when disasters of any kind strike. My first assignment was working on restoration efforts following Hurricane Michael on the Gulf Coast in 2018.

I've had opportunities to collaborate with my team and leadership as one of ACRT's area safety representatives and sat on ACRT's Safety Committee for two years. In 2020, I transitioned to a new role as a business development manager with ACRT Services, where I develop cost-effective solutions for utilities, serve as a liaison between clients and ACRT operations representatives, and more. Initially, I served the western U.S. before transferring to cover the southeast. To this day, I am still an active member of ACRT's Ready Force team and work alongside our electric utility partners impacted by disasters.

I have volunteered with the UAA on its Professional Development Committee since 2020 and served as the committee chair for the last couple of years. I have also been fortunate enough to attend every UAA Women in Vegetation Management Workshop since the first in 2018 and have served on its planning committee since 2021. I also had the privilege of sitting on a live panel in 2020 and hosting a panel discussion in 2022 for the Women's Workshop. I've also been a member of the Georgia Tree Council since 2018. Both organizations recognized me with awards in 2020, for which I'm thankful. I received the Rising Star Award from the UAA and the STARs (Service, Teamwork, Attitude, and Results) Award from the Georgia Tree Council.

From starting my career in horticulture and urban forestry to my career in UVM, I have seen the green industries continue to move closer together. We can learn so much from each other, and I believe breaking down our intellectual silos would benefit all who work within our industries. Communication is the key to bringing utility and municipal arborists together. Often, we are unaware of the similar challenges we face and the common goals we can work together to achieve. I am excited to continue to learn and grow.

COMPATIBLE RIGHT-OF-WAY

SPECIES SPOTLIGHT

presented by **Grow With Trees**

Arrowleaf Balsamroot

Balsamorhiza Sagittata

- Maximum height ± 2ft
- Compatible in wire & border zones
- All parts of the plant can be eaten
- Excellent soil stabilizer

Scan the QR code to learn why we like this compatible species

SAFETY TOOLS

Embracing Change *and* Fear to Move Safety Forward

By Dan Shaw (PMP, CUSP), Senior Forester, CenterPoint Energy

I'd like to share with you some thoughts about dealing with new information—and dealing with apprehension or fear. To say it another way: dealing with change and resistance to change. Imagine you are the person trying to make a positive change but feel like a lone voice in the wilderness whom others are not able to hear. We are all faced with these situations from time to time, and you can probably think of an example from your own professional experience. In our industry where safety is always in the foreground of our thinking and understanding, we might occasionally find ourselves in a situation where the "old way" is the consensus, and we want to advocate for a new, better approach or method. It's especially hard to be the person suggesting a new way when the agreed-upon standard in the organization is accepted as safe *enough* and current *enough*. What do you do when you want to move safety forward but you're afraid your team will resist and, on top of that, the accepted data and the safety record seem to indicate that things are OK?

The initial thought came from reading two pieces of writing, an article and a research summary. I recommend both to you. "Dealing With Fear" is a *From the Field* article in the November 2023 *Tree Care Industry Magazine* written by Michael Hoppe. He talks about fear as both a visceral and psychological feeling, and about coming to grips with it, with both mind and body. The circumstances are different—climbing a tough tree is not the same thing as having a tough conversation—but his insight is keen and broadly useful. Hoppe's description of fear is something that can be overcome, but also something that can keep you humble.

The Statistical Invalidity of TRIR as a Measure of Safety Performance is a research summary sponsored and published by The Construction Safety Research Alliance (CSRA) in November 2020. Its authors are Dr. Matthew Hallowell, Mike Quashne, Dr. Rico Salas, Dr. Matt Jones, Brad MacLean, and Ellen Quinn. Part of the conclusion of this research is that TRIR (Total Recordable Incident Rate) data has not always been correctly interpreted and, as a result, does not really mean what it has been commonly interpreted to mean. For example, the authors assert that there is no discernible association between TRIR and fatalities.

Brought to the issue of change management, the two pieces seem to be companions. If you think of Michael Hoppe's way of confronting and managing fear and the possible new ways of viewing TRIR in the CSRA paper, with enough flexibility, you may see how they relate. I hope you'll consider taking some time to read both of them to see for yourself if you agree. In conclusion, I've garnered a few thoughts from these writers about how to advocate for new, positive change in safety management while working through the fear and apprehension that sometimes hold us back.

Be Prepared

Michael Hoppe: "To act in the face of fear, the inner strength of nerve can be developed through experience." For tough conversations, the best preparation is maintaining focus, staying positive, and being ready to stumble! You will recover—and you'll get better each time you try.

Be Thoughtful

The CSRA paper concludes with these sentences:

> "In the spirit of scientific inquiry, we recommend that other researchers propose alternative hypotheses about TRIR, conduct independent tests, and challenge the assumptions made in this paper. Although we stand by our conclusions, we recognize that other perspectives may generate different models and results."

There's a nice balance here between gently standing one's ground and being open to other views and perspectives in the future. If we can navigate that thoughtful balance in our safety conversations, we can reach understanding, even when seeking common ground with those who are more skeptical.

Aim for Understanding

The long-term strategy is to move safety forward, and you are the person trying to make a positive change! Dealing with resistance can be frustrating, but it's a situation where the old analogy of "tools in the toolbox" fits. Use the tools and methods you know while learning and adopting new ones. The best approach is the one that helps you reach a higher level of openness and understanding.

BOARD NOMINATIONS 2024

We will be seeking qualified nominees for positions on the UAA Board.

The Board of Directors is responsible for the sustainable operation of the UAA, including the strategic direction, policies, and budget of the Association. The Board includes annual progressive roles of Vice President, President-Elect, President, and ending as Past President. In addition to these four board roles, there is a Treasurer and 4-6 Directors. The Treasurer and Directors are elected to serve for three years. The immediate Past President participates on the Board during his/her fourth year.

We will be soliciting nominees for board positions to be filled effective September 1, 2024. Elected positions sought for 2024 include Vice President and two Directors.

To nominate a candidate for the UAA Board of Directors, an email will be sent to all active UAA Members on May 1, 2024. In this email, a link will be supplied for you to submit your nomination(s).

Board nominees who will be considered must meet the following criteria:

1. Be a current UAA Member in good standing
2. An individual who displays commitment to the UAA mission and goal, who thinks strategically and communicates effectively
3. Committed to serving the designated term in various capacities, ranging from committee champion, attendance at meetings, financial insights, as well as attend the UAA Annual Meeting, Trees & Utilities Conference, and the UAA Utility System Managers Summit

The UAA Nominating Committee will review all nominations submitted and discuss the job responsibilities and commitments with the potential candidate, prior to developing a final slate of nominations for voting by UAA Members.

Nominees will be accepted May 1–May 22, 2024. Voting will take place July 15–August 1, 2024.

COMING SOON!

UAA®
UTILITY ARBORIST ASSOCIATION

BOARD ELECTIONS

The UAA Executive Board will be opening nominations for new board members soon.

UAA Members are encouraged to update their online profiles with current information (email, address, etc.) in the member portal *(member.gotouaa.org/login.aspx)* and prepare to submit nominations for the following UAA Executive Board open positions:

Vice President

Directors (2 positions)

For more information,
contact Diona Neeser at *dneeser@gotouaa.org*.

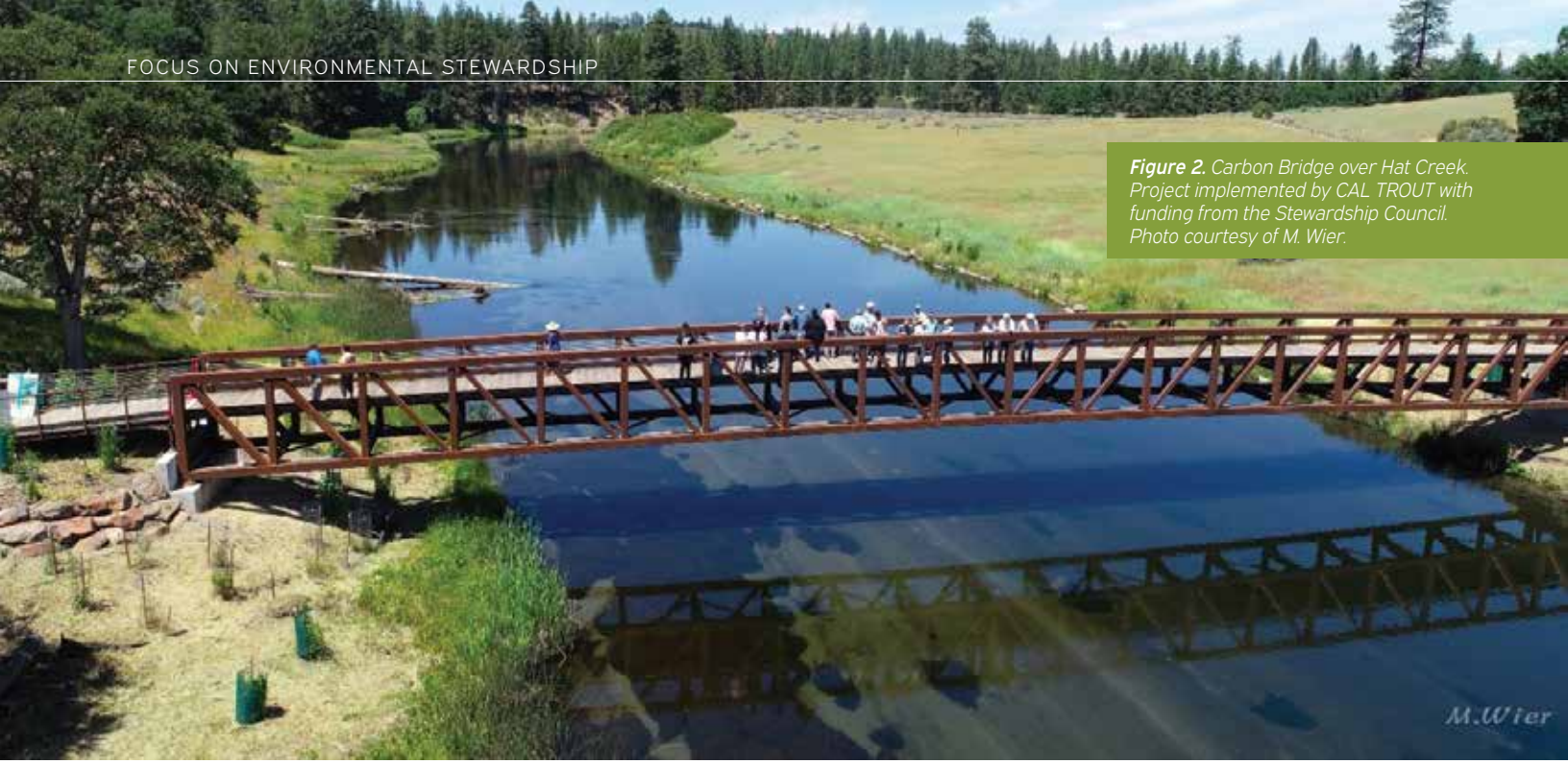


Figure 2. *Carbon Bridge over Hat Creek. Project implemented by CAL TROUT with funding from the Stewardship Council. Photo courtesy of M. Wier.*

Crisis Meets Conservation

By Troy Kelly, Land Program Manager, Principal–Land Conservation Commitment; and Cheryl Davis, Land Program Manager, Expert–Land Conservation Commitment, Pacific Gas & Electric Company

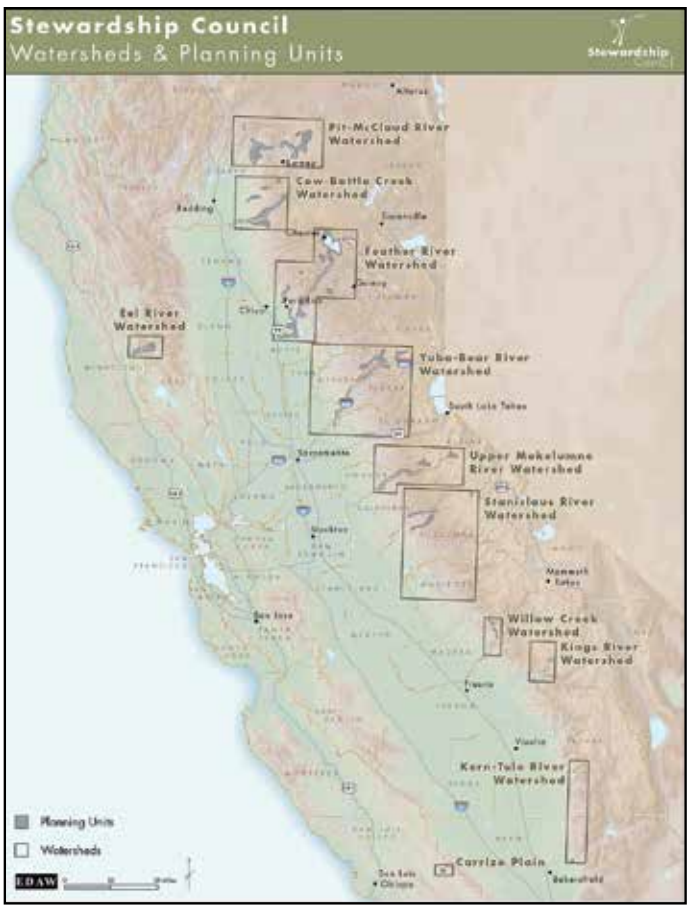


Figure 1. *PG&E watersheds and planning units subject to the Land Conservation Commitment. Photo courtesy of the Pacific Forest and Watershed Land Stewardship Council.*

Deregulation and the subsequent manipulation of California energy markets (remember *Enron: The Smartest Guys in the Room*?) resulted in skyrocketing wholesale energy prices for California utility companies in the late 1990s and early 2000s. This led to the California energy crisis in 2000–2001. To add insult to injury, drought in the Pacific Northwest and California reduced the amount of cost-effective hydroelectric power available for utilities to purchase. With Pacific Gas and Electric Company (PG&E) forced to pay higher wholesale prices for power but unable to change the rates it charged customers, the utility was hemorrhaging cash. PG&E filed for bankruptcy protection in 2001. In 2003, a federal bankruptcy judge approved a settlement agreement proposed by the California Public Utilities Commission and PG&E—this ended the company's bankruptcy.

The settlement agreement allowed PG&E to maintain its hydroelectric operations. Part of the agreement required PG&E to conserve, in perpetuity for public benefit, 140,000 acres of watershed lands valued at approximately $300 million. PG&E established a nonprofit corporation, the Pacific Forest and Watershed Land Stewardship Council (Stewardship Council), to oversee the donation of a portion of the watershed lands portfolio, place conservation easements on all parcels, and fund environmental enhancements on these lands using a $70 million fund established by PG&E.

The Stewardship Council created a Land Conservation Program to ensure that PG&E's watershed lands throughout California are conserved for a broad range of beneficial public values. These values include outdoor recreation, sustainable forestry, agriculture, habitat protection, open space preservation, and protection of cultural and historic resources. Located across 22 counties, these watershed lands encompass some of California's most beautiful wilderness landscapes. The

parcels, almost 1,000 in total, stretch from Shasta County in the north to Kern and San Luis Obispo counties in the south, from the Sierra Nevada and Cascade mountain ranges to the Eel River watershed in Mendocino County (Figure 1).

PG&E established a Land Conservation Comittment (LCC) Program to work hand-in-hand with Stewardship Council staff to negotiate land donations to Native American Tribes, state and federal resource agencies, and educational institutions. Approximately 40,000 acres were donated in 42 separate transactions. The donations, in addition to the remaining 100,000 acres of retained lands, all have conservation easements protecting those properties in perpetuity. One focus of the Stewardship Council Board was to engage local land trusts and resource conservation districts throughout the watershed lands portfolio to benefit rural communities. Each conservation easement on retained lands includes an endowment for the easement holder.

Consensus and good agreements take time—almost twenty years, in fact. All 97 transactions, each unique in their complexity and nuance, were completed by the end of 2023. All 42 land donations and 50 retained easements (five properties in the portfolio were sold with conservation easements in place) required years of work with each organization's staff, board, attorneys, consultants, surveyors, title companies, PG&E, and the Stewardship Council Board. Now that all transactions are complete, the LCC Program has fully transitioned into compliance mode. What is compliance mode exactly?

Compliance is an ongoing annual process with procedures that outline how PG&E stays in compliance with each easement. Remember, these conservation easements are forever documents that run with the land. Annually, the LCC Program gathers information from each line of business within PG&E (e.g., hydro generation, electric and gas transmission and distribution, telecommunications, vegetation management) to present an annual workplan to easement holders. After notifications and meetings with easement holders, the fieldwork begins. The Land Conservation Commitment staff, together with our easement partners, monitor and document the condition of each property. Four-wheel drive trucks, side-by-side UTVs, drones, tablets, satellite communicators, and boot leather are all tools that help get the job done. Land management can be messy, but the LCC staff and easement partners work collaboratively to correct issues like homeless encampments, dump sites, abandoned cars, and illegal marijuana grows. These issues, while disheartening, don't detract from the magnificence of seeing bald eagles soar above and river otters play along the river embankment.

Land Conservation Commitment staff have worked with many of our easement holders and partners on enhancement projects to better manage PG&E's conserved watershed lands. One proud accomplishment was working with the Stewardship Council to fund a project with CAL TROUT to replace the historic Carbon Bridge over Hat Creek in Shasta County (Figure 2). Another significant contribution was the reintroduction of the endangered Shasta crayfish *(Pacifastacus fortis)* to a restored creek at that same Hat Creek property, thanks to the diligence and expertise of scientists at Spring Rivers Ecological Sciences. Many more proposed enhancements are on the horizon for these conserved watershed lands. The LCC Program is a legacy project that all Californians can be proud of.

ACRT

Inaugural Hammer of Honor Recipient: Eric Morales

Nearly two decades ago, Eric Morales came to ACRT with a Bachelor of Science in agriculture and a very basic understanding of utility vegetation management. He started doing ticket and inspection work and has progressed his way through the organization to his current role as an operations manager.

Morales has been an International Society of Arboriculture (ISA) Certified Arborist for 15 of those years and made it his mission to "let folks know that there is something out there in the forestry and arboriculture realm that they might not be aware of. I was one of those people who were unaware of this line of work, but I'm glad I found it."

Eric Morales (left) with ACRT President Kevin Puls (right)

When it comes to his management style, Morales considers himself an open book and appreciates when his team asks questions and poses ideas. "I don't like the status quo. I don't want to just get the job done; I want to continue to get better at what we do. That continually makes our team better and it makes our value better."

This philosophy is what led to him being named the inaugural ACRT Hammer of Honor recipient, a recognition awarded to an operations leader who has hammered home their leadership skills, nailed teamwork, chiseled out innovative solutions, and consistently built a sturdy foundation of success.

"Eric is the 'give the shirt off of his back type.' He is genuinely one of the nicest people I know and cares deeply about his employees," shared ACRT Senior Operations Manager Jerry Staton. "He is a strong leader who speaks up and helps guide newer managers and is a strong proponent of our company's culture of safety. Eric sets the example for what a good leader should be."

People like Morales are the key to our success at ACRT. Learn more about our dedicated employees at *acrt.com/careers*.

Climate Action Programs: Biodiversity Gains in ROWs Can Happen if We Think "Big Picture"

By Anand B. Persad (PhD, BCE), Director of Research, Science, and Innovation, ACRT Services

Dr. Anand Persad

Climate action programs (CAPs) in our utility and transportation rights-of-way and corridors are becoming increasingly required and entrenched in our day-to-day management strategies as we embrace the nuances of change in weather patterns, growing need for economic sustainability, and post-pandemic worker challenges. As we continue to develop our ROWs, longer-term vegetation management plans, climate, humans, and economics will remain major governing aspects of our work in utility and transportation ROWs, with a heightened focus on the intersection of utility, urban, and natural spaces as we are called to a higher standard and bigger-picture approach.

A Multidisciplinary Approach Helps with the Big Picture

Indeed, the ability to harness programs that can deliver on enhanced stewardship, biodiversity gains, and resilience in a changing climate is now a priority for engaging in many of our social deliverables in and around the communities we serve. Added to these is the need for sustainable ideals which can improve the outcome as we aim to reduce input and generate ecologically and economically favorable outcomes. The requirements of better understanding our ROWs—from soil to sky and everything in between—have never been more crucial in our integrated vegetation management and vegetation management evolution, and will only become more necessary as we brace for more erratic weather systems. Additionally, other high-impact factors may include the need for more aggressive invasive-species countereforts and improving our engagement in human-related aspects of our work; and most prominently will be safety challenges at an operational level as we are called to do more with sometimes lesser resources. However, opportunities abound for us to collectively draw on multidisciplinary approaches and bridge our enhanced stewardship and sustainability goals with solid use of new and emerging technologies. Our focus on the ecological and economic return on investment (EROI) must embrace equally both tried-and-true and emerging concepts and higher-order data management and analytics.

COURTESY OF ACRT SERVICES.

Tulip poplar (Liriodendron tulipifera). *Courtesy of ACRT Services.*

Swainson's hawk (Buteo swainsoni). *Courtesy of Samuel Davidson, ACRT Pacific*

Sphinx moth (Sphingidae). *Courtesy of Samuel Davidson, ACRT Pacific*

Red-spotted Admiral (Limenitis arthemis). *Courtesy of ACRT Services.*

Metrics and Branding Aligned with Biodiversity

One way to connect our soil-to-sky aspirations is to look at biodiversity in our CAPs and embrace the philosophy of "connected biodiversity." I have long maintained the view that our end goals of sustainability and biodiversity gains are hitched closely to our in-house policies and planning that have now, to be effective, must be based on solid and defensible metrics.

Courtesy of ACRT Services.

BKGD. ©ISTOCK/CHINNAPONG
BRANCHES: ©ADOBE STOCK/RAMIN

Metrics are "not just numbers"; they must mean something aligned with our brand. Everything comes down to how we, as utilities, support agencies and other institutions and departments through meaningful inward-looking and outward-facing dialogue to communicate our management challenges and successes. Biodiversity metrics in our ROWs can enable a cohesive plan to come together and demonstrate CAPs' achievements over time—both gains and deficits. The use of audits, while fragmented, in the past must now be connected and aligned closely with our management strategies. On a positive note, several utilities, including National Grid, have embraced the utilization of connected metrics, such as BIOaudit™. These are deployed over multiple cycles to draw business conclusions that are connected, data-informed, and meaningful for further use in planning. The larger picture emphasizes too that biodiversity metrics—a product of training, knowledge of ROWs systems, plant population assessments, and other ecological attributes—come together nicely as a model for the future of many of our management operations on the ground, including pre- and post-construction, remediation of sites, rewilding of sites, and more.

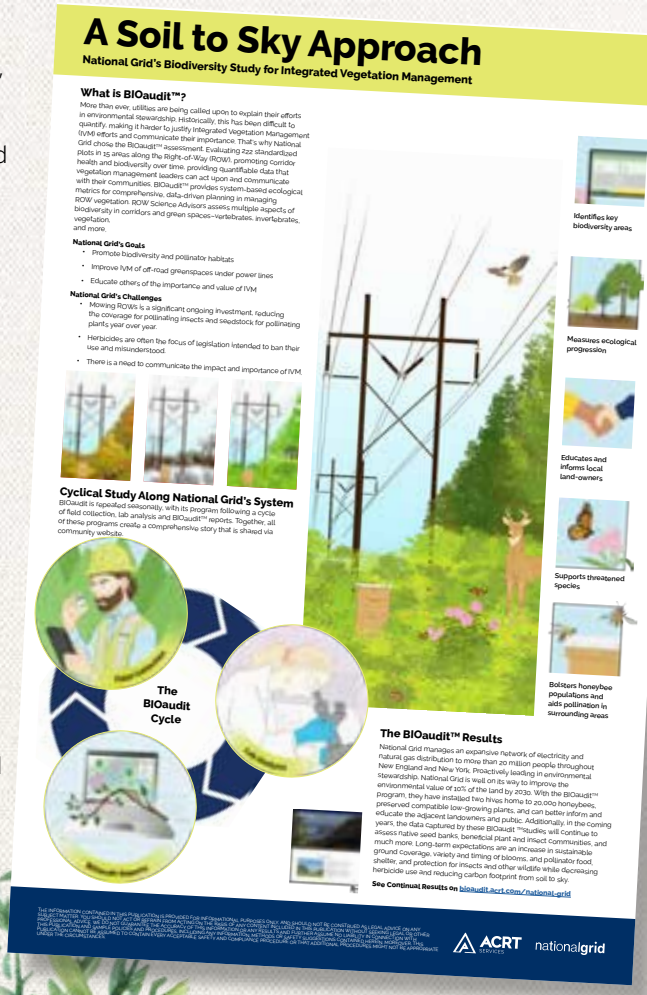
The connection of biodiversity as a suitable result measurement tool (metric) to what happens during the process of IVM and VM rises in importance now as everything comes together and is packaged effectively to draw inherently from all contributing aspects and tasks.

Once a hard alignment to conceive that of meshing safety, climate, and economics to biodiversity is now achievable as indices for each step and contributing counterefforts to our challenges can now be assessed and rated over time and between cycles. Because our financial reporting is already closely aligned with management, this piece comes together to deliver on our gains and return on investments.

The alignment of biodiversity metrics and cycles can be easily assimilated and generated in periodic reporting if suitable technology and software can be adopted to deliver these as needed, sometimes in real-time scenarios, enabling a more dynamic pivot and shift in management systems deployed or if needed.

The Rise of Technology and the Biodiversity and Human Interface

The use of rapid relay systems to help with the conversion of data to information will enable, in addition to reporting, the ability to intercept and implement new strategies. For example, as we pivot with erratic weather systems and the need for enhanced safety deployments, a faster response to change is needed. Technology can help and artificial intelligence tools are already a mainstay for many but will require us to adequately brace for the steep learning curve through effective training. For many personnel, this will be best met with effective and directed training programs that can then be applicable to adaptive research and real-world situations. Biodiversity does not occur in a vacuum; and in our CAPs initiative and as we engage metrics and assessments, many of our related goals (such as vegetation-caused outage reporting) become relatable, especially in cases of storm response and others, such as remediation and post-construction re-canopy initiatives. The advent of AI-driven management tools coupled with advances in technology, such as LiDAR and satellite, do help with proactive determination of movement of assets and general program management. The human aspect of our CAPs is closely related to outcomes and challenges, which may include worker retention and shortages, and may also be addressed with suitable technology adoption. This includes ready access to programs and software tools that can engage and stimulate workers and raise the profiles of task-doers who become more qualified and can showcase the ability to employ systems that can respond as shifts occur.



Courtesy of ACRT Services.

Corporate Social Responsibility, Biodiversity, and Communities

By far one of the most significant gains of connected biodiversity as a tool is for ecological (and economical) EROI delivery to our communities. The promise of a greener world and enhanced stewardship objectives is today a major criterion and performance index for a lot of green space managers in the utility world—as well as in urban forestry—as we implement CAPs. Our ability to showcase advancements and success to our neighbors and landholders in the area communities we serve is paramount in our corporate social responsibility (CSR) initiatives. Biodiversity reporting under this umbrella will only become more important as we engage with communities and can effectively narrate not only the good we as IVM and VM managers are doing but also the good we will leave behind. Outward-facing dialogue with communities is just as important as getting the job done. Both inward and outward showcasing of our CAPs and biodiversity can be narrated via signage, newsletters, websites (e.g., *bioaudit.acrt.com/national-grid*), and other marketing materials, such as infographics.

As we continue to embrace change and positively affect biodiversity levels, we as greenspace managers collectively shoulder the responsibility to adapt. Our adoption of new technology, enhanced initiatives, and engagement of the human and social aspects of our work will ultimately reflect on the EROI we realize. By engaging in proper metrics and being able to pivot as needed, our work becomes more dynamic and able to realize our goals more effectively. In conclusion, today as we think "big picture," we need to train ourselves to adapt, engage spherically, and morph our strategies. We must remember that our legacy will be written in green.

About the Author

Dr. Anand Persad is the Director of the Research, Science, and Innovation (RSI) team at ACRT Services. He has an extensive background in arboriculture, invasive species, tree biomechanics, pollinator health, wetland restoration, avian studies, and more. He is the Research Committee Chair for the UAA, Chair of the ISA Science and Research Committee, and actively works with city, state, and federal organizations in taking innovation and technology from development to implementation. He holds a PhD in invertebrate ecology/entomology from the University of the West Indies. In 2021, he was recognized as the recipient of the ISA L.C. Chadwick Award for Arboricultural Research, as well as the Award of Achievement by the Ohio Chapter of the ISA.

Silver LEVEL SPONSOR SPOTLIGHT

ARBORMETRICS®
PEOPLE ARE OUR POWER®

Sustain the Habitats in Your Rights-of-Way with ARBORMETRICS

If you are struggling with ensuring a sustainable ecosystem on your rights-of-way, it's probably not due to a lack of desire or vision. The sincere commitment is everywhere—*and growing*—in the utility industry. But care is simply not enough to guarantee a consistently environmentally responsible integrated vegetation management program.

You need to translate vision into practice. That means securing and maintaining funding, balancing budgets, and turning expectations into repeatable outcomes. It's as invigorating and necessary as it is daunting and challenging. But it's also achievable and rewarding—you just need the right partner.

ARBORMETRICS can help you develop and implement a best-practice-based IVM program that ensures the sustainability of the habitats in your ROWs while improving cost-efficiency. Through IVM, you can mitigate concerns related to endangered species, increase pollinator habitat and other low-growing plant communities compatible with electric ROWs and local ecosystems, and reduce the amount of harmful invasive plants on your properties. And you can do it while reducing your operating and maintenance costs.

ARBORMETRICS combines expertise in budgeting, scheduling, and customer relations with Project Management Institute® (PMI) principles to deliver an IVM program that addresses the needs of your governmental, community, and industry stakeholders. To that aim, ARBORMETRICS specifically offers:

- Experience working with local, state, and federal agencies
- Proactive habitat protection via protocol-based prescriptions
- PMI-based methods
- Training on current BMPs for managing pollinator habitats and combating undesirable invasive plants
- Comprehensive understanding of applicable regulatory bodies and standards
- Coordinated and consistent resource allocations to ensure knowledge retention and transfer year-over-year
- Comprehensive data collection, storage, and reporting

At ARBORMETRICS, our mission is to improve the effectiveness of VM through safe, efficient planning, scheduling, and reporting services. And we can help you ensure environmental stewardship with your IVM program. Learn more at (866) 685-1880 or *info@arbormetrics.com*.

THE POWER OF PEOPLE

Exceptional people providing efficient, effective vegetation management systems.

www.ARBORMETRICS.com

1.866.685.1880

ARBORMETRICS®

PEOPLE ARE OUR POWER®

Invasive *Phragmites*

By Chelsey Blanke and Julia Bohnen, Ecological Researchers, University of Minnesota/Minnesota Aquatic Invasive Species Research Center

Photos courtesy of Julia Bohnen

There is a window of opportunity to defend Minnesota from invasive *Phragmites* (*Phragmites australis subsp. australis*), a tall wetland grass that grows in impenetrably dense stands, transforming habitats and hindering infrastructure. Utility arborists can provide support through their keen plant knowledge and eyes on the landscape.

Invasive *Phragmites*, or common reed, is a tall perennial grass found along shorelines and in other wet areas, such as roadsides and stormwater ponds. Both native and non-native (invasive) genotypes occur in Minnesota. While invasive *Phragmites* has taken over vast areas in other states, the scale of invasion in Minnesota still offers hope for effective management. The Minnesota Aquatic Invasive Species Research Center has partnered with the Minnesota Department of Natural Resources and many local organizations to support strategic, coordinated control of invasive *Phragmites* statewide. The goal is to slow and ultimately reverse the spread of invasive *Phragmites* in the state.

How Can You Help?

- Avoid spreading invasive *Phragmites*—seeds, stem fragments, rhizomes, and stolons can all contribute to spread.
- Keep an eye out for invasive *Phragmites* and report new populations. Visit *maisrc.umn.edu/phragmites-id-report* for identification and reporting instructions.
- Contact the team at *phragmites@umn.edu* to have invasive *Phragmites* controlled using best practices. Technical, financial, and other resources may be available.
- Be careful! The native subspecies of *Phragmites* can be challenging to distinguish from the invasive subspecies. Native *Phragmites* is an important component of native wetlands and should **NOT** be targeted for management.

Description

Phragmites australis subsp. australis, also known as European common reed, is a tall, densely growing perennial grass that can take over large areas. It occurs in wetlands, riparian areas, shorelines, and other wet areas such as roadside ditches and stormwater ponds, and can often be found growing alongside native *Phragmites*. Native and invasive *Phragmites* can be difficult to distinguish from one another.

Origin and Spread

Invasive *Phragmites* was introduced to North America from Europe in the mid-1800s, likely from ships' ballast discharge. Contemporary spread occurs via seed dispersal from established populations, including populations intentionally planted in wastewater treatment facilities where it is used to dewater biosolids. Mowing along roadsides is another important source of spread. Deliberate introductions in Minnesota are now prohibited.

Established patches of *Phragmites* expand in place by sending out long, aboveground runners

Key Threats

- Creates dense, impenetrable stands up to 18' tall
- Outcompetes and reduces native plant diversity
- Reduces habitat quality for fish and wildlife
- Alters wetland hydrology and impacts function of drainage ditches and stormwater ponds
- Reduces access and habitat quality for hunters, anglers, birders, and other recreationists
- May block roadway sight lines
- Linked to declining property values

Native: *Leaf sheaths loosely attached, tending to not overlap; stems smooth and glossy, with segments in lower portion typically red*

Invasive*: Leaf sheaths closely attached and overlapping; stems typically green with ribbed texture*

Plant height can be from 8' up to 18' tall. Foliage stays green until after the first hard frost. Inflorescenses are densely branched, typically upright conical in shape, and orange-tan in color by late fall.

(stolons) or underground stems (rhizomes). Seeds and stem fragments are major drivers of spread to new locations. Seeds can be spread by wind and mechanically—such as by equipment or on clothing. Mowing during the growing season (i.e., along roadsides) results in stem fragments that can sprout to create a new plant if they drop in a moist location.

Management

Best practices for control involve treatment with imazapyr and/or glyphosate from August 1–September 30. Winter or summer mowing may be used to facilitate access and herbicide contact. Multiple years of monitoring and follow-up treatment are likely needed to achieve sustained control of invasive *Phragmites*. It is critical to confirm identification of invasive *Phragmites*, follow permitting and regulatory requirements, and prevent further spread when conducting control. Please visit *mnphrag.org* for information about how to identify the native and invasive subspecies and report invasive *Phragmites*.

Funding for this project was provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Minnesota Aquatic Invasive Species Research Center (MAISRC), the Legislative-Citizen Commission on Minnesota Resources (LCCMR), and the Great Lakes Restoration Initiative.

Native: *Ligule is an upright red-brown smudgy tissue, >1 mm tall*

Invasive: *Ligule is a thin discrete brown-black line, <1 mm tall*

The ligule (located inside at the junction of the leaf blade and leaf sheath) is a strong diagnostic character. Both native and invasive Phragmites *have a fringe of short hairs on the ligule during the growing season.*

Distinguishing invasive Phragmites *from the native subspecies can be challenging. Reliable ID requires using 3–4 different characters. Visit the website for more information.*

Silver LEVEL SPONSOR SPOTLIGHT

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* and talk with our team to understand how Forester can further improve your reliability and environmental stewardship.

ATTRACTING THE NEXT GENERATION
of the VM Workforce and Benchmarking Best Practices for Success

By Laurel Yartz, Director of Human Resources, Lewis Services

Laurel A. Yartz

The NFL Draft is no longer an event that only appeals to die-hard football fans, wannabe coaches, and Vegas bookies. Today's draft has the pageantry of the Oscars, magic of Disney, and heartwarming stories pulled from the Hallmark channel. Bolstered by years of savvy marketing and sophisticated production, the NFL has been able to elevate its brand, diversify its audience base, and expand media partnerships—resulting in a viewership of **54 million people** during the 2023 draft.

When the Rochester Technology & Manufacturing Association in Western New York wanted to ramp up excitement around their new Finger Lakes Youth Apprenticeship Program, they borrowed a page from the NFL and created a signing event that celebrated high school apprenticeships with all the bells and whistles of a professional draft. Student "picks" were announced with great suspense as a ticking draft clock wound down with each round (*"Kodak's pick is in!"*). Music blared over loudspeakers. Parents erupted in applause. TV stations interviewed the newly signed high school apprentices. And elected officials heartily welcomed the next generation of the workforce. (Spoiler Alert: After the rigorous application process, all students accepted to the program are celebrated as First Round picks!)

The manufacturing industry isn't the only one courting youth while they're in high school, middle school, and even younger. Construction, healthcare, and emergency response sectors have been hosting job exploration events for years, serving on Career Day panels, and working with school districts to develop programs that introduce students to vocational paths in high-demand sectors.

Yadira Montes, a field hiring specialist with Lewis Services, shared her recent experience at a high school career fair—and her excitement about introducing students to careers in vegetation management. "My territory includes North Carolina, South Carolina, and Florida. And as I travel to recruiting events, I am always looking for ways to introduce people to the rewarding opportunities in vegetation management." So, when Montes was asked if Lewis would like to participate in a career day at the Dillion School District in South Carolina last spring, she immediately said, "Count us in!"

Montes learned a lot from talking with the students and quickly realized that while students are often familiar with job opportunities in other trades like construction and manufacturing, they don't know much about vegetation management. Students remarked to her, "I've seen your trucks!" but they didn't necessarily understand the vital work those trucks and crews perform. The career fair gave Montes and her colleagues the chance to talk one-on-one with students, clear up misconceptions, and answer important questions. Students inquired about how many females work in VM, what kind of training is needed, if employees have to pay for their own commercial driver's license, and how much they earn. For many students who don't want (or cannot afford) to pursue a four-year college degree, learning about the opportunities in VM and related trades was eye-opening and possibly lifechanging.

Fortunately, for students seeking a direct path from high school to employment, there are more opportunities now than ever before. According to a report released by the Bureau of Labor Statistics, approximately 60 percent of new jobs in the economy between 2020 and 2030 will be

Photos courtesy of Lewis.

The Finger Lakes Youth Apprenticeship Program borrowed a page from the NFL by creating a signing event that celebrates high school apprenticeships with all the bells and whistles of a professional draft.

Dillion School District 2023 Career Fair. Yadira Montes (right) with Lewis colleagues.

in occupations that don't typically require an associate's, bachelor's, or graduate degree (*bls.gov/careeroutlook/2022/article/occupations-that-dont-require-a-degree.htm*).

This is great news for sectors like vegetation management, utilities, construction, and a spectrum of essential trades that are eager to talk with—and train—students in high school. Montes, who previously worked in the construction industry and participated in many youth career events, emphasizes the value of partnering with schools on career exploration programing.

"Schools have always been focused on preparing students for their next stage in life. This includes putting them on the path to a successful, fulfilling career with livable wages and opportunities for advancement." Montes continued, "Companies like Lewis, our utility partners, and others in the VM sector are excited to collaborate with schools in support of today's youth, and help design relevant programming that bridges the gap between graduation and meaningful employment."

One example of such collaboration is the Career Pathways program between the Chicago Public School District and Commonwealth Edison (ComEd), the largest electric utility in Illinois. Sara Dresier, a senior program manager with ComEd, has been developing the Pathways program for students in vocational and agricultural programs, and recruits volunteers from utility and VM sectors to give presentations (and possibly summer internships) to interested students. Dresier kicked off the new initiative in December 2023 and was very pleased with the results.

"This program is a fantastic forum for students and professionals to have an open discussion about what a career in utility forestry really looks like. Our industry volunteers came from different backgrounds, levels of education, and entry points into the industry—ranging from high school diplomas to advanced degrees, and forestry to engineering. It was great for students to see that there are many diverse paths, opportunities, and

The original youth apprenticeship cohort and event guests for the Finger Lakes Youth Apprenticeship Signing Day.

©ADOBE STOCK/CHANWIT

fulfilling careers in this field," said Dresier.

Asked about future plans to build relationships between Lewis and high schools in the communities where Lewis works, Montes shared that they will be taking a proactive approach and emailing local districts to discuss a variety of ways that they can partner: "We've had great success with community events like Touch-a-Truck where we bring our vehicles to schools and job fairs, and kids get a close-up view of the equipment. Bucket trucks are a huge hit!" These community events are a great way for students to see the equipment, ask questions about the function of each piece, and perhaps pique their interest about future careers.

Thanks to her background in construction, Montes knows that there are many skills and interests that students have been building throughout childhood—such as working on farm equipment, tinkering with cars, or participating on robotics teams—that transfer nicely to vegetation management. Montes said, "Working with tools and equipment is a highly desirable skill set—one that we'd love to grow and develop."

In a recent segment of CBS News MoneyWatch, researchers stated that many companies are taking a skills-based approach to recruitment and hiring versus college degree requirements. Parisa Fatehi-Weeks (senior director of environmental, social, and governance for hiring platform Indeed) told MoneyWatch, "Part of it is employers realizing they may be able to do a better job finding the right talent by looking for the skills or competencies someone needs to do the job and not letting a degree get in the way of that." Employers are also interested in finding candidates that show potential, and then invest in them through training and certifications (*cbsnews.com/news/college-degree-job-requirement*).

As a hiring specialist, Montes knows how to spot a candidate who might not have specific experiences but has growth potential. "At Lewis, there are many examples of employees who started their careers as grounds persons and are now serving in leadership roles. We know that **today's** students are **tomorrow's** leaders. We want to connect those students with Lewis leaders and show them firsthand what a bright, rewarding path could look like in the vegetation management sector."

Community events, like Touch-a-Truck, are a great way to spark interest in students for future careers in vegetation management. Photo courtesy of Lewis.

Silver LEVEL SPONSOR SPOTLIGHT

LEWIS

Leadership in Action—Leaders at Every Level

There is no shortage of inspiration when it comes to the topic of leadership. Motivational statements, famous quotes, and uplifting testimonials can be found in classrooms, offices, bookstores, and across social media platforms. There are countless conferences, podcasts, webinars, books, speaker series, and training courses dedicated exclusively to the pursuit and development of leadership qualities.

So how do we lift these important concepts off the pages, move them from *theory* to *practice*, and make the transformative shift from *inspiration to action*? How are leaders at every level motivated to work harder, dig deeper, and develop their leadership potential?

This year, Lewis is proud to be embarking on **Leadership in Action**—a company-wide initiative that is moving the needle on leadership and uplifting Leaders at Every Level.

Guided by seven leadership principles—chosen for their relevance and impact throughout the organization—we are engaging our entire team of 4,000+ staff across 27 states on this exciting, important journey. We are embedding these principles into every safety call, every storm response, in every department, and across every division in fulfillment of our Customer Promise and commitment to a **Job Done Right**®.

Join us as we celebrate **85 Years of Service** with special Leadership in Action social media posts every Friday and profiles of Lewis Leaders at Every Level throughout the year.

www.lewisservices.com/leadership-at-lewis

Across every facet of the energy industry, the landscape of the grid is undergoing **a generational transformation.**

Clean power generation and storage sites are under development everywhere.
New infrastructure is being built and old wire is being replaced.
Overhead lines are moving underground, and electric and gas rights-of-way are evolving as habitat for birds, bees, and animals great and small.

Amidst all of this, one thing hasn't changed. That's the unmatched **Agility + Ability** of the Lewis team to listen to your needs and respond with solutions that deliver.
On time. On budget. On point.
Always with uncompromising attention to safety and customer service.

For 85 years, Lewis has evolved and advanced as the industry has grown.
Let us help you make the transition to America's energy future.

Don't settle for less than Lewis.

www.lewisservices.com

WE APPRECIATE OUR UAA UTILITY SUPPORTERS AND CORPORATE SPONSORS

The Utility Arborist Association is pleased to have an outstanding group of utility supporters and corporate sponsors. We encourage you to visit their websites to explore their products, services, and mission.

UAA CORPORATE SPONSORS

PLATINUM

ASPLUNDH

GOLD

DAVEY
Proven Solutions for a Growing World

GROW WITH TREES
BOOTS TO THE BOARDROOM

SILVER

ACRT

ACRT PACIFIC

ARBOR METRICS
PEOPLE ARE OUR POWER

CNUC

ECI
Environmental Consultants

FirstEnergy

gsi
GeoSpatial Innovations, Inc.

iapetus
infrastructure services

LEWIS

NGG
NG GILBERT
Performance You Can Count On

overstory

PennLine

SDGE

TOWNSEND

WRIGHT

BRONZE

CLEARION

SUPPORTER

PRF
FORESTRY SPECIALISTS

ProtecTerra, LLC

Your sponsorship makes a difference!

Sponsorships support webinars, meetings, our website, marketing and branding, communications to students of our industry, and in many more areas the UAA is striving to reach. Scan the QR code to learn more!

Group Membership Supporters

ACRT

ARBOR METRICS
PEOPLE ARE OUR POWER

CNUC

ECI
Environmental Consultants

2022 PinE Award Recipients

PARTNERS IN EXCELLENCE PROGRAM

The Utility Arborist Association is the leading North American organization for the enhancement of quality utility arboriculture and right-of-way (ROW) management. Our success relies on the support we receive from all of our members, sponsors, and volunteers.

Companies that go above and beyond to support our mission will be recognized annually through our Partners in Excellence (PinE) Program.

Membership, sponsorship, advertising, active committee volunteerism, and many other means have been quantified and assigned a value, all adding up to equal a PinE Score.

All applications and supporting material of qualifying companies are reviewed and selected by the PinE Committee.

We want to take this time to congratulate and thank our 2022 PinE Award Recipients.

Your continued support of the Utility Arborist Association is greatly appreciated on many levels.

PLATINUM AWARD

- Pacific Gas and Electric Company®

GOLD AWARD

- ACRT
- ACRT PACIFIC
- DAVEY Proven Solutions for a Growing World
- DAVEY Resource Group

SILVER AWARD

- ARBORMETRICS PEOPLE ARE OUR POWER
- ASPLUNDH
- CNUC
- CORTEVA™ agriscience
- DUKE ENERGY®
- ECI Environmental Consultants
- HUB
- TOWNSEND
- WRIGHT

BRONZE AWARD

- JACOBS®
- LEWIS
- overstory

Education Meets Environment: Eversource's Utility Arboretums

By Bob Allen, Vegetation Management Manager–NH, Eversource

As a manager of vegetation management for New England's largest utility, my work is dedicated to educational partnerships with arborists, municipalities, students, and the public about planting the right tree in the right place, and preparing for and combatting the natural threats to our trees—including disease, invasive insects, and winds—that further contribute to these immutable forces of nature as the leading causes of power outages in our region. The windstorm that hit Portsmouth, New Hampshire, in early 2012 was especially devastating to the Urban Forestry Center (UFC), one of the Granite State's crown jewels of arboriculture. A grove of mature spruce trees was blown down by the wind off the water, and by the end of the storm, there was a jumbled mess of tops, limbs, and timber laying where majestic conifers once stood.

Eversource Utility Arboretum—Portsmouth, New Hampshire

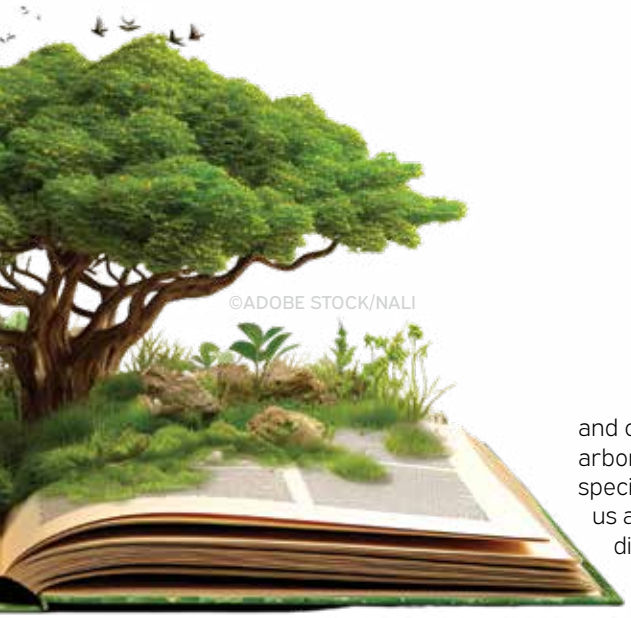
In the aftermath, a few individuals from the New Hampshire Community Forestry Advisory Council (CFAC) gathered on-site to brainstorm a use for this new clearing, which opened a vista to the water from several vantage points. While this was a wonderful outcome in one sense, there was also a decided lack of trees—and this is a forestry center, after all.

One idea stood out, with education at the heart of the UFC: a utility arboretum. Many utilities, universities, garden clubs, and tree companies have always suggested "Right Tree, Right Place" and "Plan Before You Plant" when discussing tree planting, and a utility arboretum would enable the UFC to host a demonstration site to educate the public about species that can grow and coexist with overhead utilities.

At the next CFAC meeting, the idea was presented and unanimously approved. We quickly got to work, bringing together a group of experts to get the idea off the ground. Along with AJ Dupere and Angie Hammond from the New Hampshire Division of Forests and Lands, I helped spearhead this effort with a talented group of stakeholders, including Asplundh Tree, the United States Forest Service (USFS), and Public Service of New Hampshire (PSNH, a predecessor company of Eversource), to develop the plan for the first utility arboretum in New Hampshire.

We secured funding to purchase trees and mulch, the PSNH line department created a design and provided materials, Asplundh Tree provided equipment and labor, and the USFS provided administrative support, while New Hampshire Forest and Lands personnel prepped the site and supplied labor and equipment. Thanks to the collaboration, a two-pole line (including de-energized primary and secondary wires) was built, a dozen low-growing trees were planted, and signage was installed where the Eversource Utility Arboretum now abuts

Eversource's Utility Arboretum in Portsmouth, New Hampshire, 2013. Photo courtesy of Eversource.



the center's parking lot, allowing great access for folks interested in learning more about planting trees at this popular destination.

The following year, after a merger between Northeast Utilities and NStar led to the company now known as Eversource, our three-state VM team held our first "all-hands" meeting there, which successfully enabled the team to come together quickly with our shared love for trees and represented our director Vera Admore-Sakyi's clear message about the role of VM in our new company. Admore-Sakyi was so impressed with the utility arboretum and the communal origin story, she empowered me to build arboreta in Massachusetts and Connecticut—helping lead to my role with the new company expanding beyond New Hampshire, with responsibilities in Massachusetts shortly thereafter.

UMass Amherst Utility Arboretum

We then began working with several tree wardens in Massachusetts to find an ideal site for the next utility arboretum. As it turned out, there was land available at UMass Amherst in an area of campus known as the Agricultural Learning Center (ALC). Working with Dr. Dennis Ryan, Dr. Brian Kane, Professor Mike Davidsohn, and UMass Head of Grounds Todd Cournoyer, we were able to secure a perfect site located within the ALC. Preeminent horticulturist and author of several books, including the monumental *Manual of Woody Landscape Plants*, Dr. Michael A. Dirr (whom I had met previously on a tree walk at UMass and corresponded with about utility arboriculture and underutilized tree species in the landscape) also later met us at the proposed site for a productive discussion.

The site for the UMass Amherst utility arboretum was next to a gravel road mostly used as a path for jogging, biking, and dog walking and had approximately 1,200 linear feet of roadside planting space available, but would require significant site work prior to drawing up plans for pole placements and plantings, as the area had not been maintained regularly. There was poison ivy, bittersweet, sumac, and various brambles and briars that needed cleaning up, and during the brush cutting we also uncovered stones,

Eversource's UMass Amherst Utility Arboretum. Photo courtesy of Eversource.

stumps, and other detritus.

Eversource Vegetation Management contractors from Asplundh Tree, Northern Tree, and Distinctive Tree worked hand-in-hand with the UMass grounds crews to clear the area, and we were happy to eliminate invasive species and reclaim the natural landscape, which took about one week with a bucket truck, brush mower, and skid steer. We were then able to bring in an Eversource engineer to design the pole line, which included input from our arborists, UMass professors, and their head of grounds, plus Eversource field training personnel. The final design included seven 40-foot poles, 1,000 feet of primary wire in several different configurations at the pole tops, individual transformers and cluster mount transformers, secondary line, appropriate guying, and a pad-mounted transformer.

With 100% buy-in from Eversource Chief Operating Officer Werner Schweiger, we were able to get the materials and equipment needed for the project. Due to very precipitous timing, Eversource was in the process of tearing down an old training yard to build a new one—meaning material was available, including the poles, wire, transformers, and guying needed for the arboretum. Our vice president responsible for VM at the time, Steve Driscoll, also had training under his purview and we were able to quickly transfer everything from Berlin, Connecticut, to the UMass Amherst campus.

The training group also had a class of lineworker apprentices who had progressed enough in their craft and were able to work aloft on de-energized lines; so the apprentices built the pole line while gaining valuable experience that otherwise would not have been in their curriculum. With the continuing holistic focus on education through our burgeoning utility arboreta initiative, this was nice symmetry: we were constructing a demonstration site on the campus of a first-class university whose students, professors, and landscape crew partook in the construction by planting trees and shrubs. When completed, this project featured more than 50 trees and shrubs, becoming a world-class demonstration site that we have used for training, contractor "safety days" as an outdoor classroom, and for Earth Day and Arbor Day celebrations. The fact that this pole line is not energized allows for unique training and safety demonstrations, and we also left four mature trees in the wire zone for students to learn about working within proximity to overhead electric lines. Training at this site has increased every year since it was built, and our next safety and training session is scheduled for June, when several crews will demonstrate pruning and rigging on these mature trees. The UMass landscape team has been an excellent partner, still regularly maintaining the utility arboretum amongst the huge, beautiful campus of more than 20,000 students.

Hooksett Utility Arboretum

Back in New Hampshire, our vegetation team was transferred from Manchester to a neighboring town, Hooksett, a few years ago. This new location was like a blank canvas for us, and there was already an energized off-road line that ran parallel to the access road to our office facility while feeding the operations of a large manufacturing firm nearby. At the time, it was being maintained by brush mowing of the right-of-way floor and side-trimming of the wooded edge. We asked for and received permission to use the line as another demonstration site and utility arboretum in New Hampshire. Unlike our original arboretum at the UFC in Portsmouth, this property

Ginkgo (Bingko biloba)*, Hooksett Arboretum*

Bosnian Pine (Pinus leucodermis)*, Hooksett Arboretum*

'Sugar Cone' Sugar Maple (Acer saccharum)*, Hooksett Arboretum*

Black Haw Viburnum (Viburnum lentago)*, Hooksett Arboretum*

'Purple Fountain' European Beech (Fagus sylvatica)*, Hooksett Arboretum*

Photos courtesy of Eversource.

NOW OPEN!

UAA®
UTILITY ARBORIST ASSOCIATION

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

Visit the UAA Member Portal Feed, Monthly Update, and Social Media for more info!

Get your original photo published on the cover of the *Utility Arborist Newsline!*

We are encouraging members to submit their best photos representing professional utility arboricultural services, centered around the people who make up our incredible industry.

The selected photos, chosen by the UAA Editorial Committee, will be featured as the cover art for the 2024 *UAN* issues. Our goal is to showcase the diversity of the people and roles in the industry, whose commitment and dedication enrich the growth and practices of utility arboriculture.

These photos should be:

- Full page, measuring 7.5" x 9.875"
- Portrait mode, not landscape
- High resolution (300 dpi or higher)

Submit all photos to *newsline@gotouaa.org*. The image deadlines for the remaining magazine issue are as follows:

MAY/JUN—March 4, 2024
JUL/AUG—April 29, 2024
SEP/OCT—July 8, 2024
NOV/DEC—September 2, 2024

We look forward to seeing your photos!

was more than 600 linear-feet long and 50 feet from the access road, offering a unique opportunity as an exciting location to showcase the trees that we believe can coexist with overhead lines their entire lives. After tilling in several loads of robust planting mix into the sandy soil, we selected more than 60 trees to plant there and built a path that our employees could use to stay active, get their "steps in," and take refreshing mental breaks.

The other benefit of the path is the ease for community groups, garden clubs, classrooms, and tree companies to partake in guided walks. As we worked with several of our contractors who donated labor, equipment, material, trees, large rocks, and benches, this became the only one of our four utility arboreta that has energized lines. While this limits the amount of training that can be scheduled at the site, it is the most accessible for the general public since there is plenty of parking, the path is flat, and the site is bordered by a pond and woodland, which adds to the park-like feel of this arboretum. As with the UMass site, there are also multiple signs explaining the reasons behind the creation of these outdoor classrooms.

Hooksett Utility Arboretum, 2021. Photo courtesy of Eversource.

Gold Leaf Award

Recognizing the benefit of our educational partnerships with arborists, municipalities, students, and the public, the New England Chapter of the International Society of Arboriculture (NEC-ISA) bestowed in October 2021 its prestigious Gold Leaf Award to Eversource Vegetation Management for our commitment to improving the landscape by the construction of these arboreta. Additionally, our informational resource for our customers and partners throughout our communities, the "30 under 30" poster, was given high marks and was readily accepted by the tree and landscape communities as a forward-thinking guidance document. The NEC-ISA held their annual conference for 2021 in Manchester, and a tour of the Eversource Hooksett Utility Arboretum was a part of the agenda. More than 20 arborists attended the tour and were able to ask questions regarding species that were planted at the site and where they were sourced from.

Eversource leadership attended the conference and accepted the award. When touring the Hooksett site, attendees were so impressed with the design I was asked to reboot the arboretum that was under construction at Eversource headquarters in Berlin, Connecticut. I was happy to help complete this site, which is located directly across from our new training yard, greatly enhancing foot traffic. The site isn't flat or well-drained but does receive several hours of sun, which helped us to select the species that we planted there. There is a wildflower meadow constantly visited by birds, bees, and moths, a natural complement to the "Pollinator Roadmap" that we created at Eversource to highlight various plants and their pollinators. This trifold opens out to a small poster and has been very popular with our municipalities, nurseries, garden centers, and schools.

With 36+ years in utility arboriculture, I have been involved in many projects and worked through several major storms. There is valuable work and many ideas for improvements that came out of those long hours. But what I am most proud of is the creation of these four utility arboreta—especially the public and private partnerships happened to make them a success, the backing of our senior leadership to create them, the involvement of folks within the tree and landscape communities, and the work that was performed by our contractors and arborists. The collective effort and willpower from all these partners led to making these demonstration sites a success, that will instruct and provide research opportunities for decades to come. It also underscores our shared commitment to public education and safety while affirming a fundamental aspect of life for all people: our trees are integral to who we are and essential to life on our planet. We must nourish, cherish, and coexist with these wonderfully beautiful natural resources.

TOUR DES TREES 2024

RIDE AND SPREAD THE WORD ABOUT THE IMPORTANCE OF TREE RESEARCH.

NEW ENGLAND | SEPTEMBER 22–28
425 MILES OVER FIVE DAYS
VISIT TREEFUND.ORG TO REGISTER

Not able to make it out to New England but still want to support TREE Fund in your own way? Join our Virtual Tour des Trees at home and bike, walk, run, or swim your way to 425 miles! Achieve your mileage goal in your own way, on your own time and earn custom apparel items for fundraising.

VISIT WWW.TREEFUND.ORG FOR DETAILS.

TREE Fund exists to serve. Visit **treefund.org** to learn more about our research and educational grant programs as well as our database of previously funded research topics and to sign up for our free webinar series and newsletter updates.

TREE FUND
Cultivating Innovation

Small enough to call you by name. Large enough to respond. Since 1945, utility-related forestry has been a core element of the Penn Line organization. Today, we work for some of the nation's largest energy producers. We are a single source for broad capabilities in all aspects of vegetation management.

Penn Line Tree Service, Inc.
A PennLine COMPANY

PENNLINE.COM ▪ 100% Employee Owned

ANSI A300 Consolidated Standard

By Stephen Hilbert, ANSI A300 Committee Member and Asplundh Tree Expert Company

This past October, the new consolidated ANSI A300 Tree Care standard was published and is now available on the TCIA and ISA website. This first A300 standard was published in 1995 and only contained one part, Pruning. After that first publication it became clear that other parts or sections were needed to address other practices of tree care, such as construction, lightening protection cabling, and so on. Over time the ANSI A300 standard comprised ten parts, that were published in different years. Every five years an individual part was revised and republished. Typically, two new standards were released each year. This asynchronous release of the parts became confusing for the practitioner regarding what was the most up-to-date standard. We received feedback from the users of the A300 standards that a consolidated standard was needed. Through the diligent work of the A300 Committee, the last five years' consolidation was completed. Before consolidation it was referred to as the "10 parts," each with their own normative references and glossary. In the new consolidated standard, there are 15 clauses:

- CLAUSE 1–4: Scope, Purpose, Application, and General Info
- CLAUSE 5: Pruning
- CLAUSE 6: Soil Management
- CLAUSE 7: Supplemental Support Systems
- CLAUSE 8: Lightning Protection System
- CLAUSE 9: Management During Site Development and Construction
- CLAUSE 10: Planting and Transplanting
- CLAUSE 11: Integrated Vegetation Management (IVM)
- CLAUSE 12: Root Management
- CLAUSE 13: Tree Risk Assessment
- CLAUSE 14: Integrated Pest Management (IPM)
- CLAUSE 15: Industry Definitions

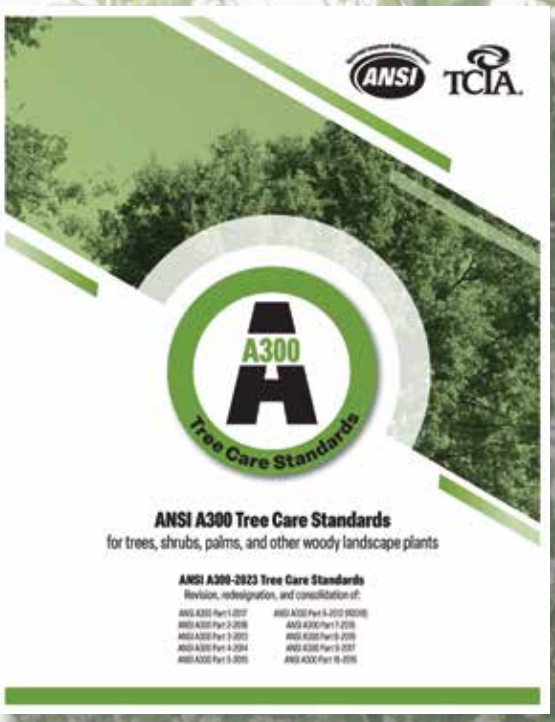
Arborists, urban foresters, horticulturalists, landscape architects, and contractors who work on trees and shrubs should perform their work according to the A300 standards. Some jurisdictions even have adopted the A300 standards into law. As utility vegetation managers, we must comply with the standard of care that the A300 set, which is based on extensive research and sound tree care practices. They are consensus standards developed by the committee and they serve as the foundation for writing specifications, best practices, and training programs to provide the best possible care to trees, shrubs, palms, and other woody landscape plants. They are intended to be guide rails for the practitioner, allowing specifications to be written for individual trees, entire municipalities, or miles of electric rights-of-way.

The committee decided to maintain a consistent flow through all of the standards, achieved with updated flowcharts for all clauses. As users become familiar with the new format, writing specifications should become easier. Some other changes include a standardization of the normative references and industry definitions.

The day-to-day operations of utility vegetation management usually fall under three of the clauses: Pruning, Integrated Vegetation Management, and Tree Risk Assessment. In 2023, Pruning and Integrated Vegetation Management were due for an update. There were major overhauls of those standards in the previous versions (2018), so the new 2023 versions should be somewhat familiar. Some of the sections of the pruning and IVM clause were moved within their respective clauses to better match the other clauses of the standard, to create consistency from one clause to the next. Within the pruning standard, the most substantial changes were several *shoulds* were changed to *shalls* to strengthen the wording of the standard. A few examples of those changes are:

- An arborist or qualified professional shall perform pruning.
- The location and types of utilities and other obstructions shall be considered.
- One or more pruning objective(s) shall be specified.
- Pruning Specifications shall include the location of the plants to be pruned, the objectives, what to remove, and a plan for disposal/recycling of debris.
- Pruning cuts … shall be made without cutting into the branch bark ridge or branch collar or leaving a stub and when removing a dead branch, the final cut shall be made just outside the collar of living tissue, without leaving a dead stub.
- Heading cuts shall only be made when necessary to accomplish certain pruning objectives.
- Branches likely to split wood or tear bark beyond the pruning cut shall be precut to avoid this type of damage.
- Topping and lions tailing shall be considered an unacceptable practice.

In addition to the consolidated standard available in paper format into one document, an electronic version is now available through the TCIA website. The A300 Committee hopes that the new consolidated standard is more accessible and easier to use. While the Z133 gives our industry guidelines to do our work safely, the A300 standards gives us the guidance to perform utility vegetation management correctly.



©ISTOCK/LINJERRY

iapetus
infrastructure services

Trees & Lines Connects with UVM Leaders, Past and Present

"At the end of the day, people have gone down the road before, and I don't necessarily want to make the same mistake that they made. So, I'm going to look to my mentors and folks that have come before me," UAA President Brandon Hughson mused when he joined *Trees & Lines* as a guest at the Trees & Utilities Conference last year.

Soaking up the knowledge and advice of past UVM leaders is what allows us to grow as an industry. When Hughson sat down with our hosts, UVM veteran Phil Charlton and Iapetus Infrastructure Services COO Tej Singh, he spoke about the importance of continuing to learn from (and engage with) past UAA presidents and officers.

On *Trees & Lines*, we provide a platform for past, present, and future UVM thought leaders to discuss the evolution of vegetation management and offer fresh perspectives about the future of the industry. In case you missed it, here are a couple of highlights from recent episodes.

Chair of the UAA Research Committee Dr. Anand Persad talked about UVM safety culture. "It all comes back to how we provide the material and how we base it—how we write it into our business plans, and so forth. Safety should be the number one priority of any business plan we write," Persad declared.

Bob Allen, manager of vegetation management at Eversource, discussed the issues that come about when a dominant tree species experiences widespread loss due to disease. "Once that tree is gone, we end up with a space that invasive species could grow in, or some other species could be planted there that might not necessarily be the tree that we want near the wire," Allen explained.

That's just the tip of the iceberg. Head over to *treesandlines.com* to listen to all our conversations!

Listen to more episodes here on Apple Podcasts!

SPOTLIGHT ON THE ENVIRONMENT

How Thinking like a Blue Jay Can Support Your ESG Strategy

By Kieran Hunt, Manager of Operational Analytics, Asplundh Tree Expert, LLC

Any bird watcher knows that blue jays are opportunistic and will loudly advocate for their interests. Our profession's shift toward data-driven and science-based approaches represents a huge opportunity for utility vegetation management professionals. While traditional line clearance activities aren't going anywhere, workforce shortages and advances in technology have prompted utilities and their vegetation contractors to consider additional methods for improving their UVM program's effectiveness. Many utilities and UVM programs are aggregating and analyzing program data to drive cost efficiency, report on environmental, social, and governance initiatives, and account for climate impacts and greenhouse gas (GHG) emissions. Utility vegetation management professionals are in an opportune position to help drive this conversation and demonstrate additional value from the work we do.

Integrated Vegetation Management

Integrated vegetation management is a system for managing vegetation that is self-improving, iterative, and lends itself well to a data-driven approach. The IVM framework includes assessing conditions on the right-of-way, determining action thresholds, evaluating treatment methods, treating, assessing treatment efficacy, and utilizing adaptive management to inform future management cycles. Integrated vegetation management benefits can include improved cost efficiency and sustainable practices, workforce diversification, improved stakeholder relations, and environmental stewardship.

Integrated vegetation management also emphasizes the use of biological controls as a best management practice, encouraging and cultivating compatible (low-growing) plant communities to hold space that would otherwise be utilized by incompatible plants, such as trees. Biological controls can include compatible plant communities outcompeting incompatible ones, and animals like deer, birds, and insects consuming tree seeds and seedlings (e.g., blue jays eating acorns). Biological control methods allow vegetation managers to promote ecosystem health while achieving necessary safety and regulatory key performance indicators (KPIs).

The emphasis on ecosystem-based management and cost-efficiency over cost savings makes IVM justifiable, ethical, and sustainable. However, the adoption of IVM faces barriers, such as operational changes and institutional inertia. Convincing utility decision-makers to embrace new practices and overcoming resistance to change are vital, challenging steps in breaking away from the status quo.

Building a Business Case for IVM Conversion

Integrated vegetation management lends itself well to a persuasive business case. Highlighting program benefits aligned with utility objectives, demonstrating financial advantages, and emphasizing positive impacts on ESG performance can all play a role. Aligning IVM with data-driven management and Science-Based Target initiatives (SBTi) will be persuasive to organizations steeped in cultural shifts tied to carbon offsets and ethical land management.

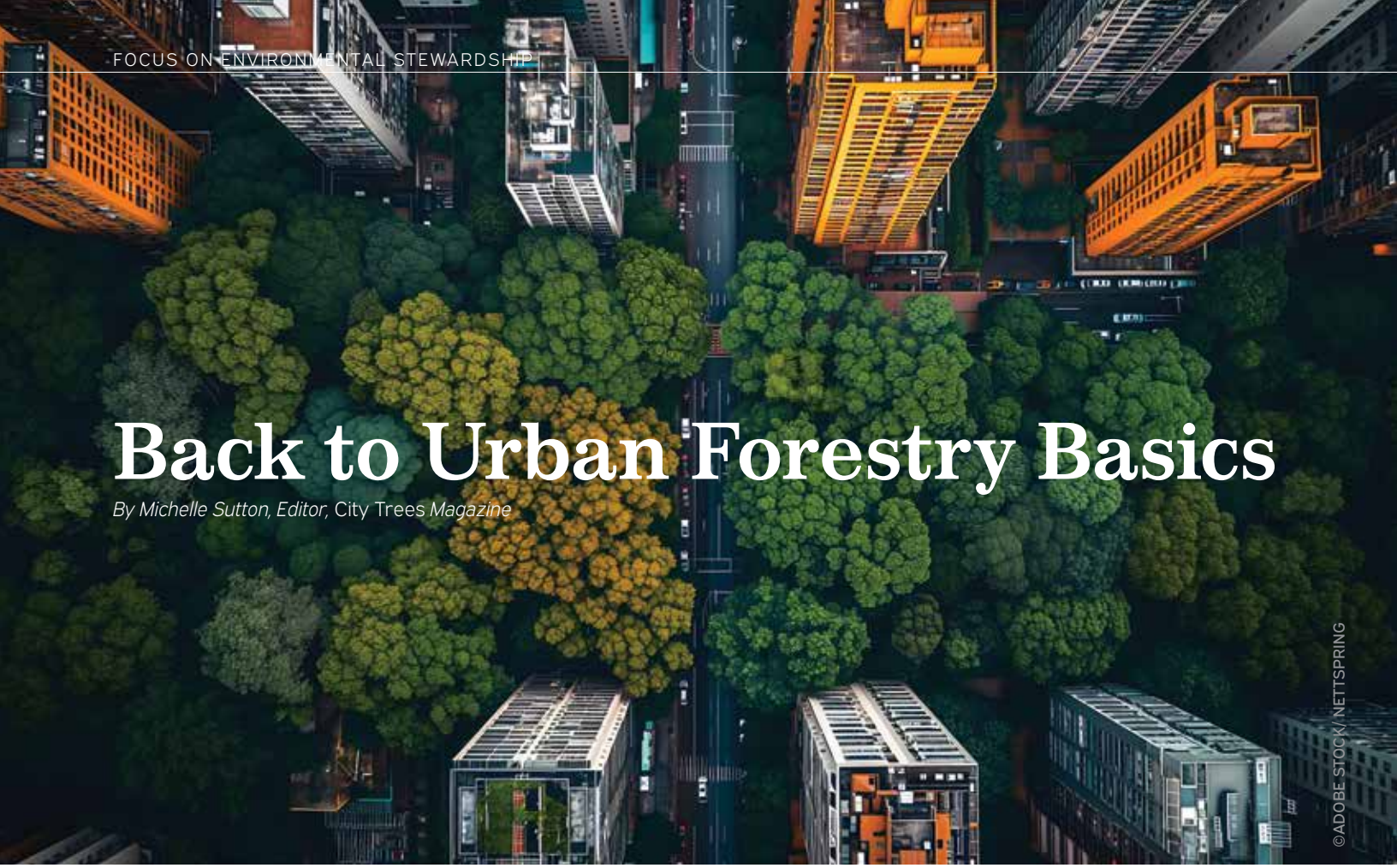
For utilities that produce a corporate ESG report, the business case should emphasize measurable and achievable goals that are aligned with the company's overall ESG strategy. Reportable environmental goals can include reducing herbicide use over time, increasing native vegetation cover on utility-owned lands, and minimizing carbon emissions from ROW maintenance activities. Reportable social goals can include positive and more diverse stakeholder engagement, including customers, communities, environmental organizations, regulators, and investors. Allocating resources to research and innovation, partnering with local researchers and universities, and collaborating with conservation organizations are added goals that enhance ROW stewardship programs, enhance the utility's image and are financially viable in the context of IVM-driven cost efficiency.

Technological Advancement

Digital work management solutions and remote sensing tools, such as virtual inspections, LiDAR, and satellite imagery, are other modern tools that improve UVM program management and elevate UVM strategy. These tools, when applied correctly, make vegetation programs more cost-efficient, targeted, and environmentally conscious. Spatial analyses and work management platforms optimize daily and project-based vegetation management efforts, expanding data quantity and quality. These tools are effective for monitoring environmental impact and efficacy of IVM and other vegetation initiatives, and associated reporting can feed directly into ESG and other environmental reports.

Final Words

Saddles and saws aren't going anywhere, but cultural and workforce shifts are broadening the options for UVM program strategy. Utility vegetation management practitioners who adapt—like the ever-opportunistic blue jay—can improve the effectiveness of their programs and forward the goals of utility companies. Moving to a more data-driven approach, with a focus on IVM, presents a transformative opportunity for utilities. By embracing these approaches, utilities can achieve cost efficiency, enhance stakeholder relations, and contribute significantly to environmental stewardship, aligning with evolving regulatory and reporting expectations.



Back to Urban Forestry Basics

By Michelle Sutton, Editor, City Trees *Magazine*

We are reprinting this article with permission from City Trees*, the magazine of the Urban and Community Forestry Society (UCFS) (*ucfsociety.org*).*

My dad was my basketball coach for several seasons when I was a teenager. He was really big on practicing The Fundamentals, which my teammates and I found tedious. We just wanted to play! Now, as I watch my grandkids play in sometimes chaotic baseball games, I understand my dad better.

As we become more knowledgeable in urban forestry, the basics seem more self-evident to us than to other folks. I wrote a series called "Urban Forestry Fundamentals" for the New York State Urban Forestry Council (NYSUFC). This series could be helpful if you are new to the field or if you are a seasoned professional who wants material at the ready to share with the people you serve.

I invite you to take the parts you wish and edit the text to suit you and your part of the world. If you do, please link to and/or credit the original NYSUFC post and state "reprinted from" or "adapted from" as appropriate.

EXCERPT FROM PART 1: Concepts and Terms

Forestry is managing woodlands for enjoyment, ecosystem health, and wood products. *Urban forestry* is getting trees to grow in inhospitable environments, like along city streets, so that humans and wildlife can benefit from trees in their daily lives.

In this context, *urban* means significantly altered by human activity. So college campuses, parks, and even your yard are urban settings, and they are all stressful for trees. Cornell Urban Horticulture Institute Director Nina Bassuk, an expert on street trees, explains why.

"In the landscapes in which we live," she said, "the soil has been disrupted and probably significantly compacted, which reduces oxygen, nutrient, and water availability to tree roots. Heat is reflected off of buildings, paved surfaces, and cars, putting more water stress on plants. Deicing salts used on paved surfaces can reduce water uptake by plant roots and cause toxic symptoms. Tree roots that are in the vicinity of pavement and structures often have limited soil volume to explore."

Small, newly planted trees in the urban forest are sometimes subject to the further indignity of vandalism. They are extra vulnerable to drought, weed competition, and damage by mowers and string trimmers. It's rough out there for mature trees, too. In parks or even alongside your driveway, notice the state of the trees that are closest to foot or car traffic. They will often show signs of stress, like dead branch tips, because their roots have been compacted.

Urban forestry gives us tools to analyze a site and then match the right tree to the particular conditions of that site. It asks, what are the toughest tree species for these stressful conditions? How can we best prepare the site before we plant the tree, and what is the best way to plant? How do we best care for them in the delicate first few years of establishment, and all their lives?

EXCERPT FROM PART 2: Selecting Trees like an Urban Forester

One of the best guides to site assessment and tree selection for the eastern U.S. is provided by the Cornell Urban Horticulture Institute and is called

PROTECTING POLLINATORS

THE FUTURE OF CRITICAL POLLINATOR SPECIES ARE IN THE HANDS OF ROW MANAGERS

Our experts are helping to define new protocols for land managers leveraging integrated vegetation management practices to support ESG goals.

Scan the QR code for a video that outlines this collaborative approach.

DAVEY®
Proven Solutions for a Growing World

VEGETATION MANAGEMENT
ENVIRONMENTAL CONSULTING
LINE CLEARANCE
STORM RESPONSE
ASSET MANAGEMENT
COMMUNICATIONS CONSTRUCTION
TECHNOLOGY & SOFTWARE SOLUTIONS

DAVEYUTILITYSOLUTIONS.COM

"Recommended Urban Trees" (*http://tinyurl.com/UrbanTreesRecs*), within which is a terrific "Site Assessment Checklist" with detailed notes on how to complete it. The process of site assessment has you consider things like sun and shade exposure, USDA Hardiness Zone (*https://planthardiness.ars.usda.gov*), microclimates (for instance, the south side of your house versus the north), soil texture, soil pH, and drainage.

The checklist in "Recommended Urban Trees" includes visual assessment of existing plants—both cultivated and wild. Noting what's growing well—and what's not—will give you insights into the site conditions. For instance, if rhododendrons, azaleas, and/or mountain laurels all have lustrous dark green leaves and other signs of vigor, your soil is probably acidic to some degree. But if they are consistently showing pale yellow leaves, your soil is likely alkaline.

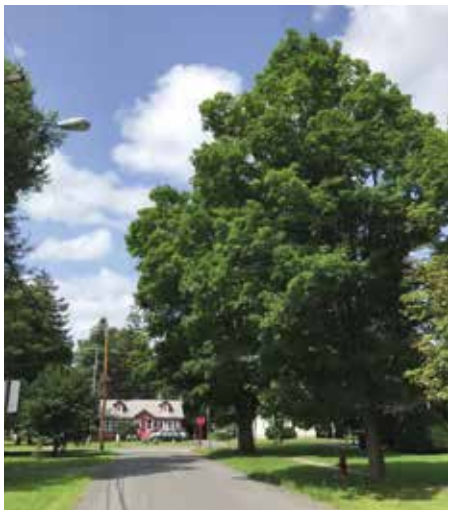
SAMPLE SCENARIOS

This is a matching game. What are the site opportunities and restraints?

Scenario A

- You live in USDA Hardiness Zone 5b.
- This part of your yard is flooded in the spring, but then gets quite dry in late summer. Ergo, you need something that can tolerate extremes of soil hydrology.
- There are no overhead wires or underground utilities in the vicinity. There is plenty of above- and below-ground space.
- Your soil is acidic to neutral (under 7.5).
- You like big trees, but you hate raking leaves.

A good match. You have lots of room, so why not go for something that gets really tall (60 feet or more)? The guide shows that the majestic baldcypress (*Taxodium distichum*) is adapted to both seasonally wet and dry soils. It is hardy to Zone 5a or higher. The leaflets are tiny and need no raking.



*Sugar maples (*Acer saccharum*) and other street trees in the tree lawn in Pine Plains, New York. Photo courtesy of Michelle Sutton.*

Scenario B, or Not Every Site Can Support a Tree

Your soil is impenetrably hard to dig in and/or bedrock is close to the surface. You could remediate a discrete area of poor soil with compost and deep tillage, but it will be expensive to create enough hospitable soil volume for tree roots, which grow well beyond the canopy. There is one site problem that we cannot select for—and that is lack of rooting space. Best not to plant a tree here.

Or say you've always wanted a weeping cherry but there is only 10 feet clearance between house and sidewalk (weeping cherry trees get much bigger than that over time). Or, you want an oak tree, but there are overhead wires in the vicinity. Find a place in your landscape where these trees will have adequate above- and below-ground room, look for compact cultivars, or consider a different tree so it can enjoy the longevity you wish for it.

EXCERPT FROM PART 3: Roots Grow Like Plates, Not Mirrors. How to Protect Them

Most of us grew up with—and still often see—illustrations of a tree's root system depicted as a mirror image of the tree's canopy. However tall and wide the canopy, that's how deep and wide the roots grow, right? Turns out, that's not the case. For the vast majority of species, tree roots grow close to the surface and spread laterally in a webbed plate; the roots get finer in width the farther out you go. You may have observed this yourself on trees that are growing on, say, the edge of a riverbank, where some portion of their root system is exposed.

Have you ever been digging in the garden, nowhere near a tree, and found fine tree roots and been at a loss as to where they came from? Fine "feeder" roots not only grow horizontally *beyond* the dripline (the canopy edge), there is often a higher percentage of them beyond the dripline than within it. (This is why those orange plastic 6 x 6-foot protection zones around trees on construction sites are woefully inadequate.)

Tree roots are found primarily in the top 12 inches of soil. The reason for this is that oxygen becomes limiting the further down you go through the soil profile. Tiny absorbing roots, responsible for most of the tree's intake of water and nutrients—and therefore critically important—are in the top few inches of soil, right under your feet. The finer the roots, the greater the surface area through which water

Here are excerpts from the four installments of "Urban Forestry Fundamentals" on the NYSUFC website:

Urban Forestry Concepts and Terms

Selecting Trees like an Urban Forester

Taking Care of Roots

Tips on Watering

GROW WITH TREES
BOOTS TO THE BOARDROOM

Gold LEVEL SPONSOR SPOTLIGHT

Liberty and Grow With Trees: Nurturing Safety and Biodiversity in the Rights-of-Way

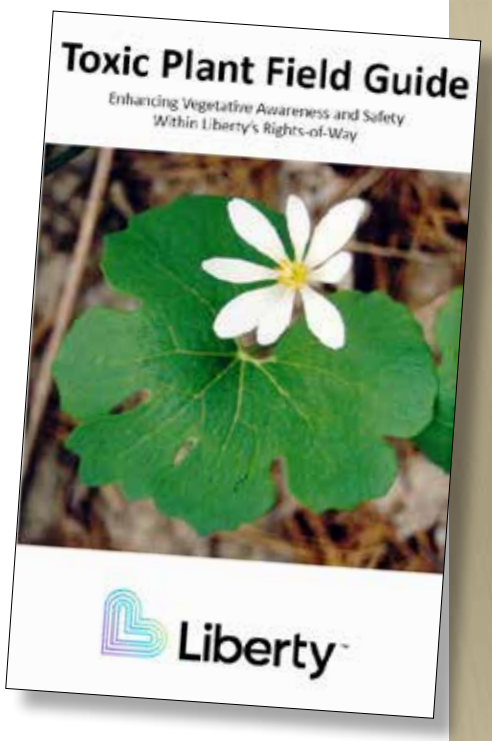
Workers for Liberty have been trained to begin each day by identifying potential hazards at a job site. They evaluate their equipment, vehicles, and even the weather, but when they evaluate the working landscape, one essential hazard was often underestimated: the vegetation. Misidentification of potentially harmful plants—like poison ivy, poison hemlock, water hemlock, and hogweed—pose a significant safety risk, yet prior to 2019, workers did not have training on how to identify plant hazards. Conversely, beneficial compatible plants that posed no threat to people, utility lines, or equipment were often doused with unnecessary herbicides—wasting time, money, and chemicals. The team's success at managing the rights-of-way was limited by a lack of understanding about the growth rates and resprout rates of the various species on the job sites. Liberty had the mechanical know-how to maintain their ROW but needed a partner to help them better understand the plants, trees, shrubs, and vines they regularly encountered. Liberty found that partner in Grow With Trees, which offered training to educate Liberty's team on managing compatible plant species to reduce overgrowth and harmful foliage, while also equipping the team with more advanced plant identification skills.

Over the past several years, Liberty's vegetation management program has transformed. The ability to manage different plant species more selectively has been a game-changer. Liberty's personnel have learned to value native species more and correctly identify those that are friendly to border and wire zones. The team can now strategically leave certain species in border and wire zones, minimizing unnecessary interventions. This shift in perspective has extended to tree growth regulator (TGR) usage, limited herbicide applications and removals, and targeted pruning techniques. In addition, this newfound knowledge has also improved team safety and contributed to the overall health of the ecosystem by providing resources for wildlife and supporting erosion control.

Grow With Tree's training involves a balanced approach, emphasizing both biodiversity and safety. In a recent session, a crew member exclaimed, "I've been walking past this for years and didn't know I could eat it!" This anecdote showcases the enlightening experiences with plant identification, fostering a deeper environmental appreciation while engaging our crew's understanding and connection with the environment.

Looking towards the future, safety remains the top priority for Liberty. The spirit of being responsible to and for each other is ingrained in Liberty's culture, fostering a collective obligation for the well-being of every team member. In addition to having the best equipment and training, teams now have access to additional resources to better understand and protect themselves and the landscape around them. As industrial safety needs evolve, continuous education is essential. Liberty is committed to staying current and proactive on safety protocols, while collaborating with Grow With Trees and other partners like CNUC to develop field guides that address toxic and compatible plants in the ROW.

Liberty has ushered in a new era of safety and environmental consciousness in VM. Through education, strategic planning, and a commitment to continuous improvement, Liberty is not only safeguarding its personnel but also contributing to the health and biodiversity of the ecosystems they operate in. This positive shift has been recognized by customers, has reduced costs, increased safety, and enhanced Liberty's role as a reliable utility and steward of the environment.



*The small-maturing white fringetree (*Chionanthus virginicus*) could be a good match for a site with overhead utility wires. Photo courtesy of Michelle Sutton.*

can enter by osmosis, which is why conservation of fine roots matters.

What can you do to protect a tree's root system?

- **Don't mulch too deeply.** Maintain a depth of about 3 inches of bark mulch, but no more, or else fine feeder roots lose their ability to "breathe" (i.e., exchange gaseous oxygen and carbon dioxide).
- **Mulch as far out as you can.** Because those critical fine feeder roots are so close to the surface, the roots of lawn grasses will be in direct competition for water and nutrients unless you favor the tree. To do this, give your tree as big a mulched bed as possible—at least to the canopy edge and ideally, beyond. But remember, mulch should be no more than about 3 inches deep.
- **Construction, digging, or staging area nearby? Make sure your tree has a large tree protection zone.** The tree protection zone is at least as wide as the tree canopy, but preferably much wider. If you can't accomplish this, work with an ISA Certified Arborist on ways to minimize mechanical damage to the tree and root compaction by equipment. Now that you can visualize the plate of fine roots that grow so close to the surface, you can see why you don't have to dig very deep in order for real damage to occur.

EXCERPT FROM PART 4: Advice on Watering

The practice of watering trees seems like it should be pretty simple, but there are some simple techniques that make a big difference.

- **Newly planted trees need more localized water.** You will frequently encounter the guideline that plants need 1 to 2 inches of water per week provided by some combination of rainfall and hand watering. That is great for established trees, but newly planted ones have special challenges. For the first season, until the tree's roots start to grow and explore the surrounding soil environment, the

Park and cemetery trees in areas of low foot traffic tend to have the good life, roots-wise. Photo courtesy of Michelle Sutton.

"Trickles are better than sprinkles" is one key piece of watering advice. Photo courtesy of Michelle Sutton.

tree has to get all its water needs met from the existing little ball of roots. You will find that even in rain-moist landscapes, the newly planted trees can be stubbornly dry, even to the point of wilting.

Saturation of the root ball is essential to allowing roots to grow and is best achieved by deep soaking by hand, by irrigation bags, or by drip irrigation. You can put an open-ended hose on the surface and let it trickle for half a day or more. Or if you have the time, you can relax into a hand-watering session, backtracking to paying multiple visits to the tree to give the water a chance to really infiltrate the root ball—not just run off into surrounding soil.

- **Established trees and shrubs need watering during extended dry times.** Pay extra attention to newly planted trees and shrubs for the first three years (as that's how long it takes most to successfully survive transplant shock and start to establish). Often when plants show signs of drought stress, large sections of the plant may already be dying, and it's not uncommon for the effects of this summer's drought stress to show up *next* summer. For established shade trees and other woody plants that you value, consider the open-ended hose slow trickle for a day a week during drought times.
- **Water less frequently but more deeply.** Thorough wetting of the soil done less often does more good for plant roots than frequent, shallow watering. More water actually percolates to roots, and it encourages roots to explore a greater volume of soil.
- **Water is the best fertilizer.** Years ago, examining a hedge that was looking pale, I immediately jumped to "must need fertilizer." But water stress could produce the same paleness. I did a little experiment on my client's hedge, whereby one half I fertilized and watered deeply, and the other half I watered deeply but did not fertilize. The latter greened up just as nicely. So much of the magical greening that people attribute to fertilizer is really courtesy of the attentive watering that accompanies it. Indeed, most fertilizers are salt-based and can contribute to plant root desiccation. So try "fertilizing" with deep watering first.

Silver LEVEL SPONSOR SPOTLIGHT

ACRT PACIFIC

James Erskine Named Inaugural ACRT Pacific Hammer of Honor Recipient

Forty-some years ago, James (Jim) Erskine obtained an Associate of Science degree from Modesto Junior College in California and immediately went to work for the United States Forest Service in timber and fire for a decade. He shifted into the vegetation management field a few years later and has been a dedicated member of ACRT Pacific since 2006.

As an operations manager, Erskine believes in "supporting each one of the members of my team by focusing on their individual strengths and weaknesses to help them become successful employees." His management style has not gone unnoticed over the years.

Jim Erskine (left) and ACRT Pacific President Brian Joiner (right)

During the 2023 ACRT Services Managers' Summit, managers from each company had the opportunity to recognize their peers as the top manager of the year with the Hammer of Honor. Erskine was nominated as the inaugural ACRT Pacific recipient.

The Hammer of Honor is awarded to the operations leader who has hammered home their leadership skills, nailed teamwork, chiseled out innovative solutions, and consistently built a sturdy foundation of success. They must be a true master of the craft, demonstrating their ability to drive results and nail every aspect of their role with precision and impact. The winner is the one who truly struck the right chord with their peers, forging success through their outstanding qualities, and dedication.

Erskine shares that he was overwhelmed when he was nominated by his peers. "There is such a talented group of managers I work with and to be singled out is quite the honor. From our operations team to my field staff, ACRT Pacific has a wonderful group of people."

People like Jim Erskine are the key to our success at ACRT Pacific. Learn more about our dedicated employees at *pacific.acrt.com/careers*.

We understand there's a lot on the line...

HUB Arbor Insurance Group's expertise includes:

- Industry leading knowledge of the Utility Line Clearance business
- Proprietary insurance programs for ALL lines of coverage
- Experts in Excess Liability placements
- Unique services tailored to Utility Line Clearance contractors
- Experts in Alternative Risk Solutions
- High performance model for claims vendor management
- Claims advocate attorneys provided

SCAN ME

Mark Shipp, CTSP, CIC

Contact Us Today For Tailored Insurance Solutions

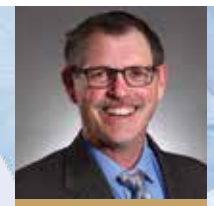
(805) 618-3710 • (800) 566-6464
mark.shipp@hubinternational.com

HUB

OPINION EDITORIAL

Utility Vegetation Management *IS* Urban Forestry

By Randall H. Miller, Director of Research and Development, CNUC



Randall H. Miller

My formal training is in urban forestry, and my background has been invaluable in my utility vegetation management career. I was hired as a utility arborist when I was a community forester for the State of Utah. The only experience I had in UVM at the time was tree biology and utility pruning training I provided for Utah Power contracted tree workers. Yet, I found that my urban forestry training applied directly to vegetation management, and it gave me an advantage in my new career.

The urban forest is the totality of woody and other vegetation in and around developed areas from small communities to metropolises (Miller et al. 2015). The intent of urban forestry is to manage trees to enhance the physiological, sociological, and economic well-being of urban society (Miller et al. 2015). The primary objective of UVM is to manage vegetation so it doesn't interfere with safe, reliable, environmentally sustainable power delivery (Miller and Kempter 2018). Those objectives are mutual. G.D. Blair observed in 1940 that "trees must be vigorous and beautiful; overhead line service must be continuous and dependable. In this measure of quality, each is essential to the happiness of civilized people." At the same time, it's indisputable that safe, reliable electric power contributes to the "physiological, sociological, and economic well-being of urban society." So, clearly UVM is an essential component of urban forestry.

There are many consistencies. Both specialties are dedicated to serving people. Community members and electric customers are the same people, after all. Urban foresters and utility vegetation managers serve their stakeholders by managing trees and other vegetation using many of the same techniques. Practitioners in both specialties require command of arboricultural principles. They must also be skilled in establishing policy, implementing effective safety procedures, setting and maintaining budgets, developing contracts, managing a fleet of vehicles, communicating with stakeholders, and planning for storm recovery among other proficiencies.

Further, urban forestry and UVM apply many of the same processes. They include iterative management at programmatic and plan levels. Both urban forestry and UVM base plans on vegetation and site assessments. Those assessments can be accomplished through the same means—ground-based inventories, photogrammetry, or LiDAR, for example. The information from those surveys, along with production and communication records, are often stored on GIS-based software. A core principle common to UVM and urban forestry is that reactive crises management (like hotspotting) is detrimental and characteristic of poor strategic planning, ineffective management, inadequate funding, and of an undereducated manager or workforce (Miller et al. 2015). Conversely, while programs that have been allowed to devolve into crisis management increase long-term costs and risk exposure, a well-planned, proactive program moderates expenditures, increases their value, and mitigates tree risks.

Utility vegetation management and urban forestry are both cost centers and subject to financial pressures. Urban forestry and UVM often contract work, using time and material, unit price, and firm fixed contract structures, with similar advantages and disadvantages to their respective programs. Professionalism is important to both UVM and urban forestry, as each should emphasize ISA Certification, municipal specialist or utility specialist certification, and Board Certified Master Arborist® credentials. Both specialties are dedicated to ANSI standards, particularly A300. It is notable that the pruning techniques used to clear utility facilities are the same as those applied to clear trees that interfere with stop signs, lines of sight, street lights, and other infrastructure. Both specialties promote human and tree health and emphasize safety through pruning to prevent branch failure on property or electrical infrastructure.

Further, both UVM and urban forestry depend on ISA best management practices. It is important that each specialty understands BMPs that might not be considered pertinent to their daily work. Examples for UVM might include tree planting or protecting trees during development, while familiarization with IVM and utility pruning of trees would benefit urban foresters. They all affect the results of our work.

So, for these and many more reasons, it's clear that UVM *is* urban forestry. By embracing urban forestry principles, we who work in UVM can best meet our objectives. It will also help better connect us with our non-utility colleagues as professionals and improve mutual understanding. In the end, we should be mindful of G.D. Blair's observation from so long ago—that trees and safe, reliable electric power are essential for the happiness of civilized people—and work together to deliver those essential benefits.

References

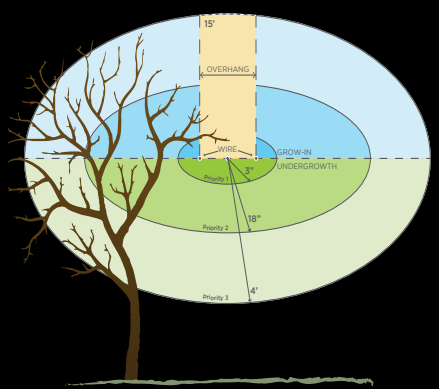
Blair, G.D. 1940. *Tree Clearance for Overhead Lines: A Textbook of Public Utility Forestry*. Chicago, IL: Electrical Publications, Inc.

Miller, R.H., and G. Kempter. 2018. *Utility Arboriculture: The Utility Specialist Certification Study Guide.* Champaign, IL: International Society of Arboriculture.

Miller, R.W., R.J. Hauer, and L.P. Werner. 2015. *Urban Forestry: Planning and Managing Urban Greens Spaces.* Long Grove, IL: Waveland Press, Inc.

Who Knew?

Learn More About Our Distribution Solutions



We did. NV5 Geospatial's vegetation management solutions ensure you have the highest quality data and analytics tools to understand the greatest risk to your distribution network and make the right calls. See what NV5 Geospatial can do to improve your operations and grid resiliency. You'll know you did the right thing.

NV5 GEOSPATIAL

www.nv5geospatial.com

UTILITY ARBORIST NEWSLINE

2009 W. Broadway Ave., Suite 400, PMB 315
Forest Lake, MN 55025

Nonprofit Org
U.S. Postage
PAID
MOS

FOR 95 YEARS ASPLUNDH HAS PROVIDED SAFE, RELIABLE, AND INNOVATIVE SERVICE FOR OUR PARTNERS, CUSTOMERS AND COMMUNITIES IN THE VEGETATION MANAGEMENT AND INFRASTRUCTURE INDUSTRIES. SUSTAINABILITY, INTEGRITY, AND RESPECT FOR THE ENVIRONMENT REMAIN AT THE HEART OF OUR EFFORTS TO LEAVE A POSITIVE LEGACY FOR MANY GENERATIONS TO COME.

ASPLUNDH®

ASPLUNDH.COM 1.800.248.TREE