

PRINT EDITION

March 10, 2022

THE

VEGETATION MANAGER
magazine

2022

ENVIRONMENTAL FATE

OF PESTICIDES

**INTEGRATED VEGETATION MANAGEMENT
BEST PRACTICES**

WORKPLACE STRESS MANAGEMENT

HEALTHY ROOTS, HEALTHY TREES

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PUBLISHER:

Professional Vegetation Management Association (PVMA) <http://www.pvma.ca>

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DESIGN:

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GRAPHICS LICENSING:

Regular Licensing from Adobe Stock

GENERAL INQUIRIES:

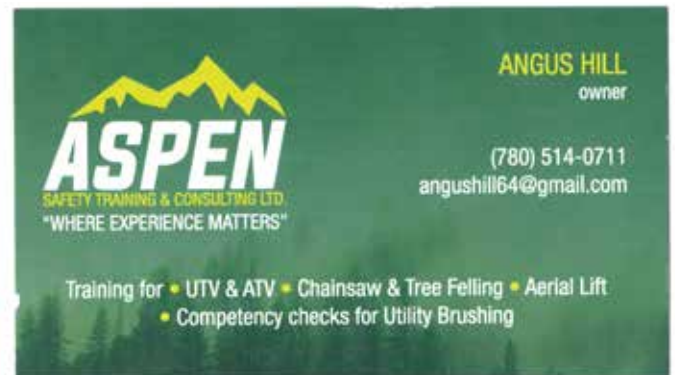
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PRESIDENT'S REPORT



- LISA RYBCHUK, PRESIDENT PVMA



As I come to the end of a 2-year term on the PVMA Board of Directors, the last year of which I served in the role of President, I take a moment to reflect on these last 2 years. Following my board election at the Spring Conference & AGM in Red Deer in March of 2020, I had no idea that by the time we all arrived home from that conference our world would change so significantly. It would be 2 years before we would have the opportunity to meet like that again in person.

I am so thankful for the volunteers that make up the PVMA Board of Directors and various committees, as well as our administrative staff. They found ways to adapt the programs they were involved with, to continue serving our members and others involved in our Industry. We all had to learn to plan with flexibility in mind.

With various Covid restrictions in place and safety concerns, our UTW-UTW Board of Governors set about extending tickets until they could work with Olds College to move the re-certification program online. The online course was quickly up and running by the end of 2020. This then allowed the certified UTWs & UTTs to complete their re-certifications

remotely. That board also worked tirelessly to revamp the in-person courses, in the Spring of 2021, to a format that would allow for in person evaluations but with more limited contact.

Also, with Covid restrictions in place our Seminar Committee shifted gears and quickly found ways to continue providing educational workshops and seminars through online platforms. We started with a Zoom workshop in the fall of 2020 and after doing a lot of research we contracted with InEvent, a online platform, that allowed us to offer a unique online conference & workshop experience, where our sponsors & exhibitors could still be a part. We were also able to use this platform to help IVMA Man-Sask hold their seminar & AGM. I am thankful for all those who supported these efforts through attendance, sponsorship & tradeshow. It was a learning curve for everyone. I am very thankful for Brandon Tupper & Sean Hilton who took the time to learn the tech side of the platform and assist our speakers and attendees on the back end. I believe the PVMA has continued to serve its members and this Industry through all the challenges faced this past couple of years. I look forward to meeting in person again at the 2022 Spring Conference & AGM on March 10th in Red Deer.

Lisa Rybchuk, PVMA President

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ENVIRONMENTAL FATE OF PESTICIDES

- HEALTH CANADA



HOW DO WE KNOW WHAT IMPACT PESTICIDES HAVE ON THE ENVIRONMENT? HOW DO WE TRACK THEIR EFFECTS?

The environmental fate of pesticides refers to the life cycle of a pesticide after it is released into the environment and depends on the physical and chemical properties of the pesticide as well as the environmental conditions. Pesticides may become airborne, enter the soil or bodies of water, or be taken up by plants and animals. The physical and chemical properties of the pesticide determine how likely it is to move through soil (soil mobility), how well it dissolves in water (water solubility) and how likely it is to become airborne (volatility). Once used, a pesticide enters the environment and can be broken down by:

- Exposure to sunlight (photolysis)
- Exposure to water (hydrolysis)
- Exposure to other chemicals (oxidation and reduction)
- Microbial activity (bacteria, fungi and other microorganisms)
- Plants or animals (metabolism)

Environmental fate studies allow for the calculation of a “half-life” for a pesticide, which is a measure of the time it

takes to break down a pesticide after use. These studies provide an indication as to how long a pesticide may last in the environment, which can vary under different environmental conditions. Environmental fate studies include information on:

- Rates and methods of application;
- Number of applications per season;
- Soil characteristics;
- Application timing;
- Geographic area.

Environmental risk assessments are performed on all pesticides to evaluate the likelihood of adverse environmental effects that may occur (or are occurring) as a result of exposure to a pesticide. If risks are not acceptable, mitigation measures can be implemented to reduce exposure and protect the environment. Mitigation measures can include:

- Spray buffer zones,
- Vegetative filter strips,
- Reductions in the rates or
- Reduction in number of applications
- Cancellation of use

WHAT CAN YOU DO?

Read, understand and follow the label. To do this:

- Review pesticide labels before using;
- Apply pesticides according to label directions and warnings, including using all personal protective equipment specified on the label
- Use a pesticide only for its stated purpose;
- Only apply pesticides:
 - at the rate stated on the label;
 - as often as stated per season
 - at the times of application
 - on the target pest
 - in the correct location
- Be aware of the environmental hazards section of the label. If there are special restrictions on a pesticide to protect the environment, this is where they will be identified.

Report possible environmental incidents:

- A pesticide environmental incident is a negative affect (adverse reaction) to the environment (plants or wildlife) that can result from being exposed to a pesticide
- There are two ways you can report an incident:
 - Contact the pesticide company as listed on the product label
 - Report directly to Health Canada's Pest Management Regulatory Agency through their public engagement portal [Voluntary Incident Reporting Form](#)

Using a pesticide contrary to label directions is a violation of the Pest Control Products Act (PCPA) and may be subject to enforcement actions such as warning letters, compliance orders, Administrative Monetary Penalties and prosecution. Companies are encouraged to maintain an internal checklist of the steps to be taken to ensure compliance, so that they and the environment remain safe.

For more information please go to:

<https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management.html> or contact us in the Prairies at info.prairies@hc-sc.gc.ca



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- Elm Pruning Ban is April 1 -September 30annually.

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YOUR WORKPLACE STRESS:

WHERE IS IT COMING FROM AND HOW CAN YOU MANAGE IT?

- SUBMITTED BY BOB GORDON, PVMA SAFETY COMMITTEE CHAIRMAN

THE ARTICLE IS FROM CANADIAN CENTRE FOR OCCUPATIONAL HEALTH AND SAFETY (CCOHS),.

Did you know that Canadian employees report workplace stress as being their primary cause of mental health concerns?* It's also the same reason why 1 in 4 of us have quit a job.*

- While it's important to recognize and treat workplace stress all year round, this is a great opportunity to reflect on how exactly it manifests in us and the best way to prevent and treat it.
- If you feel stressed because of your job, you're not alone. In fact, 58 per cent of Canadians reported feeling overworked at their jobs.
- Whether you're working in an office, on site or out in the field, workplace stress affects us all.
- Keep reading to find out what exactly causes it, how to recognize it and, most importantly, strategies on how you can help manage stress in the workplace.

WHAT IS OCCUPATIONAL STRESS?

The Canadian Centre for Occupational Health and Safety defines workplace stress as, "the harmful physical and emotional responses that can happen when there is a conflict between job demands on the employees and the amount of control the employee has over meeting these demands. So, stress isn't as much about the work that is given, but rather the individuals' response to the work. Generally, workplace stress is triggered when the demands of a situation are greater than the resources available to an employee to deal with that situation.

What causes occupational stress?

Here are some common causes of stress in the workplace:

- Workload (overload)
- Inadequate time to complete tasks
- Skills do not match job demands
- Shiftwork/long hours
- Low salaries
- Lack of training
- Lack of support
- Lack of appreciation
- Lack of work/life balance
- Limited opportunities for growth or advancement
- Isolation
- Unachievable level of responsibility
- Overall job dissatisfaction

WHERE DOES IT HAPPEN?

Workplace stress can happen at any job, at every level. Stress doesn't discriminate against any age, gender, background or educational factors. We're all susceptible towards feeling it!

HOW TO RECOGNIZE IT IN YOURSELF?

The interesting thing about stress is that two cases of it will never be the same which can make it difficult to identify. The effects of stress can either be physical or psychological, or both.

Physical symptoms of stress can include headaches, fatigue or insomnia, sweating, chest pain, teeth grinding, increased heart rate and blood pressure, digestive issues, tense muscles. Those who are experiencing stress can also develop weakened immune systems and be more vulnerable to getting sick.

Mental (psychological) symptoms of stress can include anxiety, forgetfulness, depression, social withdrawal, mood swings (often including anger) and lack of confidence as well as difficulty concentrating and making decisions.

When you're not thinking clearly, there's the chance that you're not working safely.

HOW TO RECOGNIZE IT IN YOUR COWORKERS?

In addition to recognizing the signs of stress in yourself, it's also important to look for the cues in your colleagues or employees.

The best way to recognize the cues of occupational stress in your coworkers or employees is through observation and – believe it or not – by simply asking! Check in with your team to see how they're doing. What can you do to help?

The best way to reduce stress in the workplace is by addressing it. A lot of times you can help alleviate stress by talking about the issues out loud with a supervisor, colleague, family member or friend. Here are some tips and tricks you can use in moments of high stress:

- Take a deep breath.
- Take a break. Go for a walk or listen to a song.
- Eliminate interruptions. If possible, take a work-from-home day.
- Make a list of your priorities.
- Talk to someone about it.
- Ask for help.

Long-term initiatives to manage stress in the workplace also include:

- Eat well and sleep right.
- Take time to recharge.
- Encouraging the importance of work/life balance.
- Talk to your supervisor or employees about incorporating a stress prevention and positive mental health program in your workplace.

Implement a "joint responsibility model" which puts the onus of stress management in the workplace both on the employee and the employer to foster a healthy working environment through awareness, accountability and action.

The moment that you recognize that you or one of your coworkers is jeopardizing safety as a result of stress, it's important to mediate the situation.



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LEN MACMILLAN: INDUSTRY SERVICE PROFILE

- BY IAN STANWOOD



LEN MACMILLAN DEDICATED HIS CAREER TO THE VEGETATION INDUSTRY - OVER THE SPAN OF 46 YEARS AND TOOK ON MANY ROLES THROUGHOUT THE UTILITY SECTOR

He was hired on by Asplundh on February 19, 1975, as a laborer at a staggering 4 dollars per hour. By January 1, 1982, he was promoted to Foreman where he began to lead and guide people in the industry. He worked on spray crews, trim crews and ultimately ended up as a utility vegetation planner from 1989 and onwards.

For several years, he worked as an individual contractor before joining ArborMetrics in 2010 on the Fortis Alberta system. It was here that he worked for the remainder of his career in the industry. He sadly passed away on September 13, 2021, in Red Deer Alberta at the young age of 64 and is lovingly remembered by his wife Darlene, his children Amber, Chad and Alicia, family, colleagues and friends.

Len not only had a wealth of experience in this industry but was also a mentor to the wave of people that came up behind him. Len obtained his Utility Tree Trimmer certification (UTT) in 1986 and was the 22nd person to do so making him one of the early pioneers involved with the program. He maintained his UTT certification up until his last working days.

If you have worked in the utility vegetation industry for long, you have heard the name Len MacMillan. You have also probably heard the name Bob Gordon who joined the industry with Asplundh back in 1985 and started under Len, who at the time was a Foreman running a two-man spray crew.

Bob shared with me how Len was instrumental in setting his career path with Asplundh and how he mentored him along the way; "he went out of his way to make sure I knew that it wasn't just a job but that I was part of a team. It wasn't until a number of years later as I grew older that I realized just how significant of a statement that was." Anyone who had the privilege of working with Len will understand those words.

Len understood the meaning of teamwork and always put in long hard days; his work ethic was always admired. His supervisors would generally get an ear full if he was unable to work 70 hours a week when overtime was restricted. He always cared about the quality of his work and held himself to a high standard. When talking to others in the industry about Len, there was a common theme.

Len could always be counted on to provide advice, support, and would give the shirt off his back to those in need. He often invited friends and co-workers over to his house for meals with his family, when they didn't have anywhere to go or were new in town. He cared greatly about those around him and treated everyone with respect and dignity.

During his time at ArborMetrics Len was a senior planner and was a role model to many. He helped train Orville McLean when he started. Orville is currently the Director of Operations for ArborMetrics. He explained that Len took him under his wing and taught him about his philosophy in regards to utility vegetation management in Alberta.

He taught and imparted the love for this industry which still remains. That is what a great teacher does.

In conclusion, Len MacMillan dedicated his life to this industry and was a mentor to those who came up behind him. He will be remembered for the legacy and impression he left on the industry and to those who had the honor of calling him family, a friend or colleague.

Rest In Peace Lenny.

UPDATE ON FEDERAL COURT OF APPEAL DECISION ON GLYPHOSATE

Recently, a Federal Court of Appeal decision told the Pest Management Regulatory Agency (PMRA) that its reasons for not establishing a review panel in response to notice(s) of objection to its 2017 re-evaluation decision on glyphosate need to be clearer. This ruling relates to a procedural matter that compels the PMRA to better explain why activists did not meet the scientific criteria in their notices of objection. Despite what some activist groups are trying to claim, the ruling does not call into question the science behind the glyphosate decision, nor does it compel the PMRA to necessarily establish a review panel.

- In 2019, in response to the initial notices of objection submitted by various activist groups, Health Canada concluded that the activists did not meet the scientific criteria for establishing a review panel. In fact, the PMRA said that it 'left no stone unturned' in looking at the science behind glyphosate and found no health and safety concerns associated with the use of glyphosate when used as directed. We are confident that this finding, along with the findings of every other major regulatory agency in the world that glyphosate is safe, will stand.

Health Canada's PMRA is world-renowned for its science-based regulatory system that serves to both protect the health and environment of Canadians while ensuring farmers have access to the tools they need to sustainably grow food for Canadians and the world. This decision does, however, highlight the need for Health Canada to improve the way it communicates its scientific decisions and processes. To support Canada's world-leading regulatory efforts when it comes to pesticides, we are encouraging Health Canada to work collaboratively with the agriculture industry to build public confidence in the system and the safety of the products it reviews.

- What this is: The PMRA is required to provide more transparency on why the notices of objection did not meet the scientific criteria required to establish a panel to review its reevaluation decision on glyphosate. What this is not: The PMRA is neither required to make a new safety finding for glyphosate nor is it compelled to establish a panel but rather it is required to be more transparent as to why the objections were not considered scientifically sufficient to strike a panel.
- What is a notice of objection? One method for Canadians to be part of the regulatory process is by filing a notice of objection after the PMRA publishes a final decision. Any member of the public can make a notice of objection if they believe there is a scientific basis for reconsideration of the decision. If the PMRA determines that the request meets the high scientific standard required it will establish a review panel to examine the decision.
- Is this related to the recently announced PMRA Science Advisory Committee on Pest Control Products? No, a panel that is established as part of a notice of objection is not related to the new science advisory committee that will provide advice to PMRA prior to regulatory decisions.

If you have any questions, please contact Terri Stewart.
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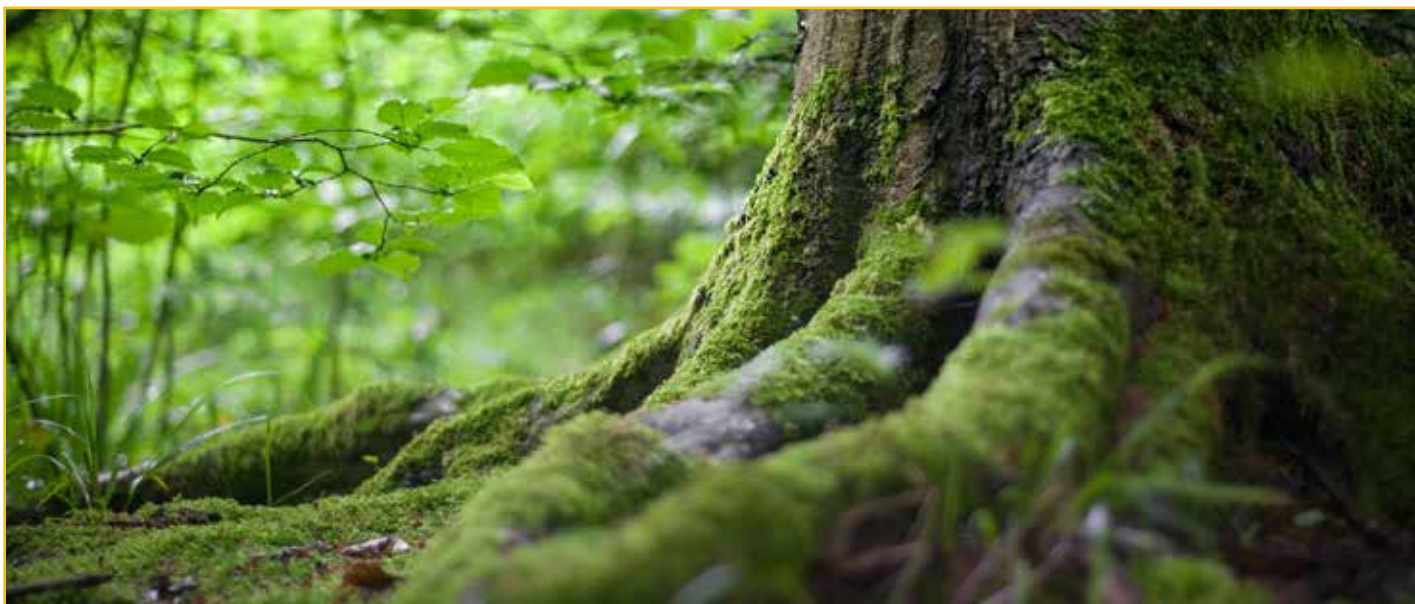


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WOOD WIDE WEB: HEALTHY ROOTS, HEALTHY TREES



- BY TOSO BOZIC.



MANY RECENT STUDIES SHOW THAT “TREES DO TALK TO EACH OTHER” THROUGH A VAST NETWORK OF THE ROOT SYSTEMS.

This is what is called “**Wood – Wide Web.**” This happens mostly due to a fungus and bacteria symbiotic mycorrhizal relationship and interaction with the tree root system through sharing water and nutrients. Beside many other functions this vast mycorrhizal networks are extremely important for tree health during the times of danger and stress. Studies show that certain species of fungi can facilitate tree resilience against certain environmental stressors such as predators, toxins, and pathogenic microbes that invade an ecosystem.

These stress signals received through root system by not affected trees will facilitate the releasing volatile hormones or chemicals to discourage predators or pathogenic bugs.

SOIL AND TREE ROOTS

All plant life in the forest originates from the thin layer of minerals, organic matter, water and air that we all commonly call soil. Tree roots are very opportunistic as they will grow wherever and whenever there is available oxygen, water, nutrients and warm environment. Soil

surface is the place where most of these preferable environments are and that is why the majority of tree roots are in the upper 45 to 60 cm (soil 18”-24”) of soil. To understand how roots function, it is important to understand the relationship between above ground tree growth and roots as well as proper balancing between these two. If a portion of roots die, a certain amount of leaves and branches will die too and vice versa.

The fine roots are the place where the production of essential nitrogen and mineral nutrients happens. They are transported together with water throughout wood tissue. There are many studies that show the surface area of roots are several times larger than the surface area of leaves. Good example is native aspen tree in Alberta. The distance of roots from the main trunk can be as twice as the height of the tree itself (e.g. 80 feet aspen can produce the roots 160 feet from the main trunk)

Overall tree roots systems provide several key functions including: anchor portion of the trees above ground, store essential food reserves and transport water and minerals from the soil to the rest of the trees. Root damage will disrupt these key functions and together with pest or environmental issues such as drought, salt, frost and mechanical damages, will contribute to decline and the mortality of whole tree.

CAUSES OF TREE ROOT INJURIES AND PROBLEMS

There are many ways to damage and destroy a root system, which ultimately lead to the decline and death of trees above ground. Once a tree is established, anything that changes the soil condition or the oxygen and water supply can be extremely detrimental for tree growth and survival. Some of the main causes of root injuries and declines are:

- Compaction – this is the most common and damaging cause for root decline
- Mechanical damages – using various equipment to disc, dig and trench with purpose of physical cutting of the roots from the main tree
- Chemical damages – using various improper herbicides, salt for de icing and other chemicals
- Watering and fertilization- over and under watering and improper fertilization will lead to root damage
- Pests – there are several pests (insects and diseases) that are able to damage and kill the root system
- Improper tree selection and planting – choosing trees that are not adaptable to existing soil conditions will lead to root decline and speed up mortality

These causes are very common on a farm as well as urban/town settings but the severity of impact is quite different. Trees in urban/town settings are exposed to more severe impacts of these causes and the lifespan on the trees are overall less than in farm or natural settings.

COMPACTION is caused when the soil particles squeeze air and moisture out of the pore spaces. It may occur during new house and road development, construction, livestock grazing, timber harvesting, recreation and hosts of other activities. Compaction in farm settings is less common than in urban settings where it is one of the biggest killers of urban trees. In urban settings, the use of heavy clay subsoils instead of topsoil is causing compaction. Sandy soils compact the least, while clays and loams are the most susceptible. Moist soils are more likely to compact than dry or frozen soils.

MECHANICAL DAMAGES are caused by severing fine feed and major roots. Mature trees contain 4 to 7 major roots with thousands of medium, small and fine feeder roots. Cutting one major root just a few feet away from the trunk can reduce up to 25 % of root system. Mechanical damage to the surface of the roots is the main entry point for many fungal diseases of trees.

CHEMICAL DAMAGES - are very common causes both in farm and urban/town settings. On farm settings, constant crop spraying near trees, where tree root system absorb chemicals can weaken or kill them in a long run. Salt de-icing and herbicide use are very detrimental to the roots survival.

WATERING AND FERTILIZING – over or underwater or fertilizing can damage roots. Too much water will fill the soil air pockets and drown roots. Under watering will cause improper root development nor allow root ability to absorb nutrients. Over fertilizing will “burn” root while under fertilizing will not allow roots to take necessary minerals for trees to grow.

PESTS - There are variety of pests that can damage roots. Majority of root pests are related to fungal diseases with few exceptions (insects). Fungal diseases can damage roots in two ways- one: they attack small/fine feeder roots, another type of fungal disease that can attack large roots resulting in root rots.

IMPROPER TREE SPECIES SELECTION AND PLANTING – it is very common to see trees planted in the soil that are not preferable to that tree species. Choosing sandy and dry soil loving species such as pine and planting them in a water logged or swampy area will not allow roots to be established or thrive in these environments. Many root injuries happen due to improper planting or damaged during the planting.

SYMPTOMS

It is sometimes very hard to identify root problems as they are associated with other symptoms that cause trees to decline. Proper identification of root injury of causes and symptoms are crucial for the determination of tree decline or mortality. There are several symptoms to identify root problems including:

- Leaves – yellow, small and chlorotic foliage. Leaves are tufted and scorch looking
- Branch dieback – portion of small or large branch entirely dead
- Bark – fungal fruiting bodies (mushroom or conks) on bark or under the bark
- Mechanical root damages – it sometimes takes years to identify the cause of decline and mortality of trees
- Dead vegetation due to chemical damages
- Roots are black or brown vs white or light colour(indication of health of roots)

- Changes in Soil Slopes
- Past constructions and activities in soil

RECOMMENDATIONS FOR HEALTHY ROOTS- HEALTHY TREES

- Avoid practices that cause root damages – e.g. compaction, mechanical, chemical, watering damages etc.
- Use tilling to break up heavy compacted soil prior to tree planting
- Add some soil amendments if the top soil is poor or removed
- Apply 2 to 4 inch thick mulch layer to protect soil
- Improve drainage by ensuring ditches and culvert are kept clear to allow free flow of water
- Perform soil testing to determine nutrient deficiency and availability
- Consider the tree species suitability for different soil types
- Avoid any weed control – especially discing and spraying once tree were established
- Avoid spraying or using chemicals on nearby trees
- Provide adequate watering and fertilizing based on tests, not on guessing
- Avoid grade changes and use directional drilling to avoid root damages
- Avoid planting trees near sewage lines, sidewalks and house foundations

- Perform proper tree planting to avoid too deep or shallow planting by looking into changes in colour between trunk and roots. It should be a visible root flare after tree is planted
- In an urban/town area – use alternative sidewalk designs and materials
- Keep leaves on the ground (do not rake leaves) in the fall as this is source of minerals, micro nutrient and organic material to roots
- Keep leaves in fall as they will act as mulch to protect roots from deep freezing

CONCLUSION

Knowing and understanding where tree roots are located, what they require to grow and how they interact and the cause and symptoms are crucial to overall survival and thriving of trees. Protect the tree roots – you will have long lasting healthy trees

FOR MORE INFORMATION:

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 ISA Certified Arborist
 CERT ID: PR 5356A
 Phone (780) 712-3699
bozict@telus.net
www.yardwhispers.ca
www.attsgroup.ca

UTT/UTW RE-CERTIFICATION COURSE DATES

ONLINE (SELF DIRECTED) SESSIONS: MARCH 14 - 25, 2022

IN PERSON SESSIONS: MARCH 30-31, 2022

CONTACT OLDS TO GET REGISTERED

UTT/UTW CERTIFICATION COURSES

2022 SPRING PROGRAM DATES:

MARCH 28-APRIL 7, 2022

APRIL 4-14, 2022

PRE-APPROVAL BY OUR OFFICE IS REQUIRED

DEADLINE TO SUBMIT PAPERWORK IS MARCH 7TH

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- SAFETY COMMITTEE

The safety committee will be running a safety awareness campaign focusing on some of the information shared with us from the instructors at the last UTT/UTW program.

- The committee will focus on ways to increase safety awareness within the industry covering the mechanical and herbicide sides of our industry.
- Any ideas you have for topics you would like to see covered please send a note to the PVMA office and the safety committee will look at developing an awareness bulletin to go in the magazine.
- As always if you are interested in joining the committee, just reach out to the PVMA office and we will follow up with you.

AWARENESS TOPIC: YOUR MENTAL HEALTH MATTERS

- Even on the best days, stress can prevent us from being fully focused and doing our best work. And too much of it can lead to burnout, disengagement, more sick days, and strained relationships in the workplace.
- In the wake of COVID-19, it's never been more critical for business and HR leaders to address the mental well-being of their teams head-on.

What can you do to help?

The best way to reduce stress in the workplace is by addressing it. A lot of times you can help alleviate stress by talking about the issues out loud with a supervisor, colleague, family member or friend. **Find some tips and tricks you can use in moments of high stress in chart on page 19.**

Bob Gordon, Committee Chairman

- AWARDS COMMITTEE

Through the use of Casino funds PVMA was able to award 4 Scholarships of \$1,500 each to some exceptional post-secondary students in 2021. See the article in this issue regarding our recipients. Bursary applications have just closed, and we will be announcing our Bursary recipients in our next issue.

Lisa Rybchuk, Director in Charge

- EDITORIAL COMMITTEE

As a committee we strive to provide our readers with interesting and valuable information regarding Vegetation Management, whether it be on the latest Industry updates or information on new products or technology available. We also run follow up articles from some of our conference speakers. This is a handy recap for those who attended and, for those who couldn't attend a way of gaining access to the information they missed. Please let us know of any topics or articles that you would find helpful by reaching out to Val in the PVMA office. We wish to acknowledge our advertisers. We appreciate your continued support and trust you have found value in advertising in our magazine.

Val Eichel, Committee Co-Chair

- MARKETING COMMITTEE

The Marketing Committee has decided to move forward with a plan to increase awareness of the PVMA and its members through our Social Media platforms. We are currently in the process of building out a Social Media Strategy to implement for our Association. We have identified key areas in which we would like to focus on and make the general public more aware of our Association, Industry and the work we do. We plan to use the strategy to release a Tender for Services to find a company to help us implement this strategy using our Social Media platforms to reach our goals as we will define in our Social Media Strategy. We are hopeful to have this all implemented for this spring.

If you are passionate about Social Media or wanting to join our Committee to help Market the PVMA please reach out to Aaron at aaron.foster@veseris.com

Aaron Foster, Director in Charge

- SEMINAR COMMITTEE

We utilized the InEvent platform again and held an online Fall Workshop October 20, 2021. The Casino Committee sponsored this event, so we were able to offer the workshop as no cost to attendees. Around 165 people joined us online for the workshop and had an opportunity to earn CECs in Alberta, Saskatchewan & BC as well as ISA credits. We started off the day with a presentation by Toso Bozic, Tree Expert & CEO of Yard Whispers shared on Wood Wide Web – Healthy Roots, Healthy Trees. Tom Wolf, a spray application specialist with Agrimetrix Research & Training, did a presentation on Recent Advances in Sprayer Technology. We welcomed back David Pinzon, Regulatory Affairs Managers with Corteva, who talked about the discovery of new herbicides as a continuous improvement tool to provide benefits for pest control and sustainability. We finished off the day with our General Meeting.

Thanks again to our tech team of Brandon Tupper & Sean Hilton.

We are always looking for speaker suggestions & topics. If you have any suggestions, please email the PVMA office.

What's new in 22? While we continue to adapt and change to the 'new normal' of living in the presence of COVID-19 (there, I said it), we are excited to be making baby steps back to the old normal with an in-person conference planned for March 10th, 2022. This is the first in-person conference that the PVMA has held since March 2020. I say baby steps because this event will only be 1-day, instead of the usual 3-days. What hasn't changed is the opportunity to network with your fellow vegetation professionals and to enjoy the CEU-accredited presentations. Join us to learn about new technologies, professional insights, and real-world experiences. We are looking forward to seeing you in-person in March 2022!

Lisa Rybchuk, Director in Charge

- MEMBERSHIP COMMITTEE

The PVMA is always exploring ways to provide more value to a PVMA membership.

As a PVMA member you have access to the following financial benefits:

- 1) Discounts on registrations for Workshops & Conferences
 - 2) Discounts on UTW-UTT Certifications and Re-Certifications
 - 3) Bursaries for your dependents in Post-Secondary.
 - 4) Your company logo & information listed on our Featured Members Page as no extra cost.
 - 5) **NEW IN 2022.** A no-cost \$3,000 Accidental Death & Dismemberment benefit, Eye care discount card and Child Safe Kits. PVMA has partnered with American Income Life Insurance Company (AIL) to provide this benefit to all PVMA members in good standing. Insurance letters will be mailed out to all named members when you either renew or purchase a new 2022 membership.
- Don't miss out on these benefits, be sure you renew your 2022 membership, if you haven't already done so.

Laura Hammer, Director in Charge

- INDUSTRIAL/NATIONAL COMMITTEE

IVMA B.C hosted their biennial event - 'The EVERYTHING in Vegetation Management Forum Nov 2-4, 2021 in Kamloops, BC. This event was available online or in-person. Most of the almost 60 attendees chose to attend the conference virtually with about 20 in-person. Check out their website at <https://www.ivma.com/> for association information. IVMA -ManSask is still working with the PVMA Office Manager regarding their administrative backlog. No other updates. Their website is <http://ivmamansask.com/>

OVMA hosted six online training events in Fall 2021 with 33 members picking up Continuing Education credits. September hosted a golf tournament and tour based out of A field tour September 27/28th in Grey County based out Collingwood ON. with 40+ participants in attendance. OVMA held their 2021 AGM online November 17th. Information on the OVMA can be found at <https://www.ovma.ca/>

AVMA The Atlantic Vegetation Management Association (AVMA) will be hosting their in-person conference an AGM November 23-25th in Moncton, NB. at the Delta Hotel. There were 30 attendees at this event. Information on the AVMA is located at <http://myavma.ca/blog/>

Geoff Thompson, Director in Charge

- GOV'T LIAISON COMMITTEE

2021 was a challenging year for both industry and government as Covid raged on. I would like to thank all members for their patience and diligence during these unprecedented times. 2022 is a new year bringing with it the hope Covid will soon be in the rear-view mirror, bringing with it some sense of normalcy.

PAC meetings will resume with the first scheduled meeting on Feb 15. I will be in attendance representing the PVMA and will report findings in the next newsletter. The PAC allows for 3 members of the PVMA to attend meetings. The desired PVMA representation is 1 representative from large business, 1 rep from small business and 1 industrial/ forestry expert. To date we are still looking for a representative for large business. If you are interested, please reach out to either Lisa Rybchuk or myself. The PVMA is committed to increasing communications and enhancing our relationship with our partners in government and education. If you have interest in becoming involved in the liaison committee, please reach out

Vaughn Leuschen, Director in Charge

- CASINO COMMITTEE

By the time this magazine is published we (hopefully) will have held our 3rd Casino for the PVMA. It was extremely challenging to find enough volunteers to work this Casino. A big THANK YOU!!! to those who did step up and volunteer. We ran the risk of losing the casino due to lack of workers. A follow up report will be provided at the AGM on March 10th.

Significant funding for the PVMA comes directly from casino funds. Casinos occur only every few years. These funds are earned by members volunteering between 4.5 and 9 hours once every 2-3 years. With casino funds, the PVMA has been able to do the following:

- Keep membership fees the same since 2011. Yes, 2011.
- Provide educational scholarships for 10 students to a total of \$13,000 to date.
- Develop, redesign, update and maintain the website where you can post jobs for free.
- Update the Alberta Industrial Vegetation Management Manual, 2016.
- Develop the Field Manual for Rehabilitating Soils affected by Residual Herbicides, 2019.
- Provide 2 FREE fall workshops, with educational credits.
- Develop and move the UTW-UTT recertification to an online platform.
- Purchase office equipment such as laptops, monitors, filing cabinets, photocopier & software.
- Purchase a defibrillator to be available at workshops and conferences.
- Participate at tradeshow and events to promote our association.
- Purchase PVMA promotional materials including a highway 2 billboard.
- Cover operational costs like insurance, office rent, telephone, utilities, etc.

Laura Hammer, Director in Charge

- UTT/BOARD OF GOVERNORS

The BOG met in January and one of the key items discussed was looking at the logbook process for collecting hours and documenting proficiencies. We are going to be setting up a sub-committee to look at the cost and logistics of utilizing an electronic platform for recording hours and documenting proficiencies.

The focus will be to develop a streamlined user-friendly process that will allow the student to keep up-to-date records and know where their collected hours at the push of a button.

Along with this we are marching towards our next intake for the UTT/ UTW course. We are closely monitoring the current restrictions to ensure we offer the safest most beneficial learning experience we can for the students.

Bob Gordon, Director in Charge

THE VEGETATION MANAGER *magazine*

- ADVERTISING RATE SHEET

2022 RATE SHEET

*submit ads or inquiries to Val@pvma.ca

AD SIZE SPECS:	SINGLE ISSUE RATE (MEMBER)	ANNUAL RATE (MEMBER) * THREE Issues - 2 printed, 1 electronic (printable)
FULL PAGE ADVERTISEMENT	\$800	\$1680
HALF-PAGE ADVERTISEMENT	\$550	\$1155
QUARTER PAGE ADVERTISEMENT	\$400	\$840
BUSINESS CARD ADVERTISEMENT	\$100	\$210

*PLUS GST

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Business Card: 3.5" (w) x 2" (h)

NOTE:

Keep live matter 1/4" from trim on each side. For ad spread units, please supply 1/16" duplicated image on both sides of the centerline.

- PUBLICATION SCHEDULE

Deadline for submission

January 28, 2022

May 4, 2022

Sept 14, 2022

Distribution Date

March 8, 2022 (Print)

June 2, 2022 (Electronic)

October 20, 2022 (Print)

HEALTHY	REACTING	INJURED	ILL
<ul style="list-style-type: none"> • Normal fluctuations in mood • Normal sleep patterns • Physically well, full of energy • Consistent performance • Socially active • No trouble/impact due to substance use 	<ul style="list-style-type: none"> • Nervousness, irritability, sadness • Trouble sleeping • Tired/low energy, muscle tension, headaches • Procrastination • Decreased social activity • Limited to some trouble/impact due to substance use 	<ul style="list-style-type: none"> • Anxiety, anger, pervasive sadness, hopelessness • Restless or disturbed sleep • Fatigue, aches and pains • Decreased performance • Social avoidance or withdrawal • Increased trouble/impact due to substance use 	<ul style="list-style-type: none"> • Excessive anxiety, easily enraged, depressed • Suicidal thoughts and intentions • Unable to fall or stay asleep • Exhaustion, physical illness • Unable to perform duties /absenteeism • Isolation, avoiding social events • Dependence

ACTIONS TO TAKE AT EACH STAGE OF THE CONTINUUM

<ul style="list-style-type: none"> • Focus on task at hand • Break problems into manageable chunks • Identify support systems • Maintain health 	<ul style="list-style-type: none"> • Recognize limits • Get enough rest, food & exercise • Practice healthy coping skills • Identify & minimize stress 	<ul style="list-style-type: none"> • Identify and understand own signs of distress • Talk to someone • Seek help • Seek social support, don't withdraw 	<ul style="list-style-type: none"> • Seek consultation as needed • Follow healthcare provider recommendations • Regain mental & physical health
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YOUR MENTAL HEALTH MATTERS



**KNOWING GREEN.
IT'S OUR NATURE.**

NEW INTEGRATED VEGETATION MANAGEMENT BEST MANAGEMENT PRACTICES

- BY RANDALL H. MILLER, DIRECTOR RESEARCH AND DEVELOPMENT, CNUC



The third edition of the integrated vegetation management (IVM) best management practices (BMP) will soon be available from the International Society of Arboriculture (ISA). The IVM BMP is a cooperative effort between ISA and the Utility Arborist Association (UAA) and was last revised in 2014. This edition is a product of nearly two years of work by a review committee made up of vegetation management (VM) authorities from electric utilities, departments of transportation, wildlife habitat nonprofits, and railroad and pipeline VM professionals. ISA BMPs are companion documents to ANSI A300 – the American National Standard: Tree, Shrub, and Other Woody Plant Management – Standard Practices. The IVM BMP is associated with Part 7 of the A300 series, the most recent edition dating to 2018 (ANSI 2018). As of this writing, IVM BMP development is nearing completion, with expected release in the first quarter of this year.

WHAT'S THE SAME?

The fundamentals of IVM haven't changed. IVM is still a planned, systematic process dependent on objective analysis of vegetation and site data. Control methods selected based on that analysis are still the means to successful IVM outcomes. More than one method often needs to be integrated into a project to achieve maintenance objectives. Controls are implemented, then results are monitored and evaluated for quality. The intervention involved in completing a project changes vegetative and site conditions, so the process circles back to the beginning—completing new vegetation and site assessments for future decision making, which will again be evaluated.

Communication and stakeholder engagement remain important to IVM. Communication plans should be designed to engage stakeholders, both internal and external to a VM organization. The plan needs to stress transparency and involve anyone who might have interest, including executives, engineers, public relations departments, call centers, governmental agencies, property owners, nonprofit organizations, and others.

The concept of action thresholds is the same: defined as a level of incompatible plant pressure that initiates work. Most of the control methods are presented as they were in 2014, including biological, chemical, cultural, along with manual, and mechanical methods (i.e., physical control). Biological methods involve using plant competition, allelopathy, animals, insects, or pathogens to control undesirable vegetation. The new edition still emphasizes biological control for its environmental benefits and cost effectiveness. For example, as in 2014, the biological method of cover type conversion is promoted as most desirable wherever possible. Chemical control is managing vegetation with the use of herbicides or growth regulators. Cultural methods involve land uses that preclude growth of incompatible plants. Mechanical methods employ machines, while manual methods use tools (e.g., chainsaws).

WHAT'S CHANGED?

While the fundamentals of IVM haven't changed, there is a lot that is new. One major modification involves the IVM process flow chart (Figure 1). The review committee realized that planning occurred on two levels: management and maintenance. This concept wasn't clear in the 2014 chart, which prompted the revision. The highest planning is at a management level. Management plans are strategic and comprised of a programmatic overview, which includes vision, mission and value statements, general descriptions of the area under management (e.g., land use and infrastructure attributes), specifications, tolerance levels, action thresholds, communication protocols, quality assurance and control practices, and strategic outcomes that govern maintenance level objectives. The second stage is at a maintenance level. Vegetation maintenance plans establish objectives for desired outcomes on a project level. They are tactical, short term, and often annual. Maintenance plans are precise and explain exactly what needs to be done, who needs to do it, and where.

Further, the IVM BMP has been brought in line with the principles and criterion in the Right-of-Way Stewardship Council's (ROWSC) Accreditation Standards (Right-of-Way Stewardship Council, 2016). The standards establish technical requirements necessary to achieve recognition from the ROWSC for excellence in IVM programs. Among the principles introduced from ROWSC Accreditation Standards, the most notable are:

- Right-of-use, which is fundamental to IVM because it can't succeed without the long-term right to manage the land for the intended purpose
- Understanding ecosystem dynamics
- Accounting for economic viability, in which management and maintenance plans are adequately funded to achieve their goals and objectives, including implementation of cost-effective techniques
- Accounting for environmental viability, when managers take the impacts of IVM into account, and control method selections are made considering both positive and negative ecological consequences
- Adaptive management, which makes use of a quality assurance and control program to improve future outcomes

The concept was implied in the previous versions' cyclic presentation of the IVM process, but the approach is strengthened in this edition.

This version's controls discussion stresses the importance of an integration of methods, with emphasis on biological techniques. Each method is described in terms of its application, advantages, and disadvantages, some of which are:

- Prescribed fire: added as a control method
- Cultural method section: expanded to include targeted grazing, seeding, and multi-use
- Manual and mechanical methods: combined as physical controls
- Chemical control method section: deemphasized in favor of biological methods, particularly cover type conversion and chemically facilitated biological control as the preferred herbicide use

The body of the BMP covers IVM best practices that can be applied universally. Specific purposes like electrical, pipeline, roadway, railroad, and wildlife habitat IVM have been moved to appendices:

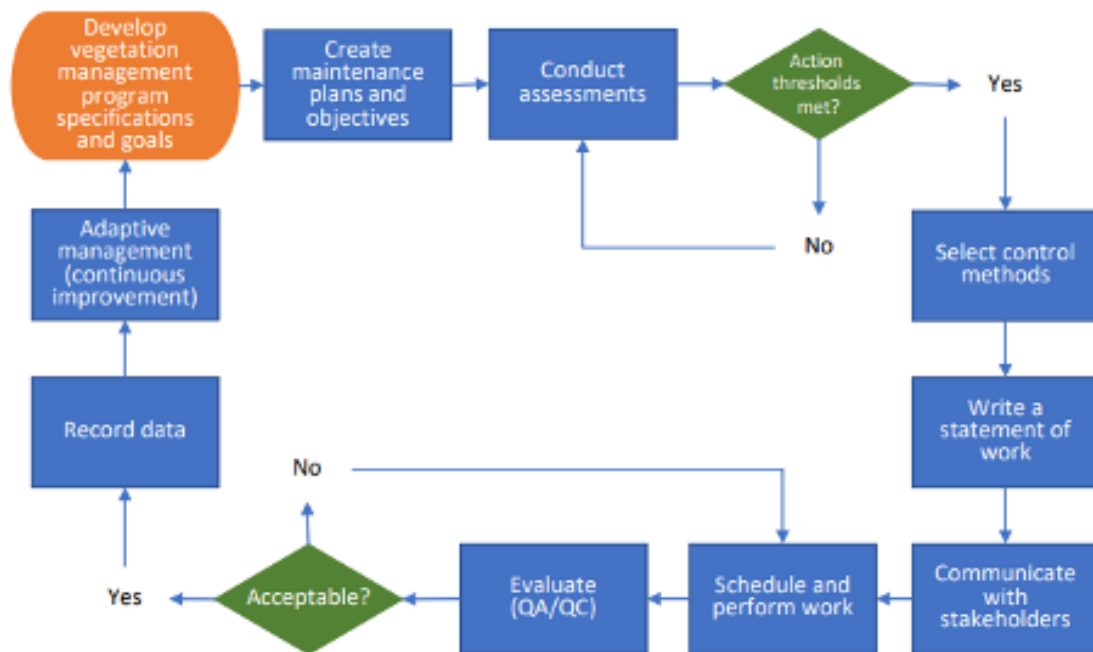
- Nearly all electric right-of-way discussion from 2014, including the wire-border zone concept, has been transferred to an appendix
- New to this edition: roadway, railway, soils, and wildlife stewardship appendices. Pipeline, roadway, and railway discussion offers overviews of IVM adaptations to achieve goals attendant to those purposes
- Wildlife habitat stewardship appendix contains an examination of habitat linkages, moderating climate change, and understanding needs of the animals targeted for benefit
- Soils appendix stresses the importance of soil health to successful IVM

The BMP concludes with an appendix on herbicide use. Much of this information, such as descriptions of application methodology, was in the body of the 2014 version. Additional information has been added about the interrelation of herbicide mode of action and application practices in influencing selectivity, as well as details on active ingredients of chemicals commonly used in IVM.

CONCLUSION

The revised IVM BMP is the culmination of nearly two years of work by the review committee. It retains the fundamentals of previous editions while expanding and updating them. Notably, the new IVM BMP recognizes that there are two levels of planning: management and maintenance. Management level planning—strategic and long term—establishes broad goals that govern maintenance plans. Maintenance plans are tactical and short term - approximately a year in order to establish objectives for specific projects. The new BMP is written to be consistent with the principles and criterion of the ROWSC Accreditation. Environmental stewardship is highlighted throughout the document and emphasizes cover type conversion as a cost-effective biological control and the most desirable IVM outcome, wherever possible. The BMP has been expanded to include specialties, such as pipeline, roadway, railway, and wildlife habitat stewardship IVM as appendices. There are also appendices on soils and chemical application. The new revision is expected out in early this year.

Figure 1. The IVM process from the IVM BMP



Note: Order of processes may vary, or may occur concurrently.

ANSI American National Standard for Tree Care Operations: Tree, Shrub, and Other Woody Plant Management - Standard Practices (Integrated Vegetation Management (Part 7)). (Londonderry, New Hampshire: Tree Care Industry Association, 2018).

"Accreditation Standards For Assessing IVM Excellence". 2016. Right-Of-Way Stewardship Council. <http://www.rowstewardship.org/standar>.

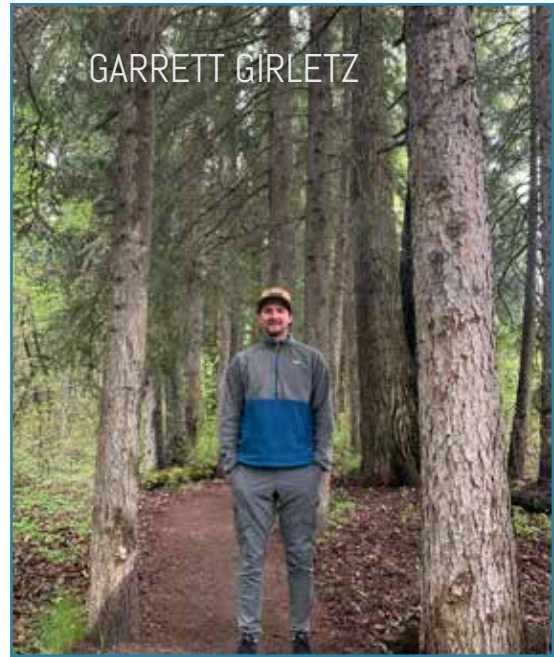
2021 SCHOLARSHIP WINNERS

- BY VAL EICHELT

2021 SCHOLARSHIP WINNER – GARRETT GIRLETZ

Meet Garrett Girletz. Garrett is a 2021 PVMA Scholarship Winner. Garrett chose to study Environmental Science because of his immense passion for the outdoors. He made the decision to pursue a Bachelor of Science in Environmental Science after graduating from SAIT. He was intrigued by the field work and hands on learning SAIT offered and became dedicated to building a career in the field of Environmental Science. He is currently completing his degree at the University of Lethbridge.

When Garrett is not immersed into his studies, he can be found enjoying the outdoors. His free time is spent biking, hiking, kayaking, and observing wildlife. He has worked as a seasonal weed inspector and applicator with Rocky View County

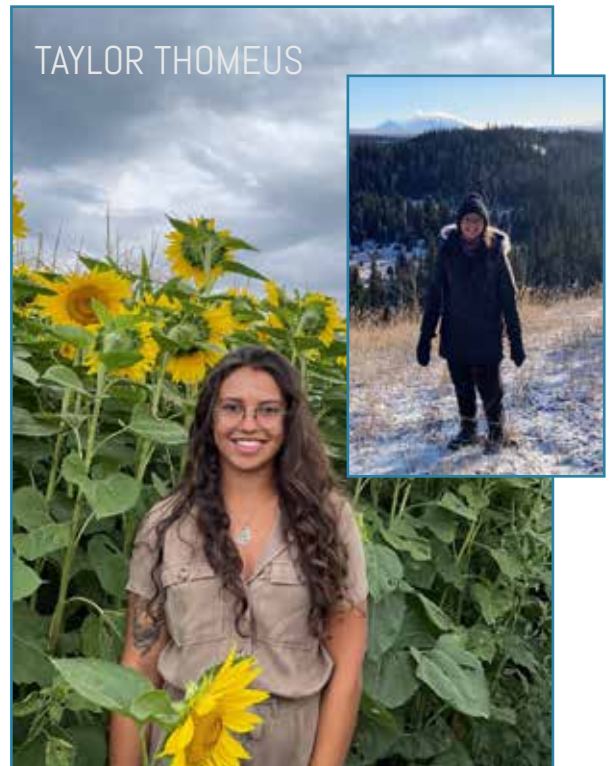


2021 SCHOLARSHIP WINNER – TAYLOR THOMEUS

Another 2022 Scholarship recipient is Taylor Thomeus. After graduating from the Biological Sciences Technology program at NAIT (on the dean's honor roll), Taylor decided to continue her education by pursuing a degree in conservation biology from the University Alberta. As a fourth-year student, with her degree coming to an end, she will be entering the vegetation management industry in a more permanent manner.

Taylor's summer work experience includes working at the NAIT Boreal Research Institute on the plant and seed technologies team, as well as working as a Herbicide applicator at West County Energy Services.

She has always been interested in working in the industry, on the land reclamation side of things. In her words... "managing vegetation is the most important step in the reclamation process and I intend on utilizing my skills to ensure that this step is done properly and safely; safely for both the applicator and the environment".



2021 SCHOLARSHIP WINNER –

KAYLA NIELSEN

Kayla Nielsen is also a 2021 Scholarship award recipient. Kayla is an accomplished student, completing several years of post-secondary schooling. She is also an adventurer. After completing a Bachelor of Science Degree in 2017 she moved to New Zealand for a year and travelled the world. Kayla then enrolled in a Chemical Technology program at NAIT in 2020. Her vegetation management experience stems from working as a herbicide applicator since 2016. She has worked for Sure Shot Environmental. Kayla says that work has been some of the most fun she has ever had in her life. Her mom likes to joke that Kayla's job has ruined her, because during long drives she stares at the ditches and names every noxious weed she sees.

Kayla says she is passionate about the field of chemistry, and she is looking forward to starting a career that allows her to use her analytical strengths.



2021 SCHOLARSHIP WINNER –

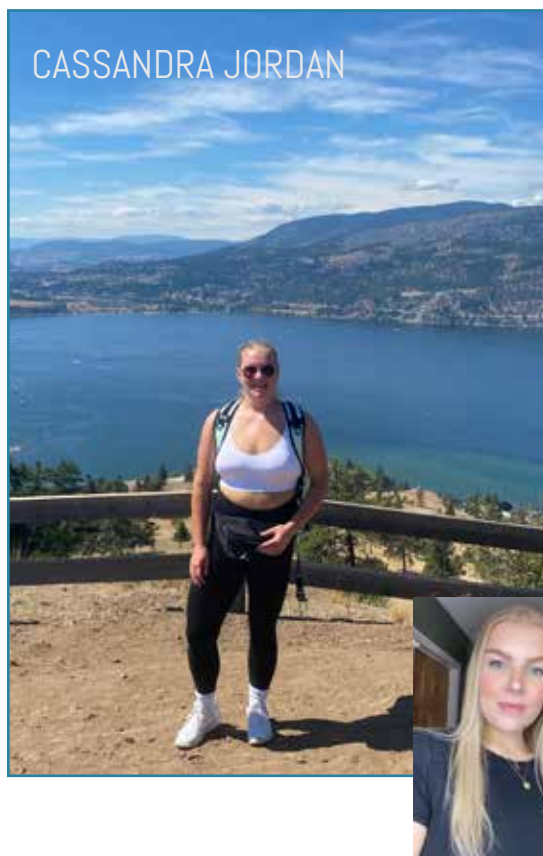
CASSANDRA JORDAN

Lastly, meet Cassandra Jordan. As a 2021 Scholarship recipient she has also completed a number of years of schooling. After taking a two-year program at NAIT to receive a diploma in conservation biology renewable resources she decided to continue her education and pursue a degree in conservation biology at the University of Alberta. She is in her 4th year of that program.

During the summers between school years Cassandra fell in love with the job of vegetation management through spraying, which Cassandra says... "is not most peoples first choice of employment options". However, she was able to spend time in the outdoors, which she loves, all summer long. She also got to see some remote and off the grid places, work with new people who have similar interests and see a vast variety of the many beautiful plant species that Alberta has to offer.

Cassandra writes... "There is always room for growth and learning and I am excited to finish my degree and see where it can take me".

Each of these 4 Scholarship recipients received a cheque for \$1,500 and in addition were invited to attend the PVMA 2022 Spring Conference as our guests, where they will be recognized publicly. The PVMA is proud to support students through Scholarships and Bursaries.



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