

2012 SNOW AND ICE CONTROL WORKSHOP HIGHLIGHTS

Kim Carr, WV LTAP



Photo by WV LTAP

The rubber tipped titanium plow cutting edge display attracted a great deal of attention.

discussed ways to help avoid and alleviate back and neck issues that can be brought on by long hours sitting, driving, and constantly turning your head, all of which are typical for snowplow drivers and other equipment operators.

Gary Eye and Bob Pritts, both WV Division of Highways District 5 employees, spoke on the importance of equipment maintenance and discussed items that operators and mechanics should pay special attention to in order to keep their equipment running efficiently.

Workshop participants were also given the opportunity to attend a special afternoon chain saw safety session. This session was led by Edward Murriner of CAHOJO Consulting, and focused on basic chain saw techniques and the importance of personal protective equipment. Ed also covered situations that the attendees will likely encounter during storm cleanups and general brush cutting.



Photo by WV LTAP

Ed Murriner demonstrates a shaving technique that is effective when cutting a spring pole.

The Snow and Ice Control Workshop continues to be one of the largest events hosted by the WV LTAP. This year's event was held on September 27 in Flatwoods, WV and over 200 people attended — surpassing attendance from previous Snow and Ice Control Workshops.

This year's program included a variety of topics, presenters, and demonstrations. *To highlight a few:* Ed Stellfox, Director of the Maryland LTAP/T2 Center, spoke about the essential role that planning and year-round organization play in winter maintenance operations.

Dr. Anna Allen, a physician with WVU,



IN THIS ISSUE

Page 1

2012 Snow and Ice Control Workshop Highlights

Pages 2 and 3

Chain Saw Operation: Best Practices When Working With Spring Poles (Part Two of Two)

Pages 4 & 5

Using Portable Generators Safely

Page 6

Road Sleuth Information Sheet *Myth: Why is the Road Department Spraying Water on the Roadway During the Winter?*

Page 7

Fall 2012 Street Smarts Contest Winners

Check out the WV LTAP Facebook Page

Roadway Fun Facts

Country Roads & City Streets is typically published quarterly. The purpose of this newsletter is to provide information that is beneficial to decision makers, elected officials, and roadway construction, maintenance and management personnel.

The material and opinions included in this newsletter are those of the West Virginia LTAP and do not necessarily reflect the views of the Federal Highway Administration or the West Virginia Department of Transportation. Every effort has been made to ensure the integrity and accuracy of both original and borrowed material; however, the West Virginia LTAP does not assume responsibility for any information that is found to be incorrect.



The West Virginia LTAP is part of the National Local Technical Assistance Program, which is funded by the Federal Highway Administration. West Virginia LTAP also receives funding from the West Virginia Department of Transportation.

MISSION:

The mission of the WV LTAP is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers.

To help achieve this mission, training, demonstrations, personalized technical assistance, and resource materials are provided.

CHAIN SAW OPERATION: BEST PRACTICES WHEN WORKING WITH SPRING POLES (PART TWO OF TWO)

This is the final article of a two-part series on chain saw operation. Part one was included in the Fall 2012 edition of this newsletter and focused on basic safety procedures to use when starting and handling a chain saw and basic felling awareness.

The focus of this article is best practices to follow when working with spring poles. With the recent storms, many of you have been clearing lots of brush and debris, and have probably encountered numerous spring poles. **A spring pole is a tree, segment of a tree, limb, or sapling that is under stress or tension due to pressure or weight of another object** (definition from About.com).

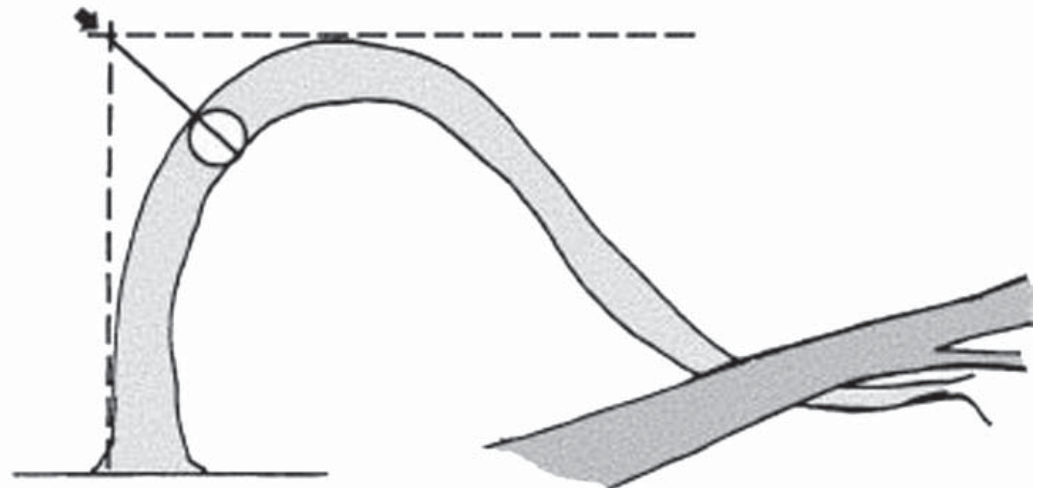
The following *Spring Pole Tips* are written by Tim Ard, owner of Forest Applications Training, Inc. A special thank you to Tim for granting reprint permission of this information to the WV LTAP.

Tim is a well known and respected chain saw operator and trainer. He is dedicated to teaching others safe operation and maintenance techniques. The WV LTAP staff encourages you to visit Forest Applications Training, Inc's website, located at www.forestapps.com, if you are looking for information related to chain saw operation, maintenance, personal protective equipment, etc.

The following tips and diagrams explain the methods advocated by Tim Ard when working with spring poles. If you don't understand these drawings or explanations, please contact Tim by emailing info@forestapps.com.

SPRING POLE TIPS

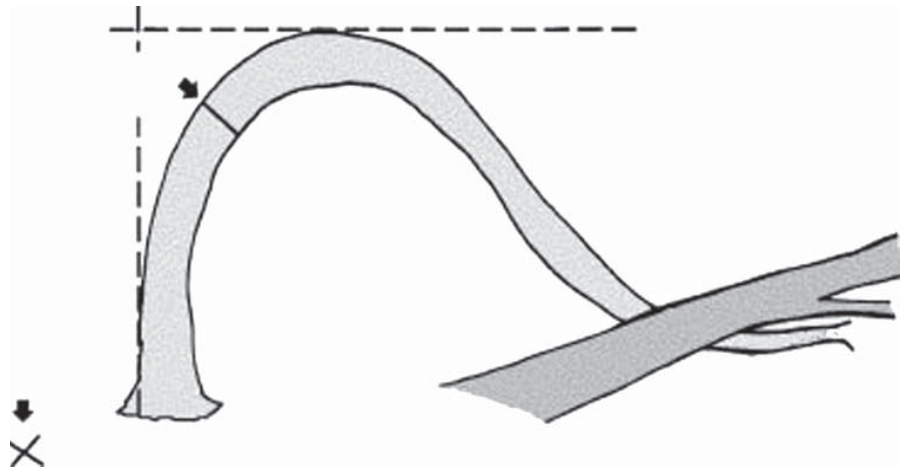
The best way to manage spring poles is to avoid them. Spring poles are dangerous! However, if a spring pole must be cut, it should be done in a safe manner. **The best way is to release the tension slowly at the maximum point of tension.**



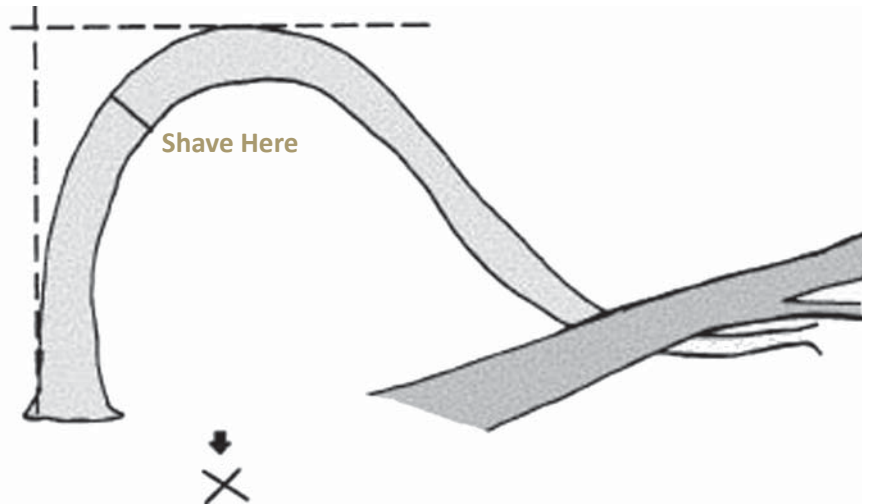
45 degree angle, point of maximum tension

To locate the maximum point of tension, extend a vertical line from the base of the tree and a horizontal [line] from the highest point of the spring pole. From the intersection of these two lines imagine a 45 degree angle to the spring pole. It is this point which will have the maximum amount of tension.

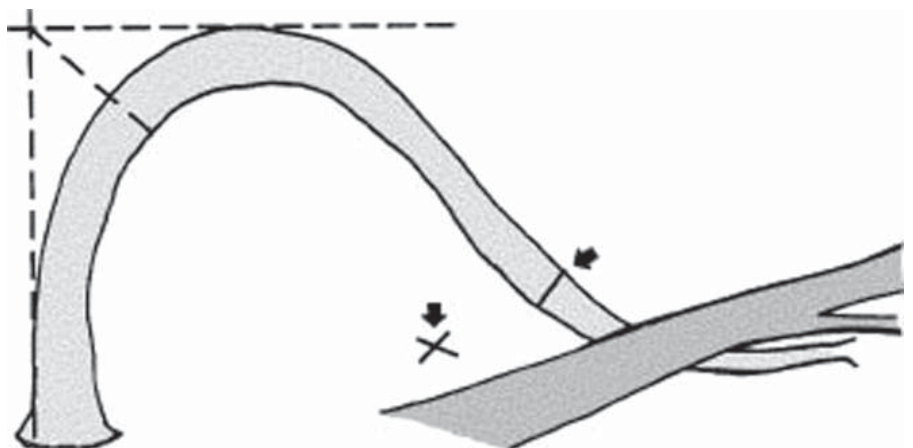
Spring poles may be cut from underneath or from the top. If you choose to cut a spring pole from the top, you must stand at 45 degrees to the spring pole to avoid being hit by the spring pole if the tension is released suddenly. From this position, the chain saw can be used to make a succession of small cuts at the maximum point of tension until the fibers begin to break by themselves. This cut must be made with the saw at maximum RPM with a slow rate of feed. At this time, the logger should move away from the tree and let the pressure release itself. The spring pole can then be cut off.



Spring poles may also be released from underneath. To do this the logger should stand at 90 degrees to the spring pole and use the chain saw to shave wood off the underside of the spring pole at the maximum point of tension. Do not cut into the spring pole as the compression of the wood will pinch the saw. After enough wood is shaved the fibers will begin to break by themselves and the logger can stand aside and let the spring pole release its tension naturally.



If the point of maximum tension on the spring pole is higher than the logger's shoulders, the spring pole should be released from the top. The logger can stand under the spring pole, trim any branches that may be in the way and then release the spring pole by cutting off the top. The spring pole should fly harmlessly above the logger and not cause injury.



This article and more tips are available at Forest Applications Training, Inc.'s website.

<http://www.forestapps.com/tips/tips.htm>

ADVISORY BOARD

FHWA-WV Division

Bert Buchanan
Charleston, WV

Kevin Burgess
Charleston, WV

WV DOT

Steve Cole
Charleston, WV

Kathy Holtsclaw
Charleston, WV

Marvin Murphy
Charleston, WV

Ronald Tenney
Weston, WV

Donald Williams
Morgantown, WV

Gary Winter
West Virginia Governor's
Highway Safety Program
Charleston, WV

Municipal

Michael DeMary
Retired Stormwater
Program Manager
Fairmont, WV

Bob Gordon
Director
Hagerstown/Eastern
Panhandle MPO
Martinsburg, WV

Terry Hough
City Engineer &
Public Works Director
Morgantown, WV

Bill Lanham
Town Superintendent
Fayetteville, WV

Private

Robert Amtower
Rummel, Klepper & Kahl
Burlington, WV

Pat Parsons
Asphalt Pavement Assoc.
of West Virginia
Charleston, WV

USING PORTABLE GENERATORS SAFELY

The information for this article is from the OSHA website.

With the winter months upon us, the possibility of power outages due to winter storms is increased. Portable generators are beneficial when short term electric power is needed, but they can be dangerous if not used properly. Hazards to be aware of when using a portable generator include, but are not limited to: shock and electrocution, carbon monoxide poisoning, and risk of fire hazards. It is important to recognize and follow safe portable generator guidelines.

The following portable generator safety tips are from the Occupational Safety and Health Administration's (OSHA), "Using Portable Generators Safely," fact sheet. We urge you to take the time to look over this list and visit OSHA's website and the fact sheet in its entirety (www.osha.gov/OshDoc/data_Hurricane_Facts/portable_generator_safety.pdf).

SHOCK AND ELECTROCUTION

- Never attach a generator directly to the electrical system of a structure such as a home, [attached garage], office, trailer, etc. unless a qualified electrician has properly installed a generator with a transfer switch. Attaching a generator directly to a building's electrical system without a properly installed transfer switch can energize wiring systems for great distances. This creates a risk of electrocution for utility workers and others in the area.
- Plug electrical appliances directly into the generator using the manufacturer's supplied cords that are grounded (3-pronged). Inspect the cords to make sure they are fully intact and not damaged, cut, or [worn]. Never use frayed or damaged extension cords. Ensure the cords are appropriately rated in watts or amps for the intended use. Do not use underrated cords; replace them with appropriately rated cords that use heavier gauge wires.
- Do not overload your generator; this can lead to overheating.
- Use ground fault circuit interrupters (GFCIs), especially where electrical equipment is used in or around wet or damp locations. GFCIs and extension cords with built-in GFCI protection can be purchased at hardware stores, do-it-yourself centers, and other locations that sell electrical equipment. Regardless of GFCI use, electrical equipment used in wet and damp locations must be listed and approved for those conditions.
- Make sure a generator is properly grounded and the grounding connections are tight.
- Keep a generator dry; do not use it in the rain or wet conditions. If needed, protect a generator with a canopy. Never manipulate a generator's electrical components if you are wet or standing in water.
- Do not use electrical equipment that has been submerged in water. Equipment must be thoroughly dried out and properly evaluated before using.
- Power off and do not use any electrical equipment that has strange odors or begins smoking.

CARBON MONOXIDE POISONING (CO)

Carbon monoxide (CO) is a colorless, odorless, toxic gas. Many people have died from CO poisoning because their generator was not adequately ventilated.

- Never use a generator indoors or in enclosed spaces. Open windows and doors may not prevent CO from building up when a generator is located in an enclosed space.
- Make sure a generator has 3 to 4 feet of clear space on all sides and above it to ensure adequate ventilation.
- Do not use a generator outdoors if its placement near doors, windows, and vents could allow CO to enter and build up in occupied spaces.

FIRE HAZARDS

- Generator fuels (such as gasoline, kerosene, etc.) can ignite when spilled on hot engine parts.
- Before refueling, shut down the generator and allow it to cool.
- Gasoline and other generator fuels should be stored and transported in approved containers that are properly designed and marked for their contents, and vented.
- Keep fuel containers away from flame producing and heat generating devices.
- Do not smoke around fuel containers.
- Do not store generator fuels in your home.



Image from Istockphoto

The California Energy Commission Consumer Energy Center is another resource for learning more about portable generator safety. (www.consumerenergycenter.org/tips/generators.html).

CENTER STAFF & CONTACT INFORMATION

WV LTAP
West Virginia University
PO Box 6103
Engineering Sciences Building
Room 553
Morgantown, WV 26506
Phone: (304) 293-9924
Fax: (304) 293-7109
E-mail: wvltap@mail.wvu.edu
Website: wvltap.wvu.edu

Staff

Dr. John Zaniewski
Director
(304) 293-9955
John.Zaniewski@mail.wvu.edu

Kim Carr
Program Coordinator
(304) 293-9924
Kim.Carr@mail.wvu.edu

Andrew Morgan, P.E.
Program Coordinator
(304) 293-9939
Andrew.Morgan@mail.wvu.edu

Sabrina DeVall
Editor & Technical Writer
(304) 293-9930
Sabrina.DeVall@mail.wvu.edu

Stephanie Spangler
Technical Assistant
(304) 293-9922
Stephanie.Spangler@mail.wvu.edu

Ashley Collins
Student Office Assistant
(304) 293-9924

Dr. Ron Eck, P.E.
Senior Advisor
(304) 293-9931
Ronald.Eck@mail.wvu.edu

Bill Wyant
Senior Volunteer
WWyant@hsc.wvu.edu

ROAD SLEUTH INFORMATION SHEET

There are many myths about transportation related issues. Road Sleuth has been designed to help dispel these myths and reveal the truth. Road Sleuth came from conversations WV LTAP staff had with public works directors, street supervisors, and others. From these conversations, one common theme emerged: public works personnel getting the same questions and requests time and again from their elected officials and residents and not having educational information readily available.

The Road Sleuth series can be downloaded from the WV LTAP website (wvltap.wvu.edu) as a PDF or Microsoft Publisher file. The Publisher files are formatted so agencies can add their individual contact information if desired. The WV LTAP does ask that the main text not be changed or altered without permission. Agencies are encouraged to post these information sheets on their webpage, distribute printed copies to city council members, send out in mailings, etc. The WV LTAP staff welcomes your suggestions for new topics and will continue adding new sheets as they become available.

MYTH: WHY IS THE ROAD DEPARTMENT SPRAYING WATER ON THE ROADWAY DURING THE WINTER?



This photo taken by WVDOH D-4 staff shows three of their tanker trucks that are used for applying liquid anti-icers and de-icers.

Most people who live in areas that receive snowfall are familiar with the sight of road crews plowing, salting, and using abrasives to help combat snowy and icy conditions. Another technique that some road agencies employ is the use of liquid solutions. If you have ever seen a road crew spraying a clear liquid onto the road just before or during a winter storm, it's not water; they are using what is known as a liquid anti-icing or de-icing agent.

There are several different products available, but two of the more common commercial products use magnesium or calcium chloride. Some agencies also make their own liquid solutions using salt and water, which is typically called salt brine. No matter whether an agency is making its own anti-icing or de-icing product, or using a commercial one, every state and local road agency has to abide by strict federal and state environmental regulations.



This photo taken by WV LTAP staff shows a spray bar that is attached to an ATV, used for treating walkways.

Often road crews will pre-treat the roadway prior to a storm – before the first snow has fallen. This means you will see a road crew spraying the liquid on the roadway several hours prior to the impending snowfall. This process helps prevent the ice from bonding to the pavement.

Another technique is pre-wetting material before spreading it on the roadway. Pre-wetting rock salt prevents it from scattering or being swept off the road by traffic, and it helps the salt begin to melt the ice sooner. Overall, pre-treating and pre-wetting lead to less waste and both of these techniques have been proven to help road agencies increase the effectiveness of the other materials they are using.

So if you see road crews spraying liquid on the roadways this winter, please keep in mind that these employees haven't lost their minds; they aren't spraying water on the roads to make them into an ice-rink. They are using a process which will enhance the melting of snow and ice and help improve roadway conditions.

FALL 2012 STREET SMARTS CONTEST WINNERS



East Main Street, Glenville

The correct answer for the fall 2012 Street Smarts Contest is **East Main Street in Glenville, WV.**

Congratulations to our winners **Carol Marsh** and **Marc Richardson**. Each winner received a pair of LTAP work gloves, an insulated tote bag, a mechanical pencil, and a magnetic note pad.

Carol was the first person to correctly respond in the printed/electronic newsletter distribution category, and Marc Richardson was the first person to correctly respond on our Facebook page.



Carol Marsh

Periodically, the Street Smarts Contest will be published in this newsletter and/or on our Facebook page. The contest is simple: a photo of a street or roadway in WV will be displayed. The first person to contact WV LTAP with the correct answer will win a fabulous prize! (As fabulous as a prize can be under \$25 dollars.)

The winner will be announced on our Facebook page or, when space is available, in the next edition of this newsletter.

CHECK OUT THE WV LTAP FACEBOOK PAGE



The WV LTAP wants to remind you that we are on Facebook! We encourage you to visit our page and give us your feedback. You can find us by typing in www.Facebook.com/WVLTAP or within the search feature in Facebook, by typing WV Local Technical Assistance Program (WVLTAP). The page is set up so everyone can post comments; you don't need to become a "friend" or be accepted to post items. Just make sure to "like" us so anytime we add announcements, they will show up in your newsfeed.

This is a great place to check for upcoming training events, available give-a-ways, current transportation related items, photos, and much more. We also hope that in addition to checking out our announcements, this will be an interactive tool for you, our clients, to pose questions, share solutions, successes, challenges, etc.

ROADWAY FUN FACTS



Image from Microsoft.Com Images

DID YOU KNOW....

- **US 30, The Lincoln Highway**, was the first roadway built that spanned from coast to coast. It was built in 1913, and in 1928 it was reconfigured, going through the northern tip of WV (<http://www.lincolnhighwayassoc.org/>).
- For thirteen years (1974–1987), speed limits above **55 mph** were prohibited by federal law (http://en.wikipedia.org/wiki/Speed_limits_in_the_United_States).
- Bobby Troup wrote the song, **Get Your Kicks on Route 66** in 1946. It has been performed and remixed by several musicians, including Nat King Cole, who first recorded it in 1946 scoring a major hit, the Rolling Stones, and Depeche Mode (<http://www.legendsofamerica.com/66-facts.html>).

Season's Greetings



The West Virginia
LTAP Wishes
You a Happy &
Healthy New Year.



West Virginia Local Technical Assistance Program
West Virginia University
Benjamin M. Statler College of Engineering and Mineral Resources
Department of Civil and Environmental Engineering
PO Box 6103
Morgantown, WV 26506-6103



Change Service Requested

Non-Profit Organization
U.S. Postage Paid
Morgantown, WV
Permit No. 34

The WV LTAP encourages you to share this newsletter with others or direct them to the electronic version on our website <http://wvltap.wvu.edu>.

- Road Supervisors
- Elected Officials
- Public Works Department
- Road Crew
- Managers
- City Engineers
- Others