Issue: 25-15
October 2, 2025

THE PURDUE LANDSCAPE REPORT

In This Issue

Help Your Trees Transition into Autumn

(Ben McCallister, bmccalli@purdue.edu)

It’s finally October, and we should be enjoying lovely fall temps and colors. While some of the trees are changing, it’s not necessarily due to the change in seasons. As I write this, the temperature is 84 F (29 C). I look out my window and see mostly green leaves with some colors from the short cold snap we had and some from heat and drought stress. Whether you are worried about the trees in your yard and community or not, there are some simple tasks that we can do to assist them as we await the cooler temperatures of Autumn.

Mulching

One simple task to better prepare your trees for winter is to add a new layer of mulch, which benefits your trees in multiple ways. Adding a 2-3 inch thick layer of mulch will better maintain moisture levels and buffer extreme temperature changes in the soil and will add some organic matter too. Mulching to the drip line will benefit the tree the most, but in the case of larger trees it’s not always feasible. Try for at least a 3-foot radius from the trunk and make sure to leave a 2 inch or so gap between the trunk and the mulch. Remember, no volcano mulching.

A 3 foot radius mulch ring around a medium sized tree

Fertilizing

That mulch you just added will add some organic material to your soil as it slowly breaks down, but an autumn fertilization can benefit your trees too. Unlike trees in the forest that have a natural supply of nutrients from fallen leaves and twigs, trees around our homes are usually deprived as we rake and clean up our yards. Adding a slow-release fertilizer in the fall helps provide a nutrient boost over the winter, can promote root growth, and better prepare your tree for Spring.

Watering

Water is still an essential part of your tree care plan, but as temperatures drop and trees begin to head into dormancy they don’t need as much water as is required in the hit summer months. If you have irrigation systems in your yard start to drop the frequency of watering. You can water up until the first freeze, but make sure soils are just a little damp and not soaked. Evergreens in particular will benefit from slow deep watering 1-2 times a week until the soil freezes. Winter winds and temperatures can desiccate the needles without an adequate supply of water.

Pruning

Now is a good time to prune out any dead, damaged, or diseased limbs in your trees. If you have access to hand saws and pole saws or pruners, you can remove smaller branches or those closer

to the ground. Make sure you are making proper pruning cuts though, and if there are large limbs, those at heights, or you are just unsure of how to make a good cut enlist the help of a professional arborist.

Trunk damage

Sunscald or southwest damage occurs on young and/or thin barked trees in the winter. Wounds can occur between the south to southwest facing part of the trunk on sunny days in the winter as temperatures rise and suddenly drop. Over time these wounds can become quite large. Trees can also incur damage from deer during the rut. Bucks will scrape trees with their antlers, scraping off the bark and damaging the cambium. Both of these injuries can be reduced one younger trees by installing tree guards in the fall. Tree guards are plastic barriers you place around the main stem of the tree. I recommend using white corrugated drainage pipe that can be found at most home centers. You can make a cut lengthwise along the pipe for easy installation and make sure it has a large enough diameter to leave a space between it and the tree. Just remember to remove it come Spring.

Use of white tree guards can protect the trunk from temperature changes that cause damage. Joseph OBrien, USDA Forest Service, Bugwood.org

Inspections

Visual inspections can be done year-round, but this time of the year it might be easier to see changes in your tree as leaves are falling and the canopy becomes more visible. From the ground up to the canopy, some of the things you're looking for include fungal growth around the base of the tree, any sort of damage on the main stem or branches, premature leaf drop or color change, and branches that are dead, cracked, diseased, or seem weak. Any concerns you find are also great information to share with an ISA Certified arborist which can be found using the Trees Are Good website.

Resources

Re-mulch Your Trees
https://www.purduelandscapereport.org/article/re-mulch-your-trees/0101

Pruning
https://www.purduelandscapereport.org/article/can-i-prune-like-the-pros/

Southwest Damage/Sunscald
https://www.purduelandscapereport.org/article/southwest-damage-scalding-or-frost-cracking/

Fungal Decay of Ash Trees

(Tom Creswell, creswell@purdue.edu)

By now, the emerald ash borer (EAB) invasion is an old story for landscapes and forests in the Midwest. Since EAB was first found in North America in 2002 more millions of ash trees than we can know have died and this tiny insect continues to kill ash in an ever widening zone that currently includes 37 US states and 6 Canadian provinces. Arborists and landscape managers continue to protect valuable ash trees by use of systemic insecticides, typically applied via trunk injection every 2-3 years.

While EAB is the overarching threat, ash survival may also be threatened by wood decay fungi, which may colonize insect exit holes, injections sites and other wounds. The most common decay fungi we see in the lab are *Perenniporia* and *Fomitopsis.*

Perenniporia fraxinophila is the most frequently reported wood decay fungus on ash and causes a heart rot that contributes to loss of structural integrity of the tree. Infection sites tend to be high on the tree and may be easily overlooked until decay is advanced. The fungal structure is perennial, expanding each year, and may be confused with *Ganoderma applanatum*, the artist's conk. The upper surface turns black or brown with age and the underside is white with pores instead of gills.

Figure 1: Upper ash branches colonized by a suspected Perenniporia sp.

Figure 2: Fungal conks of a suspected Perenniporia sp., beginning to emerge from decaying ash branches.

Figure 3: Fungal conks of a suspected Perenniporia sp., beginning to emerge from decaying ash branches.

In the last few years, we have had a few samples of a similar fungus colonizing the trunk and base of ash trees, often near injection sites. Initially we were unable to identify the fungus, but DNA analysis revealed the fungus was a *Fomitopsis* species. This fungus develops a shallow shelf structure with white top and tan underside.

Fungal decay presents a greater risk to ash because it lacks the preservative enriched heartwood found in oak, walnut and other hardwoods that tends to slow down internal spread of fungi. Even fungi that initially invade dead areas of ash may rapidly colonize and degrade stem and trunk tissue.

Figure 4: Fomitopsis sp. colonizing the trunk of ash trees damaged by EAB.

Figure 5: Figure 4: Fomitopsis sp. colonizing the trunk of ash trees damaged by EAB.

Figure 6: Figure 5: Figure 4: Fomitopsis sp. colonizing the trunk of ash trees damaged by EAB.

Fungal decay also disrupts vascular tissues in the stems and trunk, which further limits the movement and effectiveness of insecticide injections, so that infected trees may face greater damage from EAB. When found on small side branches the infection might be successfully pruned out, but in most cases the decay is in major branches or the trunk, which means the tree will need to be removed. If your ash trees that are being regularly treated for EAB but continue to show thinning and decline, check for these fungal invaders, they may be partly responsible.

References:

EAB Network: https://www.emeraldashborer.info/about-eab

Incidence of *Perenniporia fraxinophila* and its effects on green ash (Fraxinus pennsylvanica) woodlands in eastern Montana, USA: https://www.sciencedirect.com/science/article/pii/S0378112703000112

Perenniporia fraxinophila: https://www.mushroomexpert.com/perenniporia_fraxinophila.html

Diseases of Trees and Shrubs, 2nd Ed. Wayne Sinclair and Howard Lyon, Cornell University Press.

Drought Conditions Improve in Southern Indiana, Worsen in Northern Areas

(Austin Pearson, pearsona@purdue.edu)

Fall and drought have been nearly synonymous in recent years; 2025 is no different. The September 30 US Drought Monitor, released on October 2, indicated that over 92 percent of the state was categorized as either abnormally dry (D0) or moderate drought (D1), with additional areas classified as severe drought (D2) or extreme drought (D3) (Figure 1). The driest part of the state extends from Fort Wayne to just east of Lafayette, with totals more than 4 inches below normal from August 2 – September 30 in spots. D3 conditions now exist in parts of Allen and Adams Counties, along with D2 conditions stretching westward to cover a large portion of north-central Indiana counties. A year ago, D3 reappeared in the state for the first time since August 2012, affecting parts of Franklin, Dearborn, and Ripley Counties for one week. This was temporary as remnants of Helene brought rain that alleviated drought conditions in southern Indiana. The addition of D3 in the state this week marks the second time this has occurred since the 2012 drought. Portions of Vermillion and Parke Counties have also had D2 lingering for several weeks. Heavy rains in southern Indiana have improved drought conditions slightly, with portions of the region now classified as D0, or 'DNada'- a term for no drought.

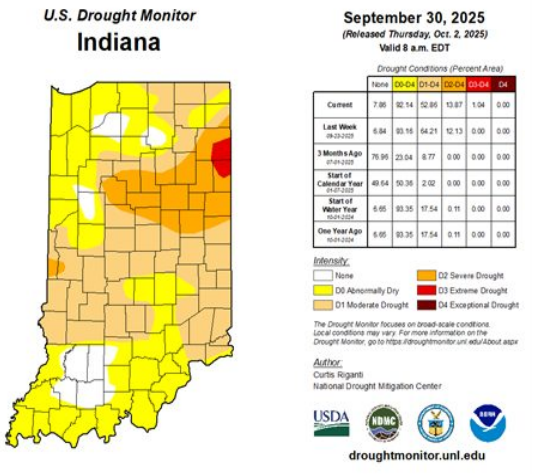

Figure 1: September 30, 2025, US Drought Monitor Map

The rapid onset of drought began in August. Using the Southern Regional Climate Center's Climate Perspectives Tool, available for the Midwestern Region, I aimed to compare the total precipitation for August to September with historical data (Figure 2). Several stations in northern Indiana experienced their top 5 driest August to September on record. Marion, Indiana, recorded 2.19 inches over the two months, which was 5.26 inches below the 1991-2020 climatological normal. This was the driest August to September period Marion ever experienced, with records spanning more than 131 years of data. The Fort Wayne Airport had its fourth driest August to September on record, spanning 121 years of data. Drought impacts range from dormant lawns (a welcome break from mowing, though) to the lowest water levels some have seen in ponds, reduced streamflows, rapidly drying crops, premature tree leaf drop, and various other effects.

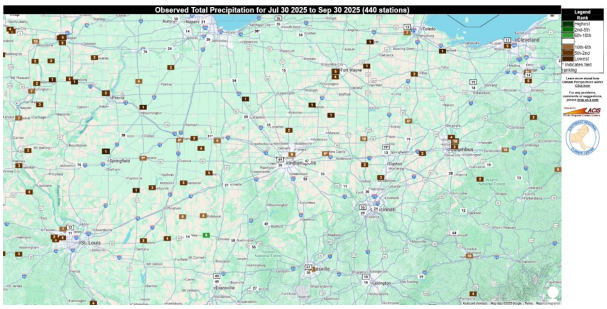

Figure 2: Climate Perspectives Tool displaying July 30 – September 30 station ranked precipitation totals.

So where do we go from here? Fortunately, we have some precipitation forecast between October 2 and October 9, 2025. The heaviest totals appear to be in central and eastern Indiana, with over an inch in most spots, and up to 2 inches in others (Figure 3). Fingers crossed, let's hope we get this precipitation. The Climate Prediction Center has elevated confidence in above-normal precipitation statewide through mid-October. This is a complete shift from the pattern that has been locked in for what seems like weeks.

Figure 3: Day 1-7 Quantitative Precipitation Forecast Valid 8:00 AM ET October 2 – 8:00 AM ET October 9.

Purdue Turf and Landscape Seminar: Don't miss the opportunity to attend in-person or virtual!

(Kyle Daniel, daniel38@purdue.edu)

Join the Purdue Turf and Landscape Seminar in Person or Virtual – November 19–20, 2025! Advance your expertise, earn pesticide credits, and connect with top Green Industry professionals at this two-day in-person and virtual, live event in West Lafayette, Indiana.

Elevate Your Turf and Landscape Game The 2025 Turf and Landscape Seminar, hosted by the Midwest Regional Turf Foundation, returns this November at Purdue University's W.H. Daniel Turfgrass Research and Diagnostic Center. Designed for *intermediate and advanced turf and landscape professionals*, this seminar delivers cutting-edge insights and practical strategies for managing turf and landscape systems.

New for 2025 The seminar will be offered virtually for those professionals that can't attend in person. Take advantage of this opportunity to gain valuable training and CCH's from your home or office.

Event Details

- **Dates:** Wednesday, November 19 – Thursday, November 20, 2025
- **Time:** 8:00 AM – 4:00 PM both days
- **Location:** 1340 Cherry Ln, West Lafayette, IN 47907
- **Capacity:** In-person is limited to the first *70 registrants*
- **Contact:** 765-494-8039

Registration Info

- **Cost:**
  - $260 for MRTF members
  - $350 for non-members
- **Online Registration:** https://tinyurl.com/rfhycv7d

Important Reminders

- You must attend *both full days* to receive all available credits.
- If virtual, you must keep your camera turned on to receive credits.

Whether you're looking to sharpen your skills, maintain your applicator license, or stay ahead of industry trends, the Purdue Turf and Landscape Seminar is your must-attend event this fall. Mark your calendar and prepare to grow your knowledge from the ground up!

Agenda:

Day 1 – Wednesday, November 19, 2025

8:00-8:30 Registration

8:30-8:45 Opening Comments, *Kyle Daniel & Lee Miller*

8:45-9:45 Two Decades in the Dirt: What We've Learned About White Grub Control, *Doug Richmond*

9:45-10:00 Break

10:00-11:00 Picking a Non-Selective Herbicide, *Aaron Patton*

11:00-12:00 Feeding Ideas for Healthy Lawns, *Cale Bigelow*

12:00-1:15 Lunch (on your own)

1:15-2:15 Cankers and Dieback Diseases in the Landscape, *Tom Creswell*

2:15-3:15 Turfgrass Disease Control Strategies with and without Fungicides, *Lee Miller*

3:15-4:15 What's Happening with OISC and Regulation, *Aaron Kreider*

Day 2 – Thursday, November 20, 2025

8:00-8:30 Review of Day 1, *Kyle Daniel & Lee Miller*

8:30-9:30 What's Killing Our Trees, *Ben McCallister*

9:30-10:30 Reducing Water Use While Maintaining Turf Performance, *Jada Powlen*

10:30-10:45 Break

10:45-11:45 Battling Yellow Nutsedge & Other Sedges in Indiana, *Brandon McNally*

11:45-12:30 Lunch (provided)

12:30-1:30 Protecting the Public and Earning a Living: Adding Mosquito Work to Your Operation, *Fred Whitford*

1:30-2:30 Protecting the Public and Earning a Living: Adding Tick Work to Your Operation, *Fred Whitford*

2:30-3:30 Beyond the Target: The Science Behind Herbicide Injury and Plant Prognosis, *Kyle Daniel*

3:30-3:45 Closing: Survey and CCH Forms

Purdue Landscape Report © Purdue University - purduelandscapereport.org
Editor: Kyle Daniel | Department of Horticulture and Landscape Architecture, 625 Agriculture Mall Dr., West Lafayette, IN 47907