

For the Betterment of the Urban Forest

Homewood, Illinois & City Forester Jim Tresouthick



Daisy Troopers plant a swamp white oak (*Quercus bicolor*) in front of Homewood's Willow School on Arbor Day 2009. Photo by Adam Middleton, who purchased these trees on his own through the TreeShare program, a 50/50 program Homewood runs for the community.

Tell us about your educational and career trajectory.

Jim Tresouthick: This is my eleventh year with the Village of Homewood in Illinois (Human Population: 19,600; Street Tree Population: 16,000). Prior to accepting a job with the Village, I was a restoration forester with a local county. In addition to restoration efforts, I was responsible for hazard and diseased tree removal, prescribed fire and wild fire response, tree trimming pre- and post-storm, nursery operations, and invasive pest sampling, management, and training.

I received A.S. degrees in Horticulture and Park Management, and earned a B.S. in Forest Science from Southern Illinois University. I went on to achieve the

Certified Arborist credential and eventually became an instructor and proctor of the program.

After graduation I had grandiose plans of saving forests—or at least managing forests for their betterment—primarily out West. The romantic idea of sitting in a fire tower on some woebegone tract of land was, unfortunately, not realistic. I found my way to urban forestry, which has been tremendously rewarding. My career has allowed me the opportunity to develop many new and exciting programs, expand existing projects, and bring forestry to a region of Chicago that historically had little professional representation in the field.

When did Homewood first have a dedicated urban

forestry program? How has the program and staff expanded or changed since then?

JT: The urban forestry program in Homewood began when I was hired in 1998. Before that time, the management of urban trees was not a critical component of the Village's infrastructure. I undertook a campaign to educate influential parties, including residents and fellow employees, as to the need for cyclic pruning schedules, hazard tree assessment, a diversified reforestation program, and integrated pest management (IPM). Critical to this campaign was cultivating the support of upper management in Public Works.

Since 1998, we have put into place a highly successful compost program, donating as much as 2600 yards of composted wood waste (mulch) annually to residents, area nurseries, and the park district. The waste generated from our cyclic pruning, removals, and storm events has an end use, thus freeing the budget of the disposal fees associated with this product.

In addition, we began using predatory insects (no ladybugs, please) in a comprehensive IPM program. Gypsy moth is just one primary insect of concern, and by releasing trichogramma wasp, we hope to control 7% to 10% of the population before we must consider the next step of biological agents or chemical control. Also,

we release green lacewings and now have a sustained population of these "aphid lions" to control soft bodied pests throughout town. In addition, we've developed a bluebird habitat program, a noxious weed program, and an ecological restoration campaign restoring native gravel prairies in town.

Since my hiring with the Village of Homewood, two employees became Certified Arborists. Another full-time employee was hired who is a Certified Arborist and Arbor Master graduate and received B.S. degrees in urban forestry and forest management from the University of Wisconsin-Stevens Point. Also, we've hired a full-time employee with a strong desire to learn about every aspect of urban forestry, horticulture, and arboriculture, and he attends night school to better himself and his career.

You are taking an aggressive stance with regard to EAB. What has been your strategy, and what advice do you have for other MAs in parallel situations?

JT: Homewood looked for EAB aggressively due primarily to our location near highways and rail traffic and our relatively close proximity to infested states to the east. Every trim request of questionable ash resulted in comprehensive bark peeling. Nearly every ash removal led to an investigation. Yet after all we did, we missed EAB



Using USDA Forest Service plans, school staff and students from Homewood-Flossmoor High School built a solar kiln to dry 1400 board feet of wood derived from EAB removals in Homewood. Photo by Tom Dilley



A view from inside the solar kiln • Photo by Tom Dilley

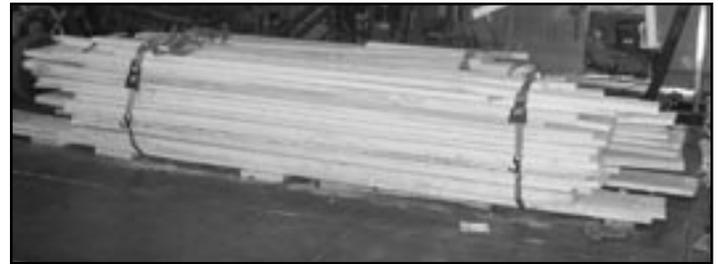
and only found it after trap trees in a neighboring community came up positive.

As soon as the infestation next door was detected, a delimiting survey following State Department of Agriculture protocols began. The delimiting survey was set up in concentric rings, sampling trees from well beyond the known infestation to just a block from it. Branches 4" (10 cm) in diameter were removed in the upper reaches of the canopy, labeled, peeled, and mapped.

All sample trees used for delimiting the infestation in town turned up negative. During our investigation, we found out that a private golf course in town was accepting logs and other tree debris in an unregulated, secretive dump site for years, including material from an EAB-infested golf course up the road. When staff from Homewood and the Illinois Department of Agriculture went for a visit to see the site, woodpecker activity was high, and tree dieback prevalent. Following protocol in EAB detection, state climbers were brought in to investigate these trees. All samples were negative, but something was amiss in what we were seeing. We knew we had a 3- to 5-year-old infestation next door, and at the rate at which these insects travel, EAB had to be in town.

We finally found a positive tree in town, just west of the golf course, 8" (20 cm) DBH, and the galleries went from the first branches of the canopy down to the ground. Why only this tree? Why not all the others around it as well? More on this later.

Once on site, EAB populations by their nature expand ten-fold every year. We did a cost analysis of chemical treatment versus removal. We compared the cost of contractual removal to in-house removal. We weighed the benefits of a comprehensive removal program, removing trees before they decline and die. We examined the cost of liability compared to preemptive remov-



Ash wood waiting for completion of the kiln, banded together to prevent warping • Photo by Tom Dilley

als and the resulting public outcry. We spoke to communities that had already been impacted by this insect about their divergent strategies.

With the research done and the numbers in, my strong recommendation was to cut. Homewood began a comprehensive in-house removal program in 2008, dividing the town into four areas of management, placing an average of 750 ash trees in each of the four areas. With the management plan approved by the Village Board, we began vying for funds to support our operations. The Board approved \$50,000 the first year to purchase equipment and ramp up training, with four additional years funded at \$400,000 per year until removals are completed.

In the meantime, I helped develop the UTiH²LzR educational program. UTiH²LzR is an acronym that stands for Urban Timber Harvesting for Hardwood Lumber Utilization and Recovery. UTiH²LzR development started here in Homewood after we saw a need for safe felling operations in the urban environment.

Funding for this program came from a federal grant awarded to the Illinois Wood Utilization Team, an organization spun off from the Municipal EAB Readiness



As a team-building exercise, the crew all grew facial hair ... These are three of four main-line tree fellers for the ash removal operation. Left to right: Aaron Meyer, Homewood's first-line field forester; Doug Hank, former truck driver, now urban forestry student; and Mike Usher, seasonal worker. Photo by Jim Tresouthick



This picture shows the beauty of silver maples (*Acer saccharinum*) as long as they are well cared for. This section of town was built prior to the Dutch elm disease outbreak in the 1960s. After the elms were lost, the planners wanted something that would give the town shade quickly. Maintenance for these silver maples costs the Village twice as much as oaks and the former only last about 45 to 50 years in town. Photo by Mike MacDonald

Team, which was a Governor's appointed committee to fight the impending insect. Training for UTiH²LzR was based on the International Game of Logging developed by Soren Erickson. The UTiH²LzR program trains municipal and private employees how to fell municipal trees safely, while yielding a marketable product out of the urban environment. This in turn lessens carbon footprint by taking wood waste out of disposal streams. About 10% of logs coming from the parkway can be turned into something other than wood waste, and this is what we are hoping to UTILIZE!

After working on UTiH²LzR, I created a regional educational program, partnering with University of Illinois Extension, Illinois Department of Agriculture, USDA, Animal and

Plant Health Inspection Service Plant Protection and Quarantine, the Illinois Arborist Association, and the Morton Arboretum. The program was designed to draw over 70 participants throughout the State of Illinois and give up-to-date information regarding the spread of EAB infestation and related management issues. A saw mill demonstration was set up while presentations were made, with EAB-infested logs being cut to various lengths and widths for later use by the local Homewood-Flossmoor High School. The money the school saved by not having to purchase dimensional wood for the industrial shop classes was put into the development and construction of a solar kiln to dry the material.

This brings us back to why only one tree showed EAB



This stump shows the average diameter class of the trees removed in the first section of town—18 inches (46 cm) DBH. Photo by Jim Tresouthick



Ash logs were graded on the Homewood parkway for utilization, with the most marketable logs being 9 feet (2.7 m) or longer and greater than 18 inches (46 cm) in diameter. The smaller ends are desirable; however, some specialty markets and local woodworkers look for interesting branch unions, curly cell structure, or something else of interest. Photo by Jim Tresouthick

galleries. We began removing trees from the parkways November 10th, 2008. While felling trees based on the UTiH²LzR method of municipal removals, we peeled trunks and branches and found that every tree removed was heavily infested with EAB. However, very few galleries were found in the upper reaches of the canopies, where we had been looking per Illinois Department of Agriculture guidelines. Instead, the majority of galleries and pupal chambers were in the main trunks and in branches 6" (15 cm) or larger, not in the upper reaches. Since finding this evidence, tree after tree, we informed local county officials, who then reported similar findings. As a result, the Illinois Department of Agriculture changed their protocol for finding this insect.

We documented our findings as we pulled larvae from the S-shaped galleries, from straight, atypical galleries, and from pre-pupal chambers. We peeled logs to 1/2" depth beyond the cambium layer for compliance and wrapped them in insect netting. We peeled logs to 3/4" depth and beyond and found active pre-pupal chambers beyond the compliance standard for bark peeling of marketable logs/firewood. We found pre-pupal chambers with no associated galleries as deep as 1"; we also found twins—two larvae in the same gallery. We assisted in chemical research with two drenches or injections made in the same year per tree.

In just four and a half months and with a crew of six, we removed just over 600 trees in-house; we saved the Village just over \$342,000 by performing the removals ourselves. The Village spent no money for disposal of waste generated from this operation as a result of



Seen here, an EAB larval gallery found in one of the ash trees Homewood removed last winter. The bark had split, and the tree began to callous over. This gallery was from the brood laid in the summer of 2007. Photo by Jim Tresouthick



Homogenous plantings such as this one of Norway maples (*Acer platanoides*) on Elder Road in Homewood can be beautiful but, for management reasons well known to city foresters, must become a thing of the past. Photo by Mike MacDonald

regional partnerships, contacts, and hard work.

The bottom line is that we had to remove trees. Liability is far too great a possibility to not react, or under-react. Removing trees was not the popular method of management, but for Homewood it was the soundest method the Village could employ with available resources. Each municipality is different; each has limitations of staff, training, operating budgets, equipment, and room to store material derived from removals. I don't have all the answers, nor can I recommend a course of action for a municipality to take. I can however recommend strongly that any municipality facing this insect begin training employees on proper felling/chainsaw and chipper safety, educating elected officials on the current infestation and speed of spread, and thinking of the financial impact this insect *will* create, while also creating a readiness plan. Emerald ash borer is not going away, and for communities that think its spread will be halted at the Great Plains, don't believe it.

What other facets of your program give you extra pride?

JT: I take tremendous pride in the way my T.R.E.E. (Trees, Restoration, Education and Ecology) Committee reaches out to other communities in an otherwise industrialized region of Chicago, an area that doesn't necessarily focus on the benefits of trees. The educational literature they develop, the tree planting programs they drive, the educational programs they take to the school districts—all make this a phenomenal place to work.

Without the Committee members and volunteers, we would be far less successful in our mission to improve the lives of our citizens.

Also, my crew is second to none. We have provided regional education for the Certified Arborist program, brought private industry techniques into municipal operations, and helped drive safety awareness in our field. We've developed aerial rescue programs that reach out to area fire departments, bridging the gap between fire service standard operating procedures and that of the tree care industry. We have pushed the limit and then some with regards to the urban forest diversification. We benefit from a microclimate off of Lake Michigan, which allows us to plant many different species of trees.

What do you wish you had more time for in your job?

JT: I suppose I'd like to be helping a region with educational needs. I'd like to provide citizens unbiased information when asked. I'd like to effectively promote bio-filters in retention/detention basins, water sheds, and ditches. I'd like to raise awareness throughout our region and beyond about those of our actions that harm the environment. That the use of pesticides, fertilizers, and magic potions are not always the answer, and that we can live with "bugs" in our lawns. I'd like to promote sustainable wood utilization from the urban environment, allowing the use of a virtually untapped resource that is often wasted. 🍃