

Core part of Louisville lost 9% of tree canopy

James Bruggers, jbruggers@courier-journal.com 1:17 p.m. EDT August 7, 2014

New study starts to put numbers on what residents have been seeing with tree losses in Louisville.



(Photo: David R. Lutman/Special to The CJ)

Louisville residents have watched storms, disease, drought and age kill trees for years. Now, city officials are getting some of the first numbers detailing the extent of the losses.

A core part of the city, the first area to be assessed in a new study, lost 9 percent of its tree cover from 2004 to 2012. The area extends from Butchertown west to Parkland and south to South Louisville, and most of its losses occurred from 2008 to 2012, according to the study's preliminary findings.

That amounts to 12 acres of lost tree canopy per year, or an estimated 735 trees annually.

Margaret Carreiro, a University of Louisville biology professor who researches Louisville's trees with her students and helped shape the new tree-canopy assessment, described the decline in tree cover as significant.

"There were trees added, but we could not keep up with the losses," she said. "We are still bleeding, and least now we are getting a sense of how rapidly we are losing trees."

The new findings are consistent with what she and a former student previously found: That back-to-back wind and ice storms in 2008 and 2009 caused an 8 percent loss in tree canopy across 10 Metro Council districts.

And she said the study does not include the heavy mortality expected from the emerald ash borer on Louisville's 2.5 million ash trees, because they began to die after 2012.

City officials in May awarded \$115,700 to the Davey Resource Group for the new study, which will be used to help manage the city's trees and set goals for plantings. The study was a priority of the Louisville Metro Tree Advisory Commission and is in addition to another research project underway to map the hottest areas of the city and make recommendations on how to cool them.

Once the canopy assessment is complete and has examined all of Jefferson County, officials plan to set planting goals to help achieve an overall average canopy coverage of up to 45 percent for Jefferson County.

But the draft findings by Davey suggest how hard that might be. Only five of 70 neighborhoods studied so far — all of them within the old city limits — meet or exceed that 45 percent goal: Iroquois Park, Cherokee Seneca, Cherokee Gardens, Brownsboro Zorn and Kenwood Hill.

More than half of those neighborhoods have tree canopy coverage of less than 25 percent.

"It is going to be a major wake up for everyone," Henry Heuser Jr., co-chairman of the tree advisory commission, said of the study, which is scheduled to be completed by Oct. 31.

"We will need hundreds of thousands of trees planted in the next 30 years," said Michael Hayman, a Seneca Gardens arborist who has worked with neighborhoods across the city to plant and maintain trees.



COURIER-JOURNAL[Interactive | Louisville's tree canopy and heat map](#)[http://www.courier-journal.com/story/tech/science/environment/2014/08/07/interactive-louisville-tree-canopy-heat-map/13710525/?from=global&sessionKey=&autologin=\)](http://www.courier-journal.com/story/tech/science/environment/2014/08/07/interactive-louisville-tree-canopy-heat-map/13710525/?from=global&sessionKey=&autologin=)**Planting trees**

City officials claim nearly 12,000 trees have been planted in Louisville since Mayor Greg Fischer announced he would start a tree program in 2011. Many have been planted by neighborhood organizations, civic volunteers, businesses and partners of the tree commission, Brightside and the Metropolitan Sewer District.

Some are going in the ground in neighborhoods where tree cover is lacking, led by a new nonprofit called Louisville Grows, which focuses on urban agriculture and forestry.

Since last year, Louisville Grows has trained 70 "citizen foresters" how to plant and maintain trees. They, in turn, have trained 500 volunteers, mainly in lower-income neighborhoods, said Valerie Magnuson, executive director of the group.

Louisville Grows has planted 450 trees, she said, and plans to plant 500 more this fall and next spring in neighborhoods such as Smoketown, Butchertown and Shelby Park.

Last spring's plantings included 20 trees on three previously tree-barren blocks in the Portland neighborhood, near the corner of Northwestern Parkway and Portland Avenue.

The trees are maintained by volunteers and inspectors check to make sure watering is being done, she said.

On Tuesday, Portland residents Cindy Calvelo and John Eberman were filling a yellow wheelbarrow with water, going from newly planted tree to tree. Using buckets, they scooped and poured water into special green bags that slowly release the water for each tree.

It takes the pair more than two hours, about once a week, but the effort is more than worth it, Calvelo said.

"We need shade," she said. "It gets so incredibly hot."

Authorities issued a smog warning Tuesday and Eberman noted trees help clean the air. "We are planning for the future," he said.

Since the trees went in around the neighborhood, residents have also started to help remove trash. "It is unfolding into positiveness," Calvelo said. "It's like taking the neighborhood back."

Hayman said many people are forming their own neighborhood planting groups across Louisville. In Shively, for example, a mother-daughter team, Colleen and 15-year-old Cayley Crum, have spearheaded tree plantings at Shively Park, he said.

"We have planted 61 trees," Colleen Crum said. "And we will be planting 50 more, starting this fall."

The park, she said, "desperately needs trees. They have planted less than 20 in the last 20 years."

More pavement

City officials said the draft numbers from the Davey study could change, and that its preliminary findings only represent a portion of what will be in the final report.

The final report will include tree canopy and other environmental information for all of Jefferson County, allowing city officials and the public to understand tree cover for each of the 26 Metro Council districts, all its neighborhoods, census tracts and individual property parcels, said Jennifer L. Gulick, a Davey regional supervisor.

The study's draft looked at only two of the council districts, and found tree losses in both:

- District 4, which includes Phoenix Hill, Butchertown, the Central Business District and Portland, lost 5 percent of its tree canopy since 2004, or roughly 207 trees per year. During the same time, the area of land covered by pavement and buildings increased from 51 percent to 56 percent.

- District 6, which includes Old Louisville, lost even more ground. It lost 11 percent of its tree canopy, or about 529 trees per year. And the area of land covered by pavement and buildings increased from 54 percent to 62 percent over eight years.

Experts say that pavement and buildings cause more water pollution and heat, and that trees can counter both problems.

"I was shocked by some of the numbers," said Councilman David James, who represents District 6. "It's good we are doing this study to find out where we are. We need to work toward ways to reverse it."

Councilman David Tandy, who represents District 4, said he wasn't surprised by his district's tree findings, given the storms of 2008 and 2009. "We do have a lot of asphalt, streets and parking lots," he added. "There's not a lot of green space."

He said the city, working with private partners, will need to replace those trees to help green up his district.

"I understand the need that we have a vibrant and thriving tree canopy," he said.

The Davey report will look at both the economic and environmental benefits of trees, including improved air quality, heat reduction, and less storm water runoff, which causes erosion and triggers sewage overflows.

Gulick said the report will also inform Louisvillians how many trees they need to plant to reach their tree canopy goals.

While city officials have said they have been aiming for an overall goal of up to 45 percent tree cover, some are now recommending holding off on establishing a tree canopy target.

"Let's wait until we get the data" and the final report, said Erin Thompson, the city's urban forester.

The Davey study will produce an overall tree canopy calculation for Louisville, but it has previously been estimated to be about 30 percent. Other Southern cities, including Atlanta and Charlotte, are said to be in the 40 percent to 50 percent range.

Setting goals for neighborhoods can be just as tricky, Thompson said. Some will have less room for trees because of how they are built, she said.

For example, downtown's tree canopy was calculated by Davey to be just 8 percent in 2012. It has so many buildings and so much pavement that bringing that number up will be difficult, Thompson said.

By contrast, some neighborhoods that show a large percentage of tree cover may still have some areas where they need more, because their trees could be concentrated in parks. That may be the case in the Iroquois Park neighborhood, where Davey calculated 68 percent tree cover, she said.

But one thing is clear, Thompson said: "We need to plant trees, and we need to make sure the trees we have are healthy."

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How to get involved

- Attend tree commission meetings. The next meeting is at 5 p.m. Aug. 26 at the Louisville Metro Air Pollution Control District, 850 Barret Ave.
- Call Brightside at (502) 574-2613.
- Attend citizen forester training or planting events operated by Louisville Grows and its Love Louisville Trees program. Find more information online at www.louisvillegrows.org (<http://www.louisvillegrows.org/>).

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