Dutch Elm Disease Is Back in Park Hill, Putting Denver's Oldest Trees at Risk

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7-8 minutes

Environment

The disease devastated the urban canopy in the 1970s, but had disappeared by 2011. Or so the city thought.



Large elm trees line many of Denver's historic parkways. Google Maps

In early July, Denver's forestry team discovered that Dutch elm

disease — a fungal tree killer that targets American elms — was back after a twelve-year absence from the city.

While the team is hoping that the outbreak is isolated to <u>South</u> <u>Park Hill</u>, the forestry department has launched an aggressive campaign to prepare for a potential citywide spread, which could devastate many of Denver's oldest and biggest trees.

Dutch elm disease hadn't been seen in or near Denver since 2011, and its reemergence baffled City Forester Mike Swanson.

"We're still trying to find the answer of where it came from. It is a mystery. My thought is, this might be an outlier; it might be because of the moisture we've gotten," he says, citing all the rain this summer.

When the forestry department confirmed the South Park Hill cases, Swanson says that his team was "in disbelief." He's called city foresters of neighboring municipalities, but no other location has seen the disease. Yet.

According to Swanson, the disease is usually "vectored" by elm bark beetles. With each suspected case in the city, Swanson has told his team to keep an eye out for those beetles — which could help explain how the disease got here. "Then we can start talking with more confidence to researchers about what's going on," Swanson says.

Most of Denver's American elm trees are around eighty years old; some may be up to 120 years old. So far, the disease has claimed seven of these "elder citizens of our urban forest," Swanson says. All of them were on the 17th Avenue Parkway.

Crews swiftly chopped down those trees and ground the stumps

— turning them into wood chips — in order to prevent the spread of the incurable infection. Since then, though, Swanson says that his team has identified at least two more suspected cases of the disease in other city trees.

The disease can spread through overlapping tree roots, and many of Denver's American elms were planted in sequence along parkways like 17th Avenue. "Monaco used to be all elms," says Swanson. "Sixth Avenue used to be that way, too."

Those roadways now have additional diversity of tree species, but many elms still remain. That creates a high risk for the disease to spread through some of Denver's tree-covered neighborhoods. "If we see it, we'll remove the trees," Swanson says, explaining that the disease "clogs up the vascular system underneath the bark. It basically starves the trees."

The city is trying to be as aggressive as possible to curb any future infections. "It's not just Denver Forestry's responsibility, it's everybody's responsibility," he says. "There was some conversation about just letting the South Park Hill folks know, but we just decided, 'Let's let everyone in the city know,'" Swanson recalls. "We're just trying to be as proactive as possible."

According to <u>a web page on the Denver Office of the City Forester</u> <u>website</u>, "signs of DED include wilting, yellowing leaves in the treetop, branch die-back, and decline of the tree in later stages."

According to Swanson, "Property owners should not attempt to diagnose, prune or remove elms that may be infected, as that may unintentionally spread the disease due to beetles or fungus existing in the debris." Instead, they should have a licensed tree contractor or arboricultural consultant "sample and diagnose the disease, perform tree work and/or remove all debris," he says.

"It is better to prevent the arrival of an illness than to cure a diseased tree," Swanson notes.

Currently, there are 2,500 city-owned American elm trees in Denver. Accounting for privately owned trees, Swanson estimates that are around 5,000 total. "We used to have 200,000," he says.

In the early 1900s, Mayor Robert Speer gave over 100,000 trees to residents, as part of his City Beautiful drive to turn Denver into "<u>Paris on the Platte.</u>" Most of those trees were American elms and were planted along Denver's historic parkways to create a "campus style" look, according to Swanson.



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Early signs of Dutch elm eisease.

Mike Swanson

In 1948, Dutch elm disease — which was brought to America

about a century ago through imported European wood — arrived in Denver. It had little effect for the first couple of decades, but in 1969, "it blew up," Swanson says. "It was devastating. It had a huge impact; we lost probably 10 or 15 percent of our canopy in the '70s because of DED."

By the mid-1980s, the disease had finally slowed down, but only after decimating Denver's American elm population. "Now, only 2 or 3 percent of our canopy is American elms," Swanson says. And many of these trees are survivors of the last plague.

"We don't want to lose the American elms that we still have," Swanson says.

One of the best examples is a massive American elm in Jefferson Park, in northwest Denver. "It's just gorgeous," Swanson says. "When we first found DED, that was one of the trees where we thought, 'We have to preserve this one.""

While American elms are no longer a big part of our urban forest, a more common tree is also at risk. There are an estimated 1.45 million ash trees in the metro area, <u>according to Colorado State</u> <u>University</u>, and they are threatened by the emerald ash borer, an insect that lays eggs and feeds under their bark.

The insect was recently found <u>in Littleton</u>. While it hasn't yet been sighted in Denver, "we all think it's here," Swanson says.

Denver has been preparing for the emerald ash borer since 2013 through its <u>Be a Smart Ash initiative</u>, which offers a variety of free (and resilient) trees to residents to either replace their existing ash trees or to put somewhere on their property or on the strip in front between the sidewalk and the street.

"This is the problem with planting monocultures," whether American elm or ash, Swanson says.

While Mayor Speer liked the aesthetic of long, tree-lined streets lined with elms, the lack of biodiversity made the city particularly susceptible to the devastation of Dutch elm disease, according to Swanson.

"There's a lesson to be learned here about not being proactive in taking care of your trees," he says. "If you have trees, they're like children: Take care of them!"

The city is hoping that this round of Dutch elm disease is just a strange outlier situation that will pass by next summer. By then, the forestry team will have a better idea of what the long-term impacts of the disease might be. But for now, "we just don't know," Swanson says.

"These are old citizens of our urban forest. Do we really want to lose them? Not while I'm still city forester."