

Dutch Elm

in St. Paul and Minneapolis

A TALE OF
TWO CITIES

DAVID SOLL

IN THE SUMMER of 1978, *Minneapolis Tribune* cartoonist Richard Guindon captured the topsy-turvy reality of a metropolitan region ravaged by a deadly tree fungus, Dutch elm disease. He depicted a couple who stopped to ask directions from a man mowing his lawn. The man replied, “Two blocks down and take a left. You can’t miss it. It’s the street with the tree on it.”

Guindon’s mordant portrait of Dutch elm’s impact was only a slight exaggeration; some blocks in Minneapolis and St. Paul lost virtually all of their street trees. Crews removed tens of thousands of diseased elms to slow the spread of Dutch elm disease, which infected or killed hundreds of thousands of elms during its peak years in southern Minnesota, 1976 to 1982.¹

The swiftness and severity of the Dutch elm epidemic was particularly shocking to residents of the Twin Cities, where almost 9 out of 10 street trees were American elms. The dense concentration of elms in St. Paul, Minneapolis, and other communities made Minnesota particularly vulnerable to Dutch elm, which was spread by beetles that picked up fungus spores and injected them into healthy trees. Infected trees also spread the disease to neighboring specimens via their root systems.²

Before-and-after photos of elm-lined streets dramatically convey the ways in which elms shaped the metropolitan streetscape. The vase-shaped trees, which can grow to 100 feet, cooled the air, shaded homes, and gave many neighborhoods a lush, verdant character rarely found in large cities. For many residents of the Twin Cities, to recall the onslaught of Dutch elm is to wax nostalgic about the former lushness of the urban environment. Wilber Schilling’s memories of his childhood are typical: “I walked down St. Clair Avenue in St. Paul to school. It was majestic. The trees formed a cathedral-like opening all

still comprised more than 30 percent of the Mill City’s tree canopy.⁴

Both cities recognized the severity of the epidemic and mounted serious efforts to combat Dutch elm, so what explains their different fates? Public health and environmental officials often liken disease-control efforts to war. In the most critical battle against the beetle from 1977 to 1978, Minneapolis adopted general strategies and specific tactics that largely contained Dutch elm. In contrast, St. Paul made critical errors that facilitated the spread of the beetles. These differences, which turned on seemingly mundane details such as

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the way down the street to school. The streets were lined with elms. Then, the Dutch elm disease came. The City chopped all of the elms down.”³

Dutch elm did not spare any community in southern Minnesota, but its effects were far from uniform. St. Paul lost most of its elms, while Minneapolis managed to preserve many of its towering shade trees. In 2006, three decades after Dutch elm began its march through Minneapolis, elms

reimbursement rates to residents for removing diseased trees and when to hire outside contractors to assist with tree removal, proved decisive.

Cities and towns often replaced the diseased elms with ash trees, most of which will, in turn, eventually succumb to the chomping of the larvae of the emerald ash borer, the latest beetle to devour Minnesota’s trees. Municipal officials seeking to protect their ash-lined streets can



ca. 1975



ca. 1978

Lombard Avenue, St. Paul, before and after trees with Dutch elm were cut down.

learn important lessons from the experiences of those who fought to save American elms throughout Minnesota 30-some years ago.

A brief history of American elms and Dutch elm disease

FEW TREES graced the streets of American cities in the late eighteenth century. Rapid urban growth in the decades after independence led city dwellers to take a more organized

approach to tree planting. By 1820, most American cities had become noticeably greener places, and trees lined many streets, squares, private yards, and parks.⁵

Historian Thomas Campanella dates Americans' enthusiasm for elms to the town beautification efforts that swept New England in the 1830s. Inspired by the elms that grew along the banks of the Connecticut River, New Englanders sought "to endow urban life with the placid beauty of New England's valley landscapes."

Elms went on to become popular street trees in much of the temperate and humid Northeast.⁶

Municipal officials in cities across the country viewed trees as essential components of healthy and attractive streetscapes. In California, the misconception that eucalyptus trees neutralized the effect of "miasmas," thought to be airborne disease-causing agents, led cities and residents from Los Angeles to the Bay Area to plant millions of the non-native, Australian trees in the second half of the nineteenth century. Those who built up midwestern cities looked not to a far-off continent but to the landscapes of their native New England and the Middle Atlantic states for inspiration. By the late

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nineteenth century, the enthusiasm for lining streets with rows of elms had spread throughout the Midwest.⁷

In Minneapolis, the park board played a decisive role in shaping urban aesthetics when, in 1887, it obtained control over the city's street trees. Even before the board began to plant elms in large numbers along city streets, it made them prominent features of many parks. Of the 6,000 trees it planted in the city's parks in 1885, almost half were elms. But it was the park board's authority over street trees that made elms the dominant species in Minneapolis's urban forest.⁸

By the 1930s, the Twin Cities was one of the nation's greenest metropolitan regions. A writer for the Works Progress Administration wrote of Minneapolis, "The visitor who comes in the summer by plane and circles above its residential districts looks down upon what seems to be a forest dotted with houses." This impression was amplified by the abundance of parks.⁹

The arrival of Dutch elm

AFTER DECIMATING elms in England and northern Europe, Dutch elm was first detected in the United States in 1931. The Great New England Hurricane of 1938 greatly accelerated its spread in the northeastern United States. Hurricane winds downed hundreds of thousands of elms. To clear the debris, communities heaped dead elm wood into enormous piles, providing ideal breeding places for the elm bark beetle. By the 1950s, Dutch elm disease had wiped out most American elms in the Northeast and begun to infect trees in the Midwest.¹⁰

In its initial stages, Dutch elm spread slowly in Minnesota. The first confirmed case occurred in St. Paul in 1961, but elms did not begin to die in large numbers until 1974. In response,



Removing infected trees and the beetles that dwelt in them was the best means of protecting healthy trees, May 1973.

the Minnesota state legislature passed a law requiring each municipality to appoint a tree inspector and authorized assessment of a special municipal levy to finance disease detection and tree removal.¹¹

In the absence of a visible crisis, elected officials did not take aggressive action. The Minnesota Department of Agriculture, the state agency charged with overseeing the response to Dutch elm, warned legislators in a 1973 report that the state was moving too slowly to combat the inevitable escalation of the disease: "Once Dutch elm disease becomes rampant we can not play a catch up game."¹²

To keep ahead of the disease, the department advocated an approach known as sanitation, in which municipalities would quickly remove infected and dead elms. Because elms could not effectively resist the depredations of beetles, the only reliable way to protect healthy trees was to ensure that fungus-laden beetles,

which could fly a few miles from their birthplace, did not spread over a wide area. Removing infected trees and the beetles that dwelt in them was the best means of achieving this.

The catch was that if too many trees died at once, removing the trees and planting new species in their place would be cost prohibitive. To avoid this scenario, the state needed to act quickly and decisively. Two University of Minnesota scientists endorsed the financial logic behind the sanitation program proposed by Department of Agriculture officials: "By concentrating monies and effort in the next few years to insure the immediate removal and destruction of diseased and dying trees, the epidemic can be slowed so that the overall replacement effort can be spread over more years."¹³

The sanitation approach may have made ecological and financial sense, but it imposed a heavy psychological burden on homeowners and

communities. To embrace sanitation was to acknowledge that the state stood to lose hundreds of thousands of elms. This partially explains why, in the early 1970s, the state legislature largely ignored the advice of experts urging it to take decisive action.

Responding to the crisis

THE BICENTENNIAL summer of 1976 marked a critical turning point in the fight against Dutch elm disease, which had spread to neighborhoods throughout the Twin Cities. In St. Paul's leafy St. Anthony Park neighborhood, "Twenty-three elms received scarlet bands in Langford Park alone and many more were marked for removal throughout the community." As the signs of damage became unmistakable, more voices called for stepping up the campaign against Dutch elm.¹⁴

Donald Willeke, a Minneapolis attorney who chaired the state Shade Tree Advisory Committee, an ad hoc committee of experts that advised the Department of Agriculture, argued at a conference on Dutch elm convened by First National Bank and attended by more than 250 community leaders that the failure to adequately fund sanitation programs at the state level was profoundly shortsighted. In response to the legislature's 1975 decision to appropriate only \$1.5 million to combat the disease, he asked rhetorically, "Was \$3 million saved by this action of the Legislature? Ask the Mayor of St. Paul. His city alone will spend more than that sum this year because of the wildfire spread of Dutch elm disease there." The press echoed the call for an expanded sanitation program. The *Minneapolis Tribune* observed that a determined effort to quickly detect and remove infected trees "can make the difference between an urban desert and a

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city that remains a pleasant place to live."¹⁵

In September 1976, Governor Wendell Anderson launched a cleanup program that laid the groundwork for a more aggressive state response. Anderson's staff held meetings across the state to explain the threat of Dutch elm to the public. The program also coordinated pickup of dead elms in specific neighborhoods and collected contributions from corporations such as General Mills and Medtronic to purchase tree removal equipment. The governor emphasized that "to do this job, we will need the cooperation of every group, individual, and government unit in our state that can possibly help."¹⁶

Anderson's call for cooperation reflected a larger biological reality. If citizens failed to promptly report

and remove dead or diseased elms on their own property, the disease would likely spread from individual backyards to streets, parks, and other neighborhoods. Conversely, if government was slow to remove affected trees on public property, even conscientious citizens stood to lose their precious elms.

The question that presented itself in late 1976 as fall gave way to winter was whether the state's political system could act quickly enough to keep pace with the bark beetles. The loss of tens of thousands of trees the previous summer made it clear that Minnesota was in the midst of a major crisis. Many legislators who had previously opposed state funding to combat Dutch elm changed their minds. Thirty-four state lawmakers introduced measures in the 1977 legislative session to save the elms. The Shade Tree Advisory Committee recommended an appropriation of \$46 million over two years to fight Dutch elm. In spring 1977, the legislature passed a bill that was signed into law allocating approximately \$26 million over the next two years to fight Dutch elm. Most of the money was dedicated to municipal grants to offset communities' disease-detection and tree-removal expenses. Cities and towns used most of their state funds to partially reimburse homeowners for the approximately \$150 to \$250 cost of removing an elm. The remaining state money financed a wide-ranging, aggressive outreach and publicity campaign conducted by the Department of Agriculture.¹⁷

In order to be successful, sanitation programs required citizens to actively detect and report Dutch elm. The publicity campaign employed a variety of tactics to achieve this outcome. The message to the public, conveyed in the press and on the airwaves, was simple: residents should contact local officials if they saw trees with dead branches or with wilted yellow leaves in the canopy, Dutch elm's most common symptoms. In effect, municipalities deputized all Minnesotans as tree inspectors to ensure prompt detection and removal of diseased trees.

A series of radio spots used local sports heroes to capture Minnesotans' attention. One featured Minnesota Kicks soccer star Mike Bailey, who emphasized his previous experience with the disease. Bailey observed that Dutch elm was "something I thought I left behind me in England. . . . We've learned in England that prompt removal is the best way to slow things down." Vikings favorite Stu Voigt promised fans, "If you try to stop the elm tree beetle, I'll try to stop the Dallas Cowboys."¹⁸

Private companies supplemented the state's education efforts. To commemorate Arbor Month, the Minnesota Gas Company included a brochure in its monthly bill mailing encouraging customers to plant trees to "help us return to being a greener state." First National Bank followed suit, sending out 150,000 pamphlets about the state's shade tree program to customers. The bank also created its own elm watch hotline that citizens could call to report suspected diseased trees. In the spring and summer of 1977, First National ran a newspaper advertisement provocatively entitled "Death Row?" that featured a row of elms and urged readers to call the hotline or a local tree inspector if they saw signs of diseased trees anywhere in their neighborhood.

The ad echoed the state's emphasis on sanitation, but its tone was snappier and more urgent. It noted that the number of infected elms was likely to increase and insisted that "to slow it down . . . we need you." After explaining the symptoms of the disease, it implored citizens, "DON'T KEEP IT TO YOURSELF."¹⁹

The publicity campaign struggled to keep pace with the beetles. Robbinsdale forester Jon Stiegler lamented in July 1977 that the Minneapolis suburb was losing thousands of trees because "residents aren't calling us. They wait until we do the survey and other trees are being infected in the meantime."²⁰

By August 1977, few residents of the Twin Cities were unfamiliar with Dutch elm and the colored "X" many tree inspectors used to mark infected trees. Citizens depended on local government officials to promptly remove diseased trees on public property, particularly street trees that had the potential to infect nearby elms on private property. Citizens also relied on local government to confirm diagnosis of diseased trees in their backyards in order to be eligible for partial reimbursement of removal costs. Legions of tree inspectors fanned out across the metropolitan area to look for infected trees. Minneapolis aimed to inspect every elm several times over the course of the summer. Tree removal crews worked 10-hour days to remove dead and diseased trees.²¹

One neighborhood fights back

RESIDENTS IN SOME neighborhoods recognized that saving their treasured elms required a more communal response. Beginning in 1976, a group of residents in Minneapolis's affluent East Calhoun neighborhood began a particularly energetic campaign to save their elms.

First, they initiated an elm watch, in which a group of volunteers periodically surveyed all the blocks in the neighborhood for signs of Dutch elm. East Calhoun residents were also willing to devote substantial resources to protect their neighborhood elms via a neighborhood spraying operation to inject East Calhoun's elms with Lignasan, a chemical recently approved by the EPA to fight Dutch elm. Lignasan was expensive to purchase and administer; the high concentration of elms in Minneapolis meant that officials could use it only for special cases.

Neighborhood activists held a series of meetings beginning in January 1977 to plan a course of action before the beetles re-emerged in the spring. The activists gauged their neighbors' willingness to pay for the cost of the Lignasan treatment. Residents understood that the chemical was not a panacea—it could not, for example, prevent an infected tree from spreading the disease via its roots—but they were eager to use any tools at their disposal to combat Dutch elm.

In April, block captains began knocking on doors to collect



Residents of Minneapolis's East Calhoun neighborhood raised funds to inject their elms with an expensive chemical, Lignasan, in an attempt to stave off Dutch elm disease.



East Calhoun Community Organization's Bark Batallion ready for action, ca 1978. L to r, Rick Peterson, Rod Lipp, John Hicks, Lon Rosheim, Tom Staufenberg, Harvey Zuckman. The three young helpers were Matthew Bottkol, Adam Staufenberg, and John Paul Staufenberg.

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payments from their neighbors for the spraying campaign. The goal was to raise enough money to hire a private contractor to treat approximately one-third of the neighborhood's elm trees. An editorial in the East Calhoun community organization's monthly newspaper urging support for the spraying effort entitled "Are You Doing Your Part?" observed that "Every resident gains from the trees throughout the neighborhood and without our elms, property values would definitely fall as would the general appearance of the neighborhood."²²

Residents opened their wallets, collectively spending \$30 a tree to spray 345 elms. The East Calhoun neighborhood was by no means spared the ravages of Dutch elm, but the Lignasan treatment did appear to provide some protection. A study conducted in March 1978 found that over 92 percent of treated boulevard trees remained uninfected, while only 71 percent of untreated boulevard trees were uninfected. Ad hoc community efforts reduced elm

losses, but ultimately the key to containing the spread of the disease was the quality of municipal sanitation programs.²³

St. Paul vs. Minneapolis

BEFORE THE BEETLES arrived, St. Paul contained 130,000 American elms. By the end of 1978, only 30,000 remained. Large-scale removal of block upon block of elms made much of the city look forlorn. By 2015, only several hundred scattered elms remained in St. Paul. The Mississippi River did not stop the beetle; Minneapolis also lost tens of thousands of elms. These losses were significant, fundamentally altering the mix of tree species in a city where more than 8 out of 10 street trees were elms.²⁴

But Minneapolis got off lightly compared to St. Paul. In 1990, the city still had approximately 100,000 elms, almost half the number it had before it began to lose trees to Dutch

elm in 1963. Throughout the 1990s and early 2000s, the city typically lost several thousand trees a year to Dutch elm. Nonetheless, Minneapolis still contained roughly 80,000 elms in the early twenty-first century. And, as the city's tree advisory commission observed, the massive size of the remaining elms made them particularly valuable: "Each elm in Minneapolis provides two to three times the annual benefits of almost any other type of street tree."²⁵

At first glance, the different outcomes in Minneapolis and St. Paul make little sense. Both cities embraced the philosophy behind sanitation: removing dead and diseased trees would limit the spread of Dutch elm, allowing for an orderly transition to a more diverse urban forest. But the contrasting approaches taken by each city in implementing their sanitation programs proved decisive.

The biggest challenge faced by all municipalities was to promptly remove and dispose of infected trees. In 1976, neither city complied with the state mandate to remove all dead or diseased elms within 20 days of diagnosis, largely because they lacked the crews needed to remove trees at this rate. However, the backlog was much more acute in St. Paul, which contained half of the diseased elms in the state not removed within the 20-day window.²⁶

The city's failure to clear the backlog was compounded by an exceptionally warm stretch of weather in the late winter and spring of 1977. In March 1977, the average high temperature exceeded 37 degrees, more than 9 degrees above average for the

month. The early spring provided excellent breeding conditions for the beetles. Nonetheless, Mayor George Latimer believed the city could control the spread of Dutch elm. Testifying before a Congressional subcommittee in June 1977, he acknowledged that the city would likely lose most of its elms, but emphasized that “we can buy ourselves a little time” through aggressive sanitation measures.²⁷

By July, 25,000 elms in the capital were infected, and the front page of the *Pioneer Press* read, “City Surrenders to Dutch Beetles.” The mayor’s optimism had turned to despair: “We can’t remove 25,000 trees unless we get every guy with an ax and a saw in the city to do it at any cost.” By the end of 1977, St. Paul had lost more than 45,000 trees, a third of its elm population.²⁸

Human actions largely determined the extent of infestation in a particular locale. St. Paul made two critical errors that allowed the disease to spread almost unchecked. First, it chose to reimburse residents 100 percent of the cost of elm removal for diseased and dead trees located on private property. It did so in part to increase the likelihood that residents would report diseased trees. St. Paul was the only city in the country that adopted such a generous policy. Most cities in the state, including Minneapolis, used state funds to provide a partial reimbursement to residents for the cost of tree removal on private property. The diversion of energy and funding to residents and away from the larger effort to contain the disease was a costly mistake.²⁹

The failure to dramatically accelerate the pace of tree removal in the face of abundant evidence that the disease had spread widely was St. Paul’s second major error. It hired private contractors to supplement the efforts of overworked city crews,



Cutting down elm trees infested with Dutch elm disease, St. Paul, July 1976.

but the limited capacity of these contractors made it impossible to keep up with the beetles. The typical contractor could remove only 12 trees a day. Given the extensive penetration of Dutch elm in these areas, selective cutting made little economic sense. The prudent course of action was replanting rather than trying to contain the Dutch elm outbreak. Once the disease spiraled out of control, the city hired construction contractors to remove every street tree in some neighborhoods. These large companies deployed their fleets of heavy machinery to remove an astounding 225 trees a day; by the end of the season, they had taken down approximately 30,000 trees.³⁰

Minneapolis, also hit hard, removed more than 30,000 trees in 1977, roughly 15 percent of the city’s elms. Dutch elm affected some neighborhoods more than others, and even neighborhoods with active elm watch programs lost many trees. Still, by August 1977, a clear narrative had emerged: Dutch elm had absolutely

walloped St. Paul but only delivered a strong blow to Minneapolis. A cartoon in a St. Paul newspaper warned Minneapolis residents not to become overconfident. It depicted a Minneapolis man looking across the river at the elm stumps littering the lawn of the capitol and chiding St. Paul with a dismissive “Tsk-Tsk” for its failure to contain the disease. Meanwhile, an oversized beetle with “Dutch Elm Disease” written on its back hovers ominously behind the man.³¹

Still, Mill City residents and officials were vocal critics. Some residents complained about the city’s reimbursement program, which only partially defrayed the cost of elm removal for homeowners. An elderly resident wondered how she could pay for elm removal on a fixed income. A northeast Minneapolis couple who paid to remove an elm before the city marked it as diseased were dismayed to learn that their rapid response made them ineligible for reimbursement. They complained that homeowners should not “be penalized

for trying to stop the disease when the Minneapolis Park Board fails to inform the public on their procedures and is too slow to handle the battle against Dutch Elm Disease.”³²

Many residents agreed that the park board was not responding quickly enough to the crisis. Neighborhood elm watch members and others intent on preserving the city’s elms despaired at what they considered the slow pace of tree removal. One park commissioner fretted that although an elm outside his office had been dead for over a year, crews had yet to remove it. Save Our Elms, a citizen advocacy group, documented the slow pace of tree removal in selected neighborhoods and submitted a 15-page report on the inadequacies of the board’s sanitation program. These complaints spurred the board to take swifter action to help save the elms.³³

In July 1977, city forester Dave DeVoto reported that 70 percent of diseased trees on public property had been removed. In early August, park commissioners granted the request of city foresters to hire additional private contractors to accelerate the pace of tree removal. At each board meeting, commissioners required city

forestry staff to report on the total number of diseased trees and the number still standing. By November, the combined forces of park board employees and private contractors had removed 95 percent of infected trees on public property.³⁴

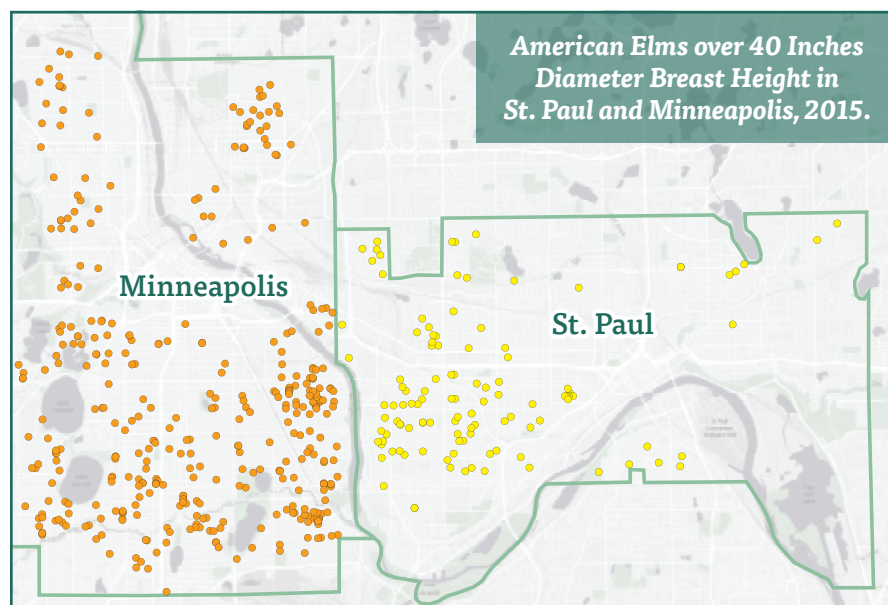
WHAT ULTIMATELY distinguished the two cities’ disease control efforts was not the willingness to spend aggressively, but how the money was spent. In 1978, St. Paul spent almost \$1 million more than Minneapolis on its Dutch elm sanitation program. A high-ranking municipal official observed that financing the reimbursement program had largely “gutted” St. Paul’s capital improvement budget despite generous state funding to fight Dutch elm. In Minneapolis, the decision to only partially reimburse residents for tree removal costs left forestry officials with sig-

nificantly more funds to hire contracted crews and inspectors to detect disease. In 1977, Minneapolis spent \$2.3 million on outside crews that supplemented the work of park board personnel. Given its smaller human and elm populations, St. Paul spent far more on disease control on a per capita or per tree basis than Minneapolis did, but because this spending did not lead to prompt tree removal in many parts of the city, Dutch elm overwhelmed the capital city’s elms.³⁵

With the return of a long, cold winter in 1977–78 and more vigorous sanitation efforts, both Minneapolis and St. Paul experienced sharply reduced losses from Dutch elm in 1978. The number of infected trees was still high—more than 20,000 in Minneapolis and roughly 15,000 in St. Paul—but by 1979 the epidemic had abated significantly. Elm-lined streets in both cities were largely a thing of the past; the remaining elms shared the boulevards with young ash, Norway maples, and other species.³⁶

But the contrast between the damage in Minneapolis and the widespread devastation in St. Paul was apparent to many observers. St. Paul waited until Dutch elm had infected almost a third of the city’s elms before it dramatically increased the pace of tree removal, whereas Minneapolis brought in additional private crews in time to contain the outbreak. Minneapolis had bent in the face of Dutch elm; St. Paul had broken.

By August 1977, a clear narrative had emerged: Dutch elm had absolutely walloped St. Paul but only delivered a strong blow to Minneapolis.



CHAD GIBLIN, UNIVERSITY OF MINNESOTA. MAP CREATED WITH INFORMATION PROVIDED BY CITY OF ST. PAUL AND MINNEAPOLIS PARKS AND RECREATION BOARD.



Anthony Coniaris sifts through sawdust of what once was an elm tree on the lawn of St. Mary's Greek Orthodox Church, overlooking Lake Calhoun in Minneapolis.

Lessons learned

THE SAGA of Dutch elm disease in the Twin Cities is a cautionary tale in several respects. Dutch elm did lead cities to plant a somewhat more diverse urban forest to minimize the risk of contagion. A recent outbreak of emerald ash borer, another beetle that transmits tree disease, has prompted St. Paul, Minneapolis, and other Minnesota communities to preemptively remove large numbers of ash trees destined to die from the borer. The irony is that many of these ash trees were planted to replace trees lost to Dutch elm. In 2015, the Minneapolis Park and Recreation Board acknowledged the need to further diversify the species composition of its street trees: "Following the devastating loss of American elms due to Dutch elm disease in the 1970s, species diversity was achieved by planting one tree type on each block of a street. Following the discovery of emerald ash borer in 2010, however, diversification was redefined to include two or more tree species on each block of a street."³⁷

Another lesson of the Dutch elm disease outbreak is the importance of

establishing independent municipal boards with the knowledge and financial resources to respond quickly to events. The Minneapolis Park Board coordinated with city officials but enjoyed a substantial degree of autonomy in financing and managing its operations. In St. Paul, foresters could not mount a large enough operation to remove trees within the state's recommended 20-day window. Saddled with the requirement to reimburse residents for the entire cost of tree removal on private property, officials simply did not have the funds to hire enough crews to keep the beetles in check. The failure to promptly remove infected trees fueled the spread of the disease, undermining St. Paul's efforts to preserve most of its graceful elms.

By failing to respond aggressively enough to the epidemic when it was at its height, St. Paul was, ironically, largely spared the challenging task of closely monitoring its elm population over the course of the ensuing decades. During the same period, detecting Dutch elm and removing diseased trees became one of the Minneapolis Park Board's most important responsibilities. Even in years when beetle populations were relatively inactive, Minneapolis lost a few thousand elms to the disease. One sign of Minneapolis's success in mitigating elm losses during the peak years of the crisis was the fact that the city still had well over 60,000 elms scattered across its boulevards, yards, and parks in 2004, when a resurgence of Dutch elm disease led to the loss of more than 10,000 elms. Nonetheless, the Minneapolis Park Board deserves credit for its long-term vigilance.

The devastation of Dutch elm was

felt at various levels. Households mourned the loss of elegant trees that provided shade and attracted birds and other critters to their yards. Residents missed the arching elms that had been the defining natural feature of streets throughout the metropolitan area. Even so, the Twin Cities remain among the greenest metropolitan areas in the nation. Most Minneapolis residents can find an elm within a short walk of their home. St. Paulites can still spy an occasional American elm but are perhaps more likely to come across one of several varieties of disease-resistant elm cultivars that have been developed in recent decades.³⁸

These newer elm varieties, found in places like St. Paul's Linwood Park, are taking root even as city foresters remove thousands of ash trees infected with emerald ash borer. The juxtaposition reminds us that urban forests are both startlingly fragile and surprisingly resilient. They are the product not only of water, sunlight, and insects, but also of politics, tough decisions, and foresight. ▣

Notes

The author would like to thank Ted Hathaway, manager of Special Collections, Hennepin County Library, for his generous assistance with images for this article.

1. *Minneapolis Tribune*, Sept. 6, 1978.
2. Minnesota Department of Agriculture, *Shade Tree Program 1980 Report to the Legislature*, Division of Plant Industry Records, box 1, folder Reports to Legislature, 1979, 1980, Minnesota Historical Society, St. Paul, MN (hereafter cited as PI Records). In an attempt to fight the fungus, elms produce plugs that impede the movement of water and nutrients, ultimately killing the tree.
3. Wilber Schilling and David Pitman, *Agents of Change: What Goes Around Comes Around: Cull-arbor-ation: Culling the Urban Forest* (Minneapolis: Indulgence Press, 2012), n.p.
4. Minneapolis Tree Advisory Commission, *Annual Report to the Minneapolis Park and Recreation Board and the Mayor and City Council of the*

City of Minneapolis (Minneapolis, Jan. 2006), 2.

5. Henry Lawrence, *City Trees: A Historical Geography from the Renaissance through the Nineteenth Century* (Charlottesville: University of Virginia Press, 2006), 159.

6. Thomas Campanella, *Republic of Shade: New England and the American Elm* (New Haven, CT: Yale University Press, 2003), 20.

7. Jared Farmer, *Trees in Paradise: A California History* (New York: Norton, 2013), 120–25. The recognition that eucalyptus trees grew quickly, the belief that they would be a good source of lumber, and their aesthetic qualities were other factors that contributed to their popularity. See Part 2 of *Trees in Paradise* for a thorough account of the eucalyptus in California in the nineteenth and twentieth centuries. Farmer also offers a rich eco-cultural analysis of redwoods, sequoias, citrus trees, and palms.

8. David C. Smith, *The City of Parks: The Story of Minneapolis Parks* (Minneapolis: Foundation for Minneapolis Parks, 2008), 139.

9. Works Progress Administration, *Minnesota: A State Guide* (Works Progress Administration, Executive Council, State of Minnesota, 1938), reprinted in 1985 as *The WPA Guide to Minnesota* (St. Paul: Minnesota Historical Society Press, 1985), 169.

10. Campanella, *Republic of Shade*, 147–59.

11. David W. French, *History of Dutch Elm Disease in Minnesota* (St. Paul: Minnesota Agricultural Experimental Station, 1993); Minnesota Department of Agriculture, *A Summary Report of Tree Disease Control Activities in the Seven County Metropolitan Area—1974*, PI Records, box 1, folder Ag.

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13. David French and Robert Shrum, *Dutch Elm Disease Projections for Five Cities in Minnesota*, PI Records, box 1, folder Correspondence 1977.

14. Ruth Anderson, “Dutch Elm Disease Continues to Bug,” *The Park Bugle*, July 1976.

15. Donald Willeke, “How to Put Sex in Sanitation,” speech delivered at First National Bank Dutch Elm Leadership Conference, Citizens’ League Records, box 11, folder Dutch Elm Disease, 1976–77, #3, Minnesota Historical Society (hereafter CL Records); “Delaying the Demise of the Elms,” *Minneapolis Tribune*, June 6, 1976.

16. “Statement of Gov. Anderson on State Elm Cleanup Program,” *Warroad Pioneer*, Sept. 6, 1976.

17. Minnesota Department of Agriculture, *Shade Tree Disease Control in Minnesota: A Report to the 1977 Legislature*, PI Records, box 1, folder Shade Tree Program Report for 1976.

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late 1976 or early 1977, CL Records, box 11, folder Dutch Elm Disease, 1976–77, #3.

18. Peter Ackerberg, “13 Proposals Introduced to Fight Dutch Elm Disease,” *Minneapolis Star*, Feb. 1, 1977.

19. Minnesota Department of Agriculture, PI Records, box 2 and box 4, folder Arbor Month/Day, 1978–82.

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31. MN Department of Agriculture, *Report to the 1979 Legislature*, 1; *St. Paul Dispatch*, Aug. 16, 1977.

32. Letter from Mrs. C. A. Martinson of Minneapolis of June 22, 1977, to Governor Perpich, and letter from Mr. and Mrs. Stuart Loudon to Governor Perpich, both PI Records, box 2, folder General Correspondence, 1977–82, Public Info. Coordinator.

33. Minneapolis Park and Recreation Board, *Proceedings, Board of Park Commissioners for Year 1977*, minutes, Sept. 14, 1977.

34. Minneapolis Park and Recreation Board, *Proceedings, Board of Park Commissioners for Year 1977*, minutes, Aug. 3–Nov. 9, 1977.

35. Senate Committee on Agriculture and Natural Resources, subcommittee on Environmental Protection, Nov. 28, 1978, Testimony of Judy Barr, PI Records, box 3, folder Legis Corres. 1978.

36. In February of 1977, there were 13 days on which the temperature exceeded 30 degrees; in February of 1978, there were only two 30-plus days. MN Department of Agriculture, *Report to the 1979 Legislature*, 25.

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38. American Forests, “American Forests Names the 10 Best U.S. Cities for Urban Forests,” press release, Feb. 5, 2013. Minneapolis was named one of the nation’s top 10 urban forests for its high level of tree cover and extensive park system. See <http://www.americanforests.org/our-programs/urbanforests/10-best-cities-for-urban-forests/10-best-cities-for-urban-forests-minneapolis/>, accessed June 10, 2015.

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Minneapolis residents watch the removal of a diseased elm tree.



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