

Property owners are responsible for removing any trees infected with oak wilt and properly disposing/storing infected wood.

Please read the following information on handling of diseased trees and wood.

Oak wilt is a vascular wilt disease that can affect all species of oak trees. Red oaks are highly susceptible; usually dying within a matter of days or weeks after the first signs of wilting appear. Bur oaks and white oaks have varying degrees of resistance to the fungus and can live anywhere from 1 to 20 years or more after being infected (please read attached information).

The primary method of spread for this disease is via root grafts. A root graft is the fusion of roots from two separate trees. When oak trees of the same species are close together, they generally form a common root system with these root grafts sharing water and nutrients. The oak wilt fungus will travel from an infected tree through these common root systems and into nearby, healthy oaks which will also become infected.

Root grafts account for approximately 90% of the spread of oak wilt. Because of this, the disease can be controlled. By severing these root grafts, the disease can be isolated in the infected trees and prevented from moving into healthy trees.

STEPS IN OAK WILT CONTROL PROGRAM

- I. Identify and mark infected trees (Summer)
- II. Optional root graft disruption (Fall)
- III. Property owner should remove diseased trees (Before April 1, 2023)
- IV. Property owner should properly dispose/store infected wood (Before April 1, 2023)
- V. Do not prune or damage oaks during growing season and especially not during the period from April 1 to July 15

I. Identity and Marking of Infected Trees

When allowed onto your property, the tree inspector will spray paint an orange ring around infected red oaks. They will paint an ID number and an "OW22" which represents Oak Wilt 2022. Infected white and bur oaks may be marked with an orange dot at the base of the tree.

You have the right to have your tree(s) tested for oak wilt. The Department of Plant Pathology at the University of Minnesota accepts samples for testing. For more information and sample submission forms, go to <http://pdc.umn.edu/submit-sample> or call 612-625-1275. The cost per test is approximately \$75.

II. Root Graft Disruption (Optional)

Root graft severing is often accomplished using a vibratory plow with a 5-foot blade. The roots are cut to prevent the fungus from moving from infected trees to healthy trees via grafted root systems.

The City currently offers this option for residents at no charge. This is usually done in October once the tree(s) have moved into a more dormant state. **If you would like to participate in this program fill out and return the Vibratory plow form in the back of this packet.**

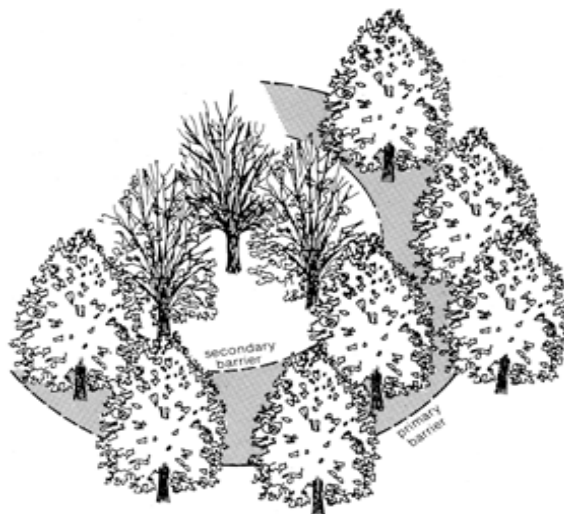
Those interested in pursuing this prevention method sooner should contact a private tree care company.

About Root Cutting

The lines cut are referred to as barrier lines. Successful disruption of root grafts to protect healthy trees close to an oak wilt infection center often requires that two or more parallel or intersecting lines be made.

PRIMARY BARRIER LINES are those expected to have a good chance of protecting trees outside the lines.

In addition, SECONDARY BARRIER LINES are often used to help ensure that the root graft disruption is effective. Separating groups of asymptomatic oaks from each other within the primary line may also save additional trees. Secondary lines usually have no greater than a 50% chance of success while primary lines may have a success rate of 90%.



Many times trees surrounding the infected oak are also already infected but are not showing symptoms of oak wilt. Cutting the root connections between these trees will not do any good. That is why the multiple lines are cut and can extend well beyond the area where most people assume the cutting will take place. Once a tree is infected, all red oaks within that area will likely become infected until another line is reached. It is a good idea to remove all trees (infected and healthy) up to the line (if no other control methods are used – chemical injection, etc.) to prevent future chances of the fungus crossing over the lines. The root graft cuttings are good for 3-4 years. After that time the roots can grow back together. If trees are still infected and wilting, oak wilt can spread across the line to the healthy trees.

If you are going to cut roots do it **BEFORE** you cut down trees. Removal of the infected trees before root graft disruption will actually hasten the spread of the disease and often makes the root cutting useless. Therefore, if you are considering root graft cutting, **DO NOT** remove the tree(s) before you do the root cutting.

III. Property Owner Should Remove Marked Trees (Before April 1, 2023)

After the root cutting has been completed, or if it was not feasible, all marked red oak (trees marked with ID # and a ring) trees need to be removed by the property owner by April 1, 2023.

The other 10% of infections and the creation of new oak wilt sites are due to the **overland spread** of the fungus. Whether the tree is still standing, or even if it has been cut down and sits in stack of firewood in your back yard, it may be a threat to you or your neighbor's healthy oaks the following spring.

IV. Proper Disposal/Storage of Infected Wood

Infected wood can be disposed of in three ways and will need to be completed by April 1, 2023.

1. Debarking, chipping or splitting
2. Burning (Need proper burning permits)
3. Piling the wood to dry and covering in plastic

When piling and drying wood prior to disposal follow these steps:

- Pile the larger pieces into several piles, or
- Cut and split the wood into firewood-sized pieces. Cutting and splitting the wood into firewood can allow it to be neatly stacked and the following steps are made easier.
- Cover the entire pile(s) of wood with sheets of 4 mil (or thicker) plastic. Cannot use tarps due to the porous nature of the material.
- Tape all seams or breaks in the plastic with duct tape or some other heavy-duty tape.
- Bury the ends of the plastic into the ground around the pile(s) so that the wood is "sealed in". You cannot just drape the plastic over the piles.
- Keep the wood covered in this manner for 6 months especially from April 1 to July 15. After 6 months, and if after July 15, remove the plastic and allow the wood to dry for another 6 months.
- After this time, the wood is no longer capable of producing spores. The wood will no longer need to be covered.
- **All trees marked should be properly taken down and properly disposed of by April 1, 2023 and all piles of wood should be covered with plastic by April 1, 2023 and remain covered through July 15.**

V. **NO CUT PERIOD, April 1 through July 15**

DO NOT PRUNE OR DAMAGE OAKS DURING GROWING SEASON AND ESPECIALLY DURING THE PERIOD FROM APRIL 1 TO JULY 15. New oak wilt infection sites begin when a tree is damaged during the growing season and when spores are present from recently infected oaks. When a tree is damaged it produces sap at the wound. Certain insects feed on the sap and some of them can be carrying spores from oak wilt trees that produced spore mats and were not properly disposed of that spring. Painting wounds won't completely seal out any chance of infection but can help by reducing the exposed sap and making the wound less attractive to sap feeding insects.

Additional Information on Handling Infected Wood

1. ***Please do not give the wood away.*** Oak wilt has been introduced into hundreds of new sites by property owners alleviating themselves of their problem by giving or selling their wood to neighbors, friends, relatives, or strangers.
2. All infected wood needs to be accounted for.
3. Only red oak wood with the bark still on it may produce spores for the spreading of oak wilt. Trees dead for more than one year are not capable of producing spore mats, and products from these trees, such as lumber or wood chips, are not spore mat producers. Please follow the handling instructions provided in this notification or contact City Hall to discuss proper handling of diseased wood.
4. Chemical treatments – Alamo Injections. In Section II above a chemical injection control method is referenced. Alamo is a fungicide injected in to red oaks that show no signs of wilting but are at high risk or are of high value. The chemical has shown good initial results but is still being researched for long term use. Currently the injections have to be repeated every three years and can only be injected when the tree is actively growing. After three years the chemical can break down and the tree can wilt.

If you have any questions about oak wilt, the program, or this information, feel free to call Ham Lake City Hall at (763) 235-1662.

John Witkowski, Public Works Superintendent

More oak wilt info available at:

<https://www.ci.ham-lake.mn.us/departments/parks/oak-wilt>
www.dnr.state.mn.us/treecare/forest_health/oakwilt/index.html
<https://extension.umn.edu/plant-diseases/oak-wilt-minnesota>