



**City of
Oakdale
Urban Forestry
Management Plan**



A VISION FOR THE FUTURE

“Oakdale’s urban forest is a healthy, dynamic, diverse, and cohesive ecosystem that is valued and cared for through community stewardship because it balances economic vitality with the conservation of natural resources now and for future generations.”

- This vision reflects the community’s deep-rooted desire to live in a green and vibrant community.
- This vision reinforces our responsibility to manage our urban forest in order to preserve and enhance this valuable community resource for the good of the environment, the economy, and the health and well-being of current residents and future generations.
- This vision can be fully realized because Oakdale is a progressive, cutting- edge place to live, with a high level of environmental awareness.
- This vision can be fully realized because Oakdale residents recognize the value of nature and are becoming more and more focused on sustainability.
- This vision will be achieved not just by public agencies, but by homeowners, neighborhoods and businesses, all looking not just short term, but 10, 20, 50 and even 100 years into the future and working together on multiple levels to improve the quality of life by starting, literally, from the ground up – by planting and taking care of their trees.

INTRODUCTION

The township of Oakdale was formed in 1858 and consisted of 36 square miles. A portion of these areas was split off and became Lake Elmo in 1926. In 1951, another division occurred and became known as East Oakdale. In 1959, 40 acres detached from the south and became Landfall. Also in 1959, 3-1/2 square miles split off and became Northdale. By 1968, the townships of Northdale and a portion of East Oakdale joined with Oakdale and became incorporated as Oakdale on February 20, 1968. In 1974, Oakdale was designated as a city.

Arthur Stephen who served as Justice, Chair of the Board of Supervisors, and Postmaster for the area named the city of Oakdale. The name was selected to reflect the many stands of oaks as well as the valleys. As Oakdale's name suggests, trees have always been a source of civic pride. In fact Oakdale's motto, "We're Branching Out!", is tree related. In 1975 the city had its first Arbor Day celebration. In 1995 the city achieved the "Tree City USA" designation. In 1999 the City of Oakdale initiated the Oakdale Tree Board whose purpose was to develop and administer a comprehensive city tree program and make policy recommendations on the city tree preservation ordinance. In 2004 the City of Oakdale acquired a full time Forester in the Public Works Department. In 2006 the Oakdale Tree Board received the National Arbor Day Foundation's Lady Bird Johnson award and the Forestry Division was created in the Public Works Department. In 2008 the Forester assumed the duties of the Oakdale Tree Board Liaison. Currently the city spans 13 square miles, has 97 miles of streets, and a resident population of 27,518. Oakdale is a "Star City", "Bike Friendly Community", and "Fit City" in addition to the designation as a "Tree City USA".

URBAN FORESTRY

At this time of increased environmental awareness, it hardly seems necessary to point out the major contributions of plant life to community health, and the benefits provided by urban and community trees. By protecting against the harshness of the urban environment, green plants make a difference between an unhealthy city and a wholesome human community. Tree lined streets and canopied parks are not only inviting, but are natural providers of important aspects of the quality of life. As their beneficiaries, the city relies on urban vegetation to clean our air, provide dynamic buffers, reduce noise, conserve our soil, and add to the visual quality of our community. In order to sustain and optimize these benefits trees and vegetation must be managed using Urban Forestry practices. Urban Forestry is defined as: *The art, science, and technology of managing trees, forests, and natural systems in and around urban areas for their present and potential contributions to the physiological, sociological, and economic well-being of urban society.*

An urban forest includes all of the vegetation in and around an urban area. Some of these forested areas may have been intentionally planned and landscaped, while other forested areas were leftover from small tracts of land preserved during development or left unattended. When buildings and other man-made structures (gray infrastructure) are included with the urban forest, a complex ecosystem exists. Operation of this complex ecosystem involves interactions among vegetation, soils, water, topography, insects, wildlife, climate, man-made surfaces and processes, and people. An urban forest provides tangible values to the urban environment and economy including temperature moderation, flooding and run-off control, water conservation, noise, insulation, visual buffering, improved air quality, and recreation. In addition, intangible benefits are provided in the form of beauty, serenity, and community pride which all serve to define quality of life.

While an urban forest provides numerous aesthetic and economic benefits it can impose dramatic costs upon a community if it is not properly managed. These costs are most obvious when poorly maintained trees wreak havoc on a community and its infrastructure in the aftermath of a storm, or when a "hazard tree" causes injury to a citizen or property. The costs can also be seen, however, when poor maintenance, location, and species selection lead to accelerated decline and replacement of trees, loss of natural storm water retention and storage capacity, and increased heating and cooling expenditures. Urban trees are under pressures not present in native forests and require active management intervention to sustain them. They lack some of the natural buffers and protection found in wildlands, where the combination of soil micro-organisms, understory plants, an ample seed source, number of trees, variance in topography, and stable hydrology all contribute to healthy trees able to ward off early destruction due to diseases, insects, and invasive plants. An Urban Forestry Management Plan is needed to provide the framework for active management intervention and to ensure the City of Oakdale receives the benefits provided by a healthy urban forest.

PURPOSE

The purpose of the Urban Forestry Management Plan is to protect, improve, and preserve the urban forest of the City of Oakdale and to optimize the benefits of trees by envisioning and enabling an integrated and sustainable approach to preserving and enhancing the city's urban forest resources, and to recommend direction and actions for the City of Oakdale to take in order to reach the objectives in the next ten to twenty years.

CURRENT TREE PROGRAM

Maintenance and Pruning

Street trees are pruned during the dormant season for clearance, structure, and aesthetics. Street tree pruning is also conducted throughout the year on a reactionary basis. Park trees are pruned for structure and aesthetics in the dormant season. Forestry staff provides ongoing maintenance to trees located on public property. Ongoing maintenance includes pruning, fertilizing, watering, mulching, and etc.

Disease Control

Inspection for Dutch Elm Diseased trees and Oak Wilt infected trees is a high priority. Diseased Elm trees are marked and removed in a timely manner to reduce the spread of the disease. Wood chips generated by the removals are used in many of the City's landscape plantings. Diseased oak trees are identified and vibratory plowing is conducted when necessary. Removal of diseased oaks occurred after the root grafts are severed by vibratory plowing. Oak wood infected with the fungus and deemed to potentially produce spore mats are destroyed or must be secured under heavy plastic in an air tight fashion the next year from April 1st to July 15th. Residents may call in and request to have their trees inspected, free of charge, by the City Forester for insects, disease, damaging abiotic factors, general health, maintenance needs, and etc.

Buckthorn Curbside Collection Program

Residents can place buckthorn at the curb for the city to pick up free of charge on three occasions in the fall.

Tree Planting Program

Streetscape:

The Tree Board conducts an annual community streetscape project. The project generates many community volunteers who are supervised by City Commission volunteers and Master Gardener volunteers. These projects are also supported by Public Works staff and the City Forester.

Seedling Planting:

The city plants over 1000 native tree and shrub seedlings every year in Oakdale Park. The trees and shrubs are selected based on their compatibility with the characteristics of the planting sites they will be planted into. Volunteers aid the City Forester with site cleanup, planting, watering, and tree shelter installation. Sites which have become overwhelmed with coarse woody debris and buckthorn are chosen for cleanup. Cleanup removes all buckthorn and excessive coarse woody debris. Buckthorn stumps are chemically treated to prevent resprouting. The shade of buckthorn leaves the forest understory barren of anything but itself so replanting is necessary. Some of the seedlings are purchased from the Washington Conservation District and others are secured free of charge from the Minnesota Department of Natural Resources.

Replacements:

The city replaces trees, in parks or maintained green space that have perished from insect, disease, or vandalism.

Arbor Day Celebration

The city conducts an annual Arbor Day Celebration in April. The celebration includes a tree giveaway where hundreds of large bare root trees along with over 300 seedlings are given away to residents. As part of Arbor Day activities, the city produces and broadcasts a video highlighting the event activities and information. This activity is publicized in the February and March Oakdale Update Show on Cable TV Channel 16.

Tree Spade

The city moves trees from damaging areas to other parts of the city. Rather than just removing trees in certain areas, the city prefers to move healthy trees to more appropriate areas. This maintains trees in Oakdale that would otherwise have been removed.

Landscape Maintenance and Beautification

The City's landscape beds receive ongoing maintenance that consists of weeding, mulching, watering, fertilizing, pruning, plant replacement, and pest monitoring.

Wood Waste Disposal

Wood waste generated by invasive species removal is disposed of at District Energy. Wood chips can be dumped free of charge at District Energy St. Paul which burns the chips to generate energy for its hot water district heating system. Oak wood is given away to those interested in splitting the wood for fires or sawing the wood into boards. Elm wood is chipped and used as mulch in some of the landscapes.

Tree Inventory

An inventory of all the trees within Oakdale's ROW and trees in Tanner's Park and Eastside Park is currently being incorporated into the City Services Mapping Program. There is also a plot sample inventory of Oakdale Park. Information collected includes: GPS location, Genus and Species, Unique #, DBH, Condition 0-10, and notable Urban Damage Agents. This inventory will be maintained by regular inspections and work orders.

Buckthorn Removal

The City Forester, volunteers, and STS (Sentenced to Serve) crews remove buckthorn from city property. Approximately 20 acres of land is cleared of buckthorn each year.

Weed Wrench Loan Program:

The city owns a number of wrenches that residents use free of charge for removing buckthorn from their yards.

Promotion and Advocacy

Promotional materials are given away at the Arbor Day, Community Streetscape, and Buckthorn Removal events. Events are highlighted in the Oakdale Update Newsletter and the Oakdale Update cable television show.

HOW DOES THE CITY IMPROVE & ACHIEVE ITS VISION

SHORT RANGE

- Analyze data from tree inventory and establish maintenance cycles. Tree Inventory information is used to: prioritize pruning, place trees on an optimum pruning cycle, determine species composition of the urban forest, evaluate tree health, and to establish a list of appropriate species for planting. The optimum pruning cycle for mature (> 25 years old) trees is 4 years, and the best pruning cycle for young (< 25 years old) trees is 3 years. Younger trees benefit from early training to establish a strong structure that reduces future maintenance. Savings to the city may be realized by longer pruning cycles, but only at a loss in tree value. The loss in value exceeds savings once the pruning cycle is extended beyond 4 years for mature trees and 3 years for young trees.
- Improve maintenance of City-managed trees. Establishing a pruning cycle will improve maintenance of City trees by addressing problems when they are small and before they become large problems with fewer maintenance options. Trees will be cared for and inspected on a more frequent basis and this is the key to promoting healthy trees with strong structure that live well into maturity. More time must be spent promoting the vitality of our trees and this will minimize dealing with many insect and disease problems that are stressing our trees. Watering during dry spells in summer, adding more mulch rings, and periodic fertilization to address growth limiting nutrients will greatly impact the health of our trees
- Increase tree planting and diversity of species. A broader diversity of trees is needed to protect against the possibility of large-scale devastation by both native and introduced insect and disease pests. A basic guideline for tree diversity states: Plant no more than 10 percent of any species, plant no more than 20 percent of any genus, and plant no more than 30 % of any family. Areas of species uniformity should be scattered throughout the city to achieve spatial as well as biological diversity. Information from the tree

inventory will provide a guide to what species the city can plant to increase diversity and stay within the guidelines. Currently the city does not replace boulevard trees and the city does not plant more trees than the city loses each year. We need to increase planting to maintain and improve our canopy cover.

- Strengthen incentives and regulations for tree preservation and planting on private property. Revisions need to be made to *Chapter 22: Trees* of the city code to make the language more user friendly and straight forward. *Chapter 22: Trees* needs more incentives for tree preservation and stricter mitigation for tree removal. Adjustments need to be made to the total percentage of tree removal allowable on a site because it is too lenient. Trees play an important role in property values and maintaining more trees during development will yield higher property values.

- Increase community education by adding a forestry web page about the value of trees and proper tree selection, planting and care. Maintenance and care of most of the city's trees is the responsibility of private property owners; this reality illustrates a major limitation to the city's overall efficacy in protecting and expanding urban tree resources. Unless and until an alternative arrangement for tree management is developed, public outreach and education will remain as one of the most powerful tools available to the City of Oakdale. Establishing a page on Oakdale's website devoted to trees will be the most effective way to inform people about proper tree care and maintenance.
- Establish an urban forestry storm emergency plan. An emergency plan, which deals specifically with trees, should be put in place to provide clarity on safety, responsibility, rental equipment, mutual aid agreement, and private storm emergency contracts in the event of a natural disaster.
- Create City of Oakdale tree planting specifications. New planting specifications are needed to eliminate poor planting practices that are out of date.
- Increase visibility of Forestry Activities. Increasing visibility of Forestry Activities is a great opportunity to gain support from the many people that are becoming more environmentally conscious and want to be part of the green movement.
- Maintain tree inventory. The new tree inventory must be maintained by updating it at every pruning cycle and recording all work orders.
- Increase plan review and involvement with the Community Development Department. Getting more involved with planning early in the process is important because all too often, a lack of holistic planning to preserve trees results in conflicts with trees late in a project. Unexpected impacts can undermine efforts to save valuable trees. Careful planning can avoid tree roots or allow a budget for tunneling, hand trenching or air excavation around roots in critical areas. It is much easier to confront the costs of successful tree preservation early. When a problem arises late in a project and the cost is unexpected, trees usually lose.
- Actively pursue grant funding for tree programs. With a tough economy and heavily scrutinized budgets it is important to utilize any possible funding.

MID RANGE

- Inventory and manage City-owned natural areas to enhance ecosystem health and function. By inventorying the many City-owned natural areas the city can identify and rank the areas based on their significant resources and spatial location and then prioritize their management. Some smaller areas, otherwise viewed as insignificant, may be vital to wildlife in that they provide green corridors between larger areas. Inventorying all these areas will provide a look at the big picture and determine whether areas need restoration, maintenance, enhancement, or no special attention.
- Inventory available tree planting spaces. All planting locations should be inventoried to identify potential for boulevard plantings. The following specifications should be used for identifying available planting spaces: a minimum of 4 feet is needed for a plantable area; the minimum distance to the adjacent planted tree is 25 feet; all planting spots are at least 25 feet from intersections; all planting sites are at least 10 feet away from hydrants, driveways, utility poles, and street lights; all planting sites are at least 10 feet away from underground electrical vaults.
- Take over the costs of private Oak Wilt control. We can control spore producing trees by enforcing Sec. 22-17 of the city code but the city cannot control below ground spread of the fungus on private property. Many people are simply complying with removal of spore producers and avoiding the extra expense of vibratory plowing. Ninety percent of Oak Wilt is spread through root grafts and only ten percent is spread overland by insect vectors, so without control of both above and below ground spread the city is fighting a losing battle. Taking on this relatively minor expense will keep Oak Wilt losses to a minimum, will encourage residents to

report Oak Wilt infections, and will be considered a very valuable service that reflects positively on the City's commitment to its namesake the oak.

- Determine the City's urban tree canopy cover. Urban tree canopy is the layer of leaves, branches, and stems of trees that cover the ground when viewed from above. An increase in urban tree canopy cover brings an associated increase in the benefits provided by an urban forest. A study of the urban tree canopy is a means to measure the extent of the urban forest. Once the City's urban tree canopy cover is determined a goal can be set. Urban tree canopy goals set a target for the city that is measurable, observable and appealing.
- Develop a Street Tree Master Plan. In order to substantially increase the City's urban tree canopy cover the City will need to have more boulevard tree plantings. A master plan will identify all potential tree planting sites, species palette, city-wide diversity percentages, and estimated tree planting expenses for each potential neighborhood.
- Develop and initiate a Street Tree Planting and Stewardship Program. After developing a street tree master plan a volunteer program to plant and maintain trees for specified length of time will be developed. The program would have a lot of flexibility but some basic guidelines for funding, training, monitoring and neighborhood buy in. Neighborhoods with the greatest interest and strong support would be selected for tree planting.
- Promote trees as valuable green infrastructure and an alternative to gray infrastructure. Trees are all too often viewed as merely burdens to Public Works because of the maintenance that is required for equipment clearances and the cleanup required after storm events. All too often Public Works has to deal with trees that exist in poor locations either because they were volunteers or just inappropriate planting selections. The perception of trees will improve as inappropriate trees are replaced, poor planting sites eliminated, and the right trees are planted in the right place. Planting the right tree in the right place will reduce the maintenance that Public Works crews have become accustomed to while improving the quality of the urban forest at the same time. The greater the benefits provided by the urban forest the easier it is to see trees as valuable infrastructure. More promotional materials highlighting the benefits and costs associated with trees will have to be made available to everyone. Highlighting these benefits on the website, in the Oakdale Update, and in brochures distributed at events will reinforce the fact that trees play a vital role in the sustainability of the city and that their role can be monetarily quantified.
- Appraise the value of all park and boulevard trees. Attaching a monetary value to trees can allow the city to make budget decisions based on the value of the resource the city is maintaining. This information can also be used to measure the success of maintenance strategies.
- Update the Urban Forestry Management Plan to adjust to changing circumstances. This plan should be updated if objectives are not being realized or if economics are not favorable to expand programs or meet higher maintenance requirements.

LONG RANGE

- Quantify the benefits provided by Oakdale's urban forest. The value of the benefits of the urban forest go far beyond the collective monetary value of trees because the value of the services they provide must also be figured in. Service values can be extrapolated from urban tree canopy cover percentages and many particulars of the area. By quantifying the benefits the city is receiving the city can balance our economic vitality with the conservation of our natural resources and this will identify what level of investment has to be made in order to achieve the optimum return.
- Increase canopy cover. Not only does the city need a large quantity of trees to comprise a well-functioning urban forest but the city also needs trees of good quality. An increase in urban tree canopy cover brings an associated increase in the benefits provided by an urban forest. Canopy cover should be at least at the recommended levels for each type of zone.

Recommended urban tree canopy cover by land use zones:

Average tree cover counting all zones	40%
Suburban residential zones	50%
Urban residential zones	25%
Central business districts	15%