

CITY OF LAKE ELMO  
COUNTY OF WASHINGTON  
STATE OF MINNESOTA

ORDINANCE NO. 08-076

AN ORDINANCE AMENDING THE LAKE ELMO CITY CODE OF ORDINANCES BY  
ADOPTING TREE PRESERVATION STANDARDS FOR ALL DEVELOPMENT AND MAJOR  
GRADING ACTIVITIES.

SECTION 1. The City Council of the City of Lake Elmo hereby amends Title XV:  
Land Usage; Chapter 154: Zoning Code, by adding the following language:

ARTICLE 6. ENVIRONMENTAL PERFORMACE STANDARDS

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§154.250 Purpose  
§154.257 Tree Preservation

**§154.250 Purpose**

The purpose of this section is to provide regulations of general applicability for property throughout the City that are intended to protect or enhance natural resources and processes, and minimize conflicts among land uses.

**§154.257 Tree Preservation**

- A. *Purpose.* Within the city of Lake Elmo, trees and woodlands are considered a valuable asset to the community. The City places a priority on protecting this asset and finds that it is in the best interest to regulate the development and alteration of wooded areas within the community. All builders, developers and subdividers shall comply with all the provisions in the Zoning Code which address the preservation of existing significant trees. All builders, developers and subdividers are encouraged to preserve all healthy trees of significant value even if the trees do not meet the size requirements to be considered significant trees.
- B. *Definitions.* The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

*Common Tree.* Includes Ash, Aspen, Basswood, Box Elder, Catalpa, Cottonwood, Elm, Hackberry, Locust, Poplar, Silver Maple, Willow and any other tree not defined as a hardwood deciduous tree or a coniferous/evergreen tree.

*Coniferous/Evergreen Tree.* A wood plant, which, at maturity, is at least twelve (12) feet or more in height, having foliage on the outermost portion of the branches year-round. Tamaracks are included as a coniferous tree species.

*Critical Root Zone (CRZ).* An imaginary circle surrounding the tree trunk with a radius distance of one (1) foot per one (1) inch of tree diameter. E.g. a twenty-inch diameter has a critical root zone with a radius of twenty (20) feet.

*Deciduous Hardwood Tree.* Includes Birch, Cherry, Hickory, Ironwood, Hard Maples, Oak and Walnut.

*Diameter Breast Height (DBH).* The diameter of trees at breast height, measured 4 ½ feet (54 inches) above the ground.

*Drip Line.* The farthest distance away from the trunk of a tree that rain or dew will fall directly to the ground from the leaves or the branches of the tree.

*Nuisance Tree.* (1) Any living or standing tree or part thereof infected to any degree with a shade tree disease or shade tree pest; (2) Any logs, stumps, branches, firewood or other part of dead or dying tree(s) infected with a shade tree disease or shade tree pest unless properly treated; and (3) Any standing dead trees or limbs which may threaten human health or property.

*Shade Tree Disease.* Dutch elm disease (*Ophiostoma ulmi* or *Ophiostoma novo-ulmi*), oak wilt (*Ceratocystis fagacearum*) or any other tree disease of epidemic nature.

*Significant Tree.* A healthy tree measuring a minimum of six (6) inches in diameter for hardwood deciduous trees, eight (8) inches in diameter for coniferous/evergreen trees, or twelve (12) inches in diameter for common trees, as defined herein.

*Specimen Tree.* A healthy tree measuring equal to or greater than thirty (30) inches in diameter breast height.

*Tree Preservation Plan.* A plan prepared by a certified forester or landscape architect indicating all of the significant trees in the proposed development or parcel. The Tree Preservation Plan includes a tree inventory which includes the size, species and location of all significant trees proposed to be saved and removed on the area of development, and the measures proposed to protect the significant trees to be saved.

C. Tree Preservation Standards for Developing Properties

1. *Applicability.*

a. A Tree Preservation Plan shall be submitted and approved for the following activities:

- i. *New Development in Any Zoning District.* A Tree Preservation Plan shall be required as part of any development or subdivision application.
- ii. Any grading or excavation project that result in the movement of greater than 400 cubic yards of material per acre of site per §151.017.

b. A Tree Preservation Plan is not required for the following activities:

- i. This section does not apply to the issuance of a development approval for a single-family residence on an existing platted lot of record.
- ii. This section does not apply to the harvesting of trees. For purposes of this section, “harvesting” means cutting or clearing trees for purposes relating to forestry operations, as defined in §154.012. “Harvesting” does not include the clearing of land for the purposes of development, even where the trees are sold for purposes of creating lumber for related purposes.

2. *Tree Preservation Plan.* All applicants shall submit a tree preservation plan prepared by a certified forester or landscape architect in accordance with the provisions of this section. During the review of an application for a building permit, grading permit or Preliminary Plat, the tree preservation plan will be reviewed according to the best layout to preserve significant trees and the efforts of the subdivider to mitigate damage to significant trees.

3. *Tree Preservation Plan Requirements.* The Tree Preservation Plan shall be a separate plan sheet(s) that includes the following information:

- a. The name(s), certification(s), telephone number(s) and address(es) of the person(s) responsible for tree preservation during the course of the development project.

- b. *Tree Inventory.* The Tree Preservation Plan must include a Tree Inventory through one of the following methods:
    - i. *Tree Inventory Individual.* An individual inventory including an identification system linked to metal field tags located four and one-half (4.5) feet from grade on all significant trees. The quantity, size species, health and location of all significant trees must be identified on a plan sheet in both graphic and tabular form.
    - ii. *Tree Inventory Sampling.* In cases of sites with large tracts of significant trees, the City may approve the use of a sampling inventory for all or portions of a site as an alternative to an individual inventory. The sampling inventory must include the methodology for sampling, identification ribbon around the perimeter of the sampling areas, and metal field tags located four and one-half (4.5) feet from grade on all significant trees in the sampling area. Within the sampling area, the quantity, size, species, health and location of all significant trees must be identified on a plan sheet in both graphic and tabular form. Based on sampling, total estimates and locations of healthy significant trees shall be provided.
    - iii. *Tree Inventory Combination.* With the approval of the City, sites that include both large tracts of significant trees and areas of individual significant trees may utilize a combination of the individual and sampling inventory methods.
  - c. Trees that were planted as part of a commercial business such as a tree farm or nursery do not need to be inventoried on an individual tree basis. A general description of the trees and an outer boundary of the planted area must be provided. The burden of proof shall be on the applicant to provide evidence to support the finding that the trees were planted as part of a commercial business.
  - d. A listing of healthy significant trees inventoried in subsection (b) above. Dead, diseased or dying trees do not need to be included in the totals.
  - e. A listing of the healthy significant trees removed, identified by the metal field tag or some other form of identification used in the tree inventory in subsection (b) above.
  - f. A listing of the healthy significant trees to remain, identified by the metal field tag or some other form of identification used in the tree inventory in subsection (b) above.
  - g. Outer boundary of all contiguous wooded areas, with a general description of trees not meeting the significant tree size threshold.
  - h. Locations of the proposed buildings, structures, or impervious surfaces.
  - i. Delineation of all areas to be graded and limits of land disturbance.
  - j. Identification of all significant trees proposed to be removed within the construction area. These significant trees should be identified in both graphic and tabular form.
  - k. Measures to protect significant trees.
  - l. Size, species, number and location of all replacement trees proposed to be planted on the property in accordance with the Mitigation Plan, if necessary.
  - m. Signature of the person(s) preparing the plan.
4. *Implementation.* All sites shall be staked, as depicted in the approved Tree Preservation Plan, and the required tree protection fencing shall be installed around the critical root zone before land disturbance is to commence. The City shall inspect the construction site prior to the beginning of the land disturbance to ensure that protective fencing and other protective measures are in place. No encroachment, land disturbance,

trenching, filling, compaction, or change in soil chemistry shall occur within the fenced areas protecting the critical root zone of the trees to be saved.

5. *Allowable Tree Removal.* Up to thirty (30) percent of the diameter inches of significant trees on any parcel of land being developed may be removed without replacement requirements. Replacement according to the Tree Replacement Schedule is required when removal exceeds more than thirty (30) percent of the total significant tree diameter inches. The following types of trees do not need to be included as part of the tally of tree removals:
  - a. Dead, diseased or dying trees;
  - b. Trees that are transplanted from the site to another appropriate area within the city;
  - c. Trees that were planted as part of a commercial business, such as a tree farm or nursery; or
  - d. Trees that were planted by the current property owner. In making such a determination, the City shall consider consistency of the age of the trees, any patterns in the location of trees, historical aerial photography and evidence of intentional planting such as invoices, formal planting plans or cost sharing agreements.
6. *Mitigation Plan.*
  - a. In any development or grading project where the allowable tree removal is exceeded, the applicant shall mitigate the tree loss by either:
    - i. Planting replacement trees in appropriate areas within the development in accordance with the Tree Replacement Schedule;
    - ii. Planting replacement trees on City property under the direction of the Public Works Superintendent; or
    - iii. Some combination of above subsections (i) and (ii) to total the equivalent number of replacement trees to meet the Mitigation Plan.
  - b. The form of mitigation to be provided by the applicant shall be determined by the City.
  - c. The planting of trees for mitigation on residential projects shall be in addition to any other landscape requirements of the City.
  - d. All trees, with the exception of ornamental trees, planted as landscaping on commercial or mixed-use projects may be counted towards tree replacement requirements.
7. *Tree Replacement Calculations.* Thirty (30) percent of the total diameter inches of significant trees on the site may be removed without replacement. The allowable thirty (30) percent removal is first credited to the common trees removed, then the conifers, and lastly the hardwood species. The following calculation procedure must be used to determine tree replacement requirements:
  - a. Tally the total number of diameter inches of significant trees on the site.
  - b. Calculate thirty (30) percent of the total diameter inches of significant trees on the site. This is the allowable tree removal limit, or the number of inches that can be removed without replacement.
  - c. Tally the total diameter inches of common trees that will be removed and subtract this number from the allowable tree removal limit.

- d. If there are any allowable inches left, tally the total diameter inches of conifer/evergreen tree species that will be removed and subtract this number from the remaining allowable inches.
  - e. If there are any allowable inches left, tally the total diameter inches of hardwood deciduous tree species that will be removed and subtract this number from the remaining allowable inches.
  - f. If at any point in the above calculation procedure (a-e) the number of inches to be removed exceeds the thirty (30) percent allowable removal limit, the remaining inches of removal above the allowable limit must be replaced according to the Tree Replacement Schedule in subsection 8.
8. *Tree Replacement Schedule.* Tree removals over the allowable tree removal limit on the parcel shall be replaced according to the following schedule:
- a. Common tree species shall be replaced with new trees at a rate of one-fourth ( $1/4$ ) the diameter inches removed.
  - b. Coniferous/evergreen tree species shall be replaced with new coniferous or evergreen trees at a rate of one-half ( $1/2$ ) the diameter inches removed. Since coniferous species are often sold by height rather than diameter inch, the following conversion formula can be used:  

$$\text{Height of Replacement Coniferous Tree} / 2 = \text{Diameter Inches of Credit.}$$
  - c. Hardwood deciduous tree species shall be replaced with new hardwood deciduous trees at a rate of one-half ( $1/2$ ) the diameter inches removed.
  - d. *Replacement Tree Size.* Replacement trees must be a minimum of one (1) inch in diameter.
9. *Species Requirement.* The City must approve all species used for tree replacement. Ornamental trees are not acceptable for use as replacement trees. Where ten or more replacement trees are required, not more than thirty (30) percent of the replacement trees shall be of the same species of tree. Native species are encouraged, and hardiness and salt tolerance should be considered where applicable.
10. *Warranty Requirement.* Any replacement tree which is not alive or healthy, as determined by the City, or which subsequently dies due to construction activity within two (2) years after the date of project closure shall be removed by the applicant and replaced with a new healthy tree meeting the same minimum size requirements within eight (8) months of removal.
11. *Protective Measures.* The Tree Preservation Plan shall identify and require the following measures to be utilized to protect significant trees planned for preservation:
- a. Installation of snow fencing or polyethylene laminate safety netting placed at the drip line or at the perimeter of the critical root zone, whichever is greater, of significant trees, specimen trees and significant woodlands to be preserved. No grade change, construction activity, or storage of materials shall occur within this fenced in area.
  - b. Identification of any oak trees requiring pruning between April 15 and July 1. Any oak trees so pruned shall be required to have any cut areas sealed with an appropriate nontoxic tree wound sealant.
  - c. Prevention of change in soil chemistry due to concrete washout and leakage or spillage of toxic materials, such as fuels or paints.
  - d. Removal of any nuisance trees located in areas to be preserved.

12. *Compliance with the Tree Preservation Plan.* The applicant shall implement the Tree Preservation Plan prior to and during any construction. The tree protection measures shall remain in place until all land disturbance and construction activity is terminated or until a request to remove the tree protection measures is made to, and approved by, the City.
  - a. No significant trees shall be removed until a tree preservation plan is approved and except in accordance with the approved Tree Preservation Plan.
  - b. The City shall have the right to inspect the development and/or building site in order to determine compliance with the approved Tree Preservation Plan. The City shall determine whether the Tree Preservation Plan has been met.
  - c. *Irreparable Damage.* Where the City determines that irreparable damage has occurred to a healthy significant tree that is designated to be preserved as part of the Tree Preservation Plan, the tree shall be removed and replaced, and protective fencing shall be provided.
- D. *Specimen Trees.* The removal of any specimen trees on a property located in any of the urban zoning districts shall require a special permit and be subject to the Tree Replacement Schedule for the purpose of mitigating great tree loss.
- E. *Financial Security.* In cases where mitigation or tree replacement is required, the City may require that a financial security, in a form acceptable to the City, be provided as part of a development agreement or applicable permit to ensure compliance and performance of the Mitigation Plan. The financial security will be released to the applicant upon verification by the City that the Mitigation Plan was followed, and that all replacement trees are planted and in a reasonable state of health. The financial security may be used to replace any replacement trees that have become damaged or diseased after planting.
- F. *Exceptions*
  1. *Exception Standards.* Notwithstanding the City's desire to accomplish tree preservation and protection goals, there may be instances where these goals are in conflict with other City objectives. These conflicts will most likely occur on small, heavily-wooded parcels. At the discretion of the City Council, exceptions may be granted if all of the following conditions exist:
    - a. The subject parcel is five (5) acres in size or less;
    - b. It is not feasible to combine the subject parcel with adjacent parcels that could use the parcel as required green space;
    - c. Strict adherence to the Tree Preservation Ordinance would prevent reasonable development that is consistent with the Comprehensive Plan and desirable to the City on the parcel; and
    - d. The exception requested is the minimum needed to accomplish the desired development.
  2. *Reduced Mitigation for Exceptions.* If an exception is granted, relief from the requirements of the ordinance may take the form of reduced mitigation requirements, greater allowable tree removal, higher thresholds for determining significant trees, or any combination of the above. The City Council will determine which form of relief best balances the objectives of the City and tree preservation.

**SECTION 2. Effective Date.** This ordinance shall become effective immediately upon adoption and publication in the official newspaper of the City of Lake Elmo.

**SECTION 3. Adoption Date.** This Ordinance 08-076 was adopted on this sixteenth day of April 2013, by a vote of \_\_\_\_ Ayes and \_\_\_\_ Nays.

**LAKE ELMO CITY COUNCIL**

\_\_\_\_\_  
Mike Pearson, Mayor

ATTEST:

\_\_\_\_\_  
Adam Bell, City Clerk

This Ordinance 08-076 was published on the \_\_\_\_ day of \_\_\_\_\_, 2013.