

**ORDINANCE NO. 2008-24**

**AN ORDINANCE AMENDING CITY CODE §300.28, SUBD. 19  
REGARDING TREE PROTECTION**

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The City of Minnetonka Ordains:

Section 1. Existing city code §300.28, subd. 19, a copy of which is attached as Exhibit A, is repealed, and a new city code §300.28, subd. 19 is adopted to read as follows:

19. Tree Protection.

a) Purpose. The goal of this subdivision is to preserve as much as practical Minnetonka's highly valued tree natural resources, ecosystems and viewsheds, while allowing reasonable development to take place and not interfering with how existing homeowners use their property. This subdivision provides incentives for property owners who wish to subdivide areas that include woodlands and high priority trees to use planned unit development (PUD), which allows the flexibility to both protect woodlands and property rights. Standards governing the preservation, protection, and planting of trees are necessary to:

- 1) prevent tree loss by eliminating or reducing compaction, filling or excavation near tree roots;
- 2) prevent or reduce soil erosion and sedimentation and stormwater runoff;
- 3) improve air quality and reduce noise pollution;
- 4) enhance energy conservation through natural insulation and shading;
- 5) control the urban heat island effect;
- 6) increase and maintain property values;
- 7) maintain buffers between similar land uses and establishing and maintaining buffers between conflicting land uses; and
- 8) preserve as much as practical the diversity and extent of the trees and woodlands that are an integral part of this city's identity, while allowing reasonable development and allowing existing homeowners freedom to use their land.

b) Definitions. For the purposes of this subdivision, certain terms and words are defined as follows:

- 1) “Basic Tree Removal Area” - consists of the following:
  - a. within the areas improved for reasonably-sized driveways, parking areas and structures without frost footings and within ten feet around those improvements;
  - b. within the footprints of, and 20 feet around, buildings with frost footings; and
  - c. in areas where trees are being removed for ecological restoration in accordance with a city-approved restoration plan.
- 2) “Canopy” - The uppermost layer of a forest, formed by tree crowns.
- 3) “Critical root zone” – the minimum area around a tree that must remain undisturbed. The critical root radius is calculated by measuring the tree's diameter at breast height. For each inch of tree diameter, 1.5 feet of root zone radius must be protected. For example, if a tree's dbh is 10 inches, then its critical root zone radius is 15 feet (10 x 1.5 = 15).
- 4) “Diameter breast height (dbh)” – the diameter of a tree measured at 4.5 feet above the base of the tree. Multi-stem trees are considered one individual tree and each stem must be measured 4.5 feet above the base of the stem and added together to determine the diameter of the multi-stem tree.
- 5) “Protected tree” – a tree that is in a woodland preservation area, or is a high priority tree or significant tree.
- 6) “Redevelopment” -- reconstruction of the principal structure if it includes the removal of the principal structure by more than 50% of the square footage of the building footprint or an increase of the square footage of the building footprint by more than 50%.
- 7) “Sapling” - A young tree.
- 8) “Understory” - The trees, shrubs, and herbaceous plants that grow in the shade of the forest canopy, including trees that could potentially grow to reach the canopy.
- 9) “Woodland preservation area” - a remnant woodland ecosystem that is at least two acres in size regardless of property boundaries, is generally mapped in the city's Minnesota Land Cover Classification System, and although it may be degraded it generally meets the criteria for one of the following types of ecosystems as reasonably determined by the city:
  - a. “floodplain forest” – an area populated by deciduous tree species

tolerant of seasonal flooding and deposition of silty or sandy soils. The canopy cover is extremely variable, and mature trees are typically greater than 70 feet tall. The dominant tree species in the canopy are silver maple and eastern cottonwood. In floodplain areas with severe flooding, the understory will be sparsely vegetated. Trees in the understory include saplings from the canopy species, green ash, black willow, slippery elm, American elm, boxelder, and hackberry;

b. “lowland hardwood forest” - an area with a flat terrain populated by deciduous tree species tolerant of periodic soil saturation from seasonally high water tables. The soils are moderately well to poorly drained. The dominant tree species in the canopy are American elm, black ash, basswood, bur oak, red oak, white oak, quaking aspen, paper birch, and red maple. Trees in the understory include saplings from the canopy species, slippery elm, green ash, butternut, sugar maple, quaking aspen, balsam poplar, and American hornbeam. The large shrub or small tree layer of the understory is typically dense and can include ironwood, pagoda dogwood, prickly ash, American hazelnut, gray dogwood, and speckled alder;

c. “maple basswood forest” – an area with well drained soils and populated by a variety of shade-tolerant, fire sensitive, deciduous tree species. The mature trees are straight with narrow crowns greater than 60 feet tall. The dominant tree species in the canopy are basswood and sugar maple but mesic species such as slippery elm, red oak, bur oak, green ash, white ash and black ash may be found as well. Trees in the understory include saplings from the canopy species, bitternut, black cherry, and ironwood. The large shrub or small tree layer of the understory is composed of primarily tree seedlings and herbaceous plants;

d. “mesic oak forest” – an area populated by tall, single stemmed deciduous trees greater than 60 feet tall that lack spreading lower branches. Mesic oak forests may have a moderately moist habitat, but can be dry depending on the slope and aspect of the forest. The dominant tree species in the canopy include red oak, white oak, and bur oak. Trees in the understory include saplings from the canopy, and fire-sensitive species such as basswood, green ash, bitternut hickory, big-toothed aspen, butternut, northern pin oak, black cherry, paper birch, American elm, boxelder and red maple. The large shrub or small tree layer in the understory tends to be sparse with greater herbaceous plant diversity but can include ironwood, chokecherry, prickly ash, American hazelnut, prickly gooseberry, red-berried elder, nannyberry, juneberry/serviceberry, and pagoda dogwood;

e. “oak woodland brushland” – an area with a canopy more open than a forest but less open than a savanna. It is characterized by open-grown trees and a distinct shrub layer in well-drained sandy, gravelly soils. The dominant tree species include red oak, northern pin oak, white oak, bur oak, and aspen. When it exists, the trees in the understory include saplings from the canopy, black cherry and red cedar. The large shrub or small tree layer can include American hazelnut, ironwood, juneberry and chokecherry;

f. “tamarack swamp” – an area that is a forested wetland community dominated by patches of tamarack, a deciduous coniferous tree. The dominant tree species in the canopy include tamarack, black spruce, paper birch, and red maple. The trees in the understory include saplings from the canopy and the large shrub or small tree layer can include speckled alder and red osier dogwood; or

g. “willow swamp” – an area that is a forested wetland community or an area with seasonally flooded soils and scattered-to-dense shrub cover. The dominant tree species in the canopy include black willow and speckled alder. The trees in the understory include saplings from the canopy and the large shrub or small tree layer can include several species of willow and dogwood.

10) “High priority tree” – a tree that is not in a woodland preservation area but is still important to the site and the neighborhood character, that is structurally sound and healthy, and that meets at least one of the following standards:

a. a deciduous tree that is at least 15 inches dbh, except box elders, elm species, poplar species, willow, silver maple, black locust, amur maple, fruit tree species, mulberry, and Norway maple.

b. a coniferous tree that is at least 20 feet in height, except a Colorado spruce that is not in a buffer as described in subparagraph (b)(10)(c); or

c. a tree that is in a group of deciduous trees that are at least eight inches dbh or coniferous trees that are at least 15 feet in height, that provide a buffer or screening along an adjacent public street, and that are within 50 feet of an arterial road and 35 feet of a minor collector, local, or private street and a trail.

11) “Significant tree” – a tree that is structurally sound and healthy and that is either a deciduous tree at least eight inches dbh or a coniferous tree at least 15 feet in height.

c) City authority. To preserve protected trees, the city may:

1) require and enforce a tree preservation plan as described in paragraph (d) below;

2) specify trees or groups of trees for preservation;

3) specify grading limits;

4) require the clustering of buildings or the relocation of roads, drives, buildings, utilities or storm water facilities when this would preserve protected trees;

5) grant variances;

6) specify time periods in which tree cutting, trimming or injury may not occur in order to prevent the spread of disease; and

7) require conservation easements or other legal means to ensure that woodland preservation areas or groups of high priority trees or significant trees are not intentionally destroyed after the development has been approved.

d) Tree Preservation Plan. A tree preservation plan is required as part of an application for a preliminary plat, lot division, conditional use permit, variance, grading permit, site and building plan review, wetland/floodplain alteration permit, or building permit, except a grading permit and building permit for R-1 property when no tree mitigation is required under (e)(1) below. If the exception applies and if the property owner retains a contractor to do the work, the contractor must submit a plan showing the proposed construction limits on the property and must not remove any trees outside the specified construction limits. A tree preservation plan must include:

1) a tree inventory that meets the following criteria:

a. The species, sizes, and locations of high priority trees, significant trees, and trees in woodland preservation areas must be shown, regardless of health. Dead or structurally unsound trees should be noted as such in the inventory.

b. Canopy species that exist in woodland preservation areas, including those that are in the understory, must be inventoried if they are four inches dbh or larger. Understory trees, excluding canopy species, and large shrubs that exist in woodland preservation areas must be inventoried if they are two inches dbh or larger.

c. The size of high priority trees and significant trees must be inventoried regardless of location.

d. The size of coniferous trees must be recorded in dbh and approximate height.

e. Invasive species such as buckthorn and honeysuckle should not be inventoried.

2) a site plan that shows the dbh, location and size of the critical root zone for each protected tree, the trees to be removed, the trees to be preserved, the proposed construction limits, and the proposed tree protection methods in addition to construction limit fencing. If grading or construction limits are outside of a woodland preservation area, the trees in that woodland preservation area may be grouped together.

e) Tree Removal and Preservation. Removal of protected trees is prohibited except as follows:

1) Existing Structures.

a. R-1 zone: On property that is zoned R-1 and that has an existing principal structure, protected trees may be removed without any mitigation if the principal structure has been in existence and not externally expanded for at least two years after (1) a final building permit inspection or a certificate of occupancy was issued and (2) all of its final landscaping or ground cover was installed.

b. All other zones: On property that is not zoned R-1 and that has an existing principal structure, protected trees may be removed subject to the same standards applicable to R-1 property if no site improvements are undertaken and the owner complies with the required tree preservation and landscape plan for the property.

2) Existing Vacant Parcels of Land, Redevelopment, Site Improvements.

a. R-1: For the construction of a principal structure on a vacant R-1 lot or for redevelopment of an existing R-1 lot, protected trees may be removed with no mitigation only within the "basic tree removal area".

b. All other zones: On property not zoned R-1, for the construction of a principal structure on a vacant lot with no principal structure, for redevelopment of an existing lot, or for site improvements to an existing lot, protected trees may be removed with no mitigation only:

1. within the basic tree removal area; and

2. within the width of required easements for public and private streets and utilities, except that only significant trees may be removed in areas of required surface water ponding. The removal of woodland preservation area trees or high priority trees for surface water ponding must be mitigated.

c. The removal of protected trees under this subsection 2 must also comply with the general removal requirements under subsection 4 below.

3) Subdivisions.

a. Significant trees may be removed for any construction in a subdivision of land without mitigation only:

1. within the basic tree removal area; and

2. within the width of required easements for public and private streets and utilities, including areas required for surface water ponding.

b. If more than 35% of the site's high priority trees or more than 25% of a woodland preservation area on the site are to be removed for any construction in a

subdivision of land, there can be no more than one lot per developable acre of land. High priority trees and trees within a woodland preservation area may be removed for any construction in a subdivision of land without mitigation only:

1. for the basic tree removal area; and

2. for the width of required easements for public and private streets and utilities, except in areas of required surface water ponding. The removal of high priority trees or trees in woodland preservation areas for surface water ponding must be mitigated.

c. A subdivision of land that proposes to remove more than 35% of the site's high priority trees or more than 25% of a woodland preservation area on the site can be developed up to the full density normally allowed under other development regulations in the applicable zoning district if the property is developed under an approved planned unit development (PUD). There is no minimum size required for a PUD in this situation. In reviewing a PUD application, the city will consider the extent to which steps are taken to preserve protected trees, such as:

1. using creative design, which may include the clustering of homes, reducing lot sizes, reducing or expanding normal setbacks, custom grading, retaining walls, buffers, and establishing the size and location of building pads, roads, utilities and driveways;

2. preserving the continuity of woodland preservation areas by developing at the edges of those areas rather than at the core;

3. exercising good faith stewardship of the land and the trees both before subdivision and after, including the use of conservation easements when appropriate; and

4. minimizing the impact to the character of the existing landscape and neighborhood.

d. The removal of protected trees under this subsection 3 must also comply with the general removal requirements under subsection 4 below.

4) General removal requirements. The removal of protected trees under subsections (2) and (3) must also comply with the following general requirements:

a. Principal structures and associated facilities must be located to maximize tree preservation. The city may specify the location of the principal structures and associated facilities in order to ensure a reasonable amount of tree preservation.

b. Any tree removed outside of the specified allowable tree removal areas must be mitigated as specified below.

c. The applicant must comply with any approved tree preservation or landscape plan.

d. Trees required to be saved as part of a subdivision approval must remain on a lot for two years after the final building permit inspection or certificate of occupancy is issued for the principal structure, whichever is later. Any tree that dies solely of natural causes such as disease or wind is exempt from this section.

e. Each protected tree that is removed in violation of ordinance requirements is a separate violation of the city code.

5) Greater Public Good. The city council may allow the removal of protected trees contrary to the provisions in subparagraphs (1) – (4) if it determines that there is a greater public good such as:

a. providing reasonable use or access to the property;

b. providing affordable housing;

c. allowing for the creation or rehabilitation of a public road or trail;

d. providing for a public utility service, such as a transmission line, ponding or a water tower;

e. allowing for the creation or rehabilitation of a public park; or

f. enabling redevelopment in a designated redevelopment area.

f) Tree Mitigation.

1) When tree mitigation is required, the applicant must submit a tree mitigation plan for staff review and approval. The plan must indicate the number of inches or feet of mitigation trees, the species and quantity of each species, and the caliper size or feet and location for each replacement tree. The plan may not be comprised of more than 25 percent of the same species or size unless approved by the city. The plan must comply with the mitigation standards required below. The applicant must implement the tree mitigation plan approved by city staff.

2) Specific mitigation standards. Mitigation for tree removal of trees in woodland preservation areas, high priority trees, and significant trees must meet the following specific standards;

a. Mitigation rate.

1. A tree or large shrub that is in a woodland preservation area

or is a high priority tree must be replaced at the rate of one inch for each inch in diameter of a deciduous tree that was removed and at the rate of one foot for each foot in height of a coniferous tree that was removed; and

2. A significant tree must be replaced with one two-inch tree.

b. Mitigation species.

1. Trees and large shrubs in woodland preservation areas must be replaced with species found in that eco-type as specified on the list of acceptable replacement species on file with the city;

2. High priority trees must be replaced with species of a similar type that are normally found growing in similar conditions and that are included on the list of acceptable replacement species on file with the city;

3. Significant trees may be replaced with any tree species other than ash, box elder, silver maple, willow, Norway maple, amur maple and Colorado spruce, as approved by city staff; and

c. Mitigation size.

1. Replacement sizes for woodland preservation areas and high priority trees are:

a) not less than one and one quarter inches but not more than three inches dbh for deciduous balled and burlapped trees, and not less than three inches but not more than six inches dbh for spade-moved deciduous trees;

b) not less than 7 gallon stock for understory or small trees and not less than 3 gallon stock for shrubbery; and

c) not less than six feet but not more than eight feet in height for balled and burlapped coniferous trees, and not less than eight feet but not more than 14 feet in height for spade-moved coniferous trees.

2. The city may allow larger balled and burlapped or spade moved trees if these trees are accompanied with a three year guarantee. Other size substitutions, based on site characteristics, may be allowed at the reasonable discretion of the city,

3. Replacement size for a significant tree is not less than a two-inches dbh.

3) General mitigation standards:

a. All replacement trees and shrubs must meet the American Standard for Nursery Stock and the American National Standard relating to planting guidelines, quality of stock and appropriate sizing of the root ball for balled and burlapped, potted and spade-moved trees.

b. If the city determines in its reasonable discretion that there is no appropriate location for some or all of the required replacement trees, those trees may not be required.

c. Replacement trees must be planted on the same property or development area from which the trees were removed.

d. A tree will be considered removed if girdled, if 30 percent or more of the trunk circumference is injured, if 30% or more of the crown is trimmed, if an oak is trimmed between April 1<sup>st</sup> and July 15<sup>th</sup>, or if the following percentage of the critical root zone is compacted, cut, filled or paved: 30 percent of the critical root zone for all species, except 40 percent for ash, elm, poplar species, silver maple and boxelder.

e. Development that is subject to landscape requirements in sections 300.27 and 300.31 must meet the minimum landscape requirements of the applicable section. Trees planted as part of a required landscaping plan may be counted as replacement trees under this section, at the city's discretion.

f. The required mitigation trees must be replaced by the current property owner if the trees have died, have severely declined or have been damaged after the end of the second full growing season following installation. A tree will be considered to be severely declined if more than 25 percent of the crown has died.

g. The city may require an escrow deposit to ensure the required planting and continued existence of the mitigation trees. The city will release the escrow deposit after the end of the second full growing season following installation of the mitigation trees and any replacement trees.

h. A tree or shrub that was required by the city to be saved but was removed must be replaced at a rate of 2:1 based on dbh for deciduous species and height for conifers. The city may also impose a financial penalty equal to \$500.00 for each inch of dbh or foot of height removed, not to exceed \$5000 for each tree or shrub. This provision also applies to a conservation easement area that is disturbed during or after development.

g) General tree protection standards.

1) Before construction, grading or land clearing begins, the city-approved tree protection fencing or other method must be installed and maintained at the critical root zones of the trees to be protected. The location of the fencing must be in conformance with the approved tree preservation plan. This fencing must be inspected

by city staff before site work begins.

2) No construction, compaction, construction access, stock piling of earth, storage of equipment or building materials, or grading of any kind may occur within the critical root zone areas of trees to be protected.

3) A healthy protected tree that was not a hazard to personal safety or property damage and that was removed or otherwise destroyed by unnatural causes within three years before a development application will be regarded as if it were present at the time of construction or a development application. This provision does not apply if the number of protected trees removed is less than 5% of the protected trees existing five years before the application.

4) An area of new or compensatory water storage may not be located where there are woodland preservation areas, high priority trees or significant trees, unless approved by the city. Mitigation will be required for the loss of woodland preservation areas and high priority trees due to ponding. The compensatory storage area must be created in a manner that prevents erosion into any nearby water resource.

Section 2. A violation of this ordinance is subject to the penalties and provisions of Chapter XIII of the city code.

Section 3. This ordinance is effective upon adoption.

Adopted by the city council of the City of Minnetonka, Minnesota, on August 25, 2008.

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Janis A. Callison, Mayor

ATTEST:

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David E. Maeda, City Clerk

ACTION ON THIS ORDINANCE:

Date of introduction: April 21, 2008  
Date of adoption: August 25, 2008  
Motion for adoption: Schneider

Seconded by: Allendorf  
Voted in favor of: Allendorf, Callison, Ellingson, Schneider, Wagner, Wiersum  
Voted against: Hiller  
Abstained:  
Absent:  
Ordinance adopted.

Date of publication:

CERTIFIED COPY:

I certify that the foregoing is a correct copy of an ordinance adopted by the city council of the City of Minnetonka, Minnesota, at a meeting held on August 25, 2008.

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David E. Maeda, City Clerk

## Exhibit A

### Repealed Section §300.28, subd. 19

#### 19. Performance Standards Regulating Tree Removal.

a) Standards governing the preservation, protection, and planting of trees are necessary to:

- 1) prevent tree loss by eliminating or reducing compaction, filling or excavation near tree roots;
- 2) prevent or reduce soil erosion and sedimentation and stormwater runoff;
- 3) improve air quality and reduce noise pollution;
- 4) enhance energy conservation through natural insulation and shading;
- 5) control the urban heat island effect;
- 6) increase and maintain property values;
- 7) protect privacy by maintaining buffers between similar land uses and establishing and maintaining buffers between conflicting land uses; and
- 8) preserve the variety and extent of trees which exist in the city and which are an integral part of this city's identity.

b) A certain amount of tree removal is an inevitable consequence of the urban development process. Nevertheless, construction of streets, utilities, driveways, parking lots, buildings, and other facilities must be located in a manner to save as many significant trees as possible.

c) In enforcing this ordinance, the city may give preference to the preservation of higher quality significant trees over less desirable trees. A tree may be considered of higher quality based on its species, size, location, or other relevant factors. The city forester will establish a list of species that are considered less desirable, and this list will be kept on file in the planning department.

d) The city may require that a property be rezoned and developed as a planned unit development to utilize flexible development standards to preserve significant trees; the city may require the clustering of buildings where this would preserve significant trees.

e) significant trees may be destroyed for development, without any required replacement, in the following areas:

- 1) within the width of required easements for public streets and utilities and

the required areas for surface water ponding;

2) within the areas improved for reasonably-sized driveways, parking lots, and structures without frost footings and within ten feet around those improvements; and

3) within the footprints of buildings and 20 feet around buildings with frost footings.

If a significant tree is removed in other areas, trees must be planted to meet the number of significant trees which existed in those other areas before development, subject to the conditions in paragraphs (f) and (g) below.

f) the provision of replacement trees is subject to the following.

1) The applicant will not be required to raise the number of trees above 25 trees per acre.

2) If the applicant and the city agree that there is no appropriate location for some or all of the replacement trees, those trees will not be required.

3) In calculating the number of replacement trees, only trees meeting the minimum sizes in subparagraph (g) below may be counted. Notwithstanding the above, any development that is subject to section 300.27 must meet the minimum landscape requirements of that section.

g) Any trees required to be planted must be varied in species, must be primarily species native to the area, may not include any species that are subject to disease epidemic or are on the list of less desirable trees established by the city forester, and must be hardy under local conditions. They must be at least 2½ inches in diameter for deciduous trees and 6 feet tall for coniferous trees, except that for property located in the planned I-394 district they must be at least 3½ inches in diameter for deciduous trees and 10 feet tall for coniferous trees. The required trees must be replaced by the property owner or original developer if they die within one year after installation.

h) Before any construction or grading takes place, snow fencing, erosion control fencing, or similar device must be placed around the drip lines of significant trees that are to be preserved or that are located nearby on adjacent property. No construction, compaction, or grading of any kind may occur within these drip lines, except when necessary to save additional significant trees and when the risk to the trees designated for preservation is minimal. The developer must place signs on the fencing prohibiting construction, compaction, or grading.

i) A significant tree that was removed or otherwise destroyed within two years before a development application must be replaced in the same general location by two trees meeting the requirements of paragraph (g) above. The replacement trees will be considered significant trees existing at the time of the development application and may be removed and relocated on the site only if the original significant tree would have

been allowed to be removed under this ordinance.

j) The area of any compensatory water storage may not be located where there are any significant trees, unless approved by the city. The compensatory storage area must be created in a manner that prevents erosion into any nearby wetland.

k) Tree removal on property with an existing home or other principal structure shall be exempt from this subdivision, except as stated in paragraph (j) above, unless the tree removal is to accommodate new development or the expansion of the existing development.