

**CHAPTER 152: NATURAL RESOURCE PROTECTION ORDINANCE**

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**SECTION 152.200 PURPOSE.**

The purpose of this ordinance is as follows:

- To protect the high quality natural resources found within the City of Annandale in order to maintain the characteristics of the neighborhoods and overall quality of the community.
- To guide development goals and strategies for natural resource protection by requiring new development applications to assess natural resources within the development.
- To guide new development within Annandale to protect intact natural resources while maintaining an equitable economic return.

**SECTION 152.201 POLICY.**

The uncontrolled use and development of natural resources in the City of Annandale affects public health, safety and general welfare not only by contributing to the destruction of native habitats and outdoor recreation opportunities, but also by impairing the local tax base. Therefore, it is in the best interest of the City of Annandale to provide for the wise, regulated use and development of the community’s natural resources.

**SECTION 152.202 JURISDICTION.**

The provisions of this Chapter shall apply to all natural resources within the City of Annandale, including: areas of bluff, woodlands and forests (mature and young), lakes, ponds, streams, shore buffer, floodplains, floodlands, drainageways, wetlands, shoreland wetlands and wetland buffers as defined in this Ordinance. New developments shall protect all areas of natural resources by establishing a conservation easement in those areas.

**SECTION 152.203 SCOPE OF COMPLIANCE.**

All new residential and non-residential development within or near any natural resource defined in this Ordinance; the size and shape of lots; the use, size, type and location of structures on lots; installation and maintenance of water supply and waste treatment systems, the grading and filling of any natural resource area; the cutting of vegetation protected in this Ordinance; and the subdivision of land shall be in full compliance with the terms of this Chapter and other applicable regulations.

**SECTION 152.204 ENFORCEMENT.**

The Zoning Administrator shall be responsible for the administration and enforcement of this Chapter. Any violation of the provisions of the Chapter or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with grants of variance or conditional uses) shall constitute a misdemeanor and shall be punishable as defined by law. Violations of this Chapter can occur regardless of whether or not a permit is required for a regulated activity pursuant to the Chapter.

**SECTION 152.205 APPLICATION REQUIREMENTS.**

It is recognized that this Chapter is structured to regulate development within natural resource areas of the City of Annandale. This Chapter is to accommodate all proposals within and around those areas by providing City input prior to the submission of a concept plan. The following are the minimum requirements which must be met before the City will approve a development proposal:

1. Prior to the submission of a Concept Plan, the applicant and/or property owner, a member from Park Commission, Planning and Zoning Commission, and the City Council, City Staff, the City Planner, and City Engineer shall walk through the proposed site to determine if any natural resources exist on the property.
2. After the walkthrough the developer shall submit for review a Concept Plan for development indicating the location of all natural resources on the site including the extent of the tree canopy cover by the use of aerial photos.
3. The Concept Plan shall be reviewed and if so approved by the Park Commission, Planning and Zoning Commission, and the City Council.
4. The approval of the Concept Plan shall not warrant the approval of the mitigation requirement, which shall be reviewed in full detail when a site plan and preliminary plat have been submitted.

5. A Natural Resources Protection and Mitigation Plan shall be submitted with an application for preliminary plat illustrating the location of natural resources, which natural resources are to be preserved, which natural resources are to be removed, and where the mitigation will occur within the property. The plan shall include the following:

- a. Base mapping at a scale of 1" = 100' (one inch equals 100 feet)
- b. A mapped resource inventory that includes:
  - 1) Topographic contours at 10-foot intervals;
  - 2) Hydrologic characteristics, including surface water bodies, floodplains, wetlands, natural swales and drainageways
  - 3) Vegetation present on the site according to cover type (pasture, woodland, etc.)
  - 4) Current land use including all buildings and structures.
- c. A site analysis that identifies, precisely locates, and calculates the acreage of all natural resource areas
- d. Net developable acreage and allowed gross density
- e. Street and open space concept
- f. Building setbacks
- g. Parcel lines and building placement concepts for residential and accessory buildings
- i. Natural resource and tree protection plan
- j. Landscape plan
- k. Utility easements

## SECTION 152.206 DEFINITIONS

**Bluff.** A high bank or bold headland with a broad precipitous sometimes rounded cliff-face overlooking a plain or body of water, especially on the outside of a stream or meander-river bluff, that rises or drops twenty-five (25) feet from the horizontal and the slope averages thirty (30) percent or greater.

**Bluff Impact Zone.** All of the land lying between the top of the bluff and the toe of the bluff.

**Buffer, Shore.** All land located within seventy-five (75) feet inland of the ordinary high water mark of all ponds, streams, lakes, wetlands, and navigable waters and parallel to that ordinary high water mark.

**Contour.** An imaginary line on the surface of the earth, connecting points of the same vertical elevation. A line drawn on a map connecting the points of the same vertical elevation.

**Contour Interval.** A vertical distance measured between contours

**Diameter at Breast Height (DBH).** The diameter of the trunk of a tree (including the bark) measured in inches at point four and one-half (4.5) feet above the ground level. This point of measurement is used for established and mature trees.

**Drainageway.** The land on either side of and within fifty (50) feet of the centerline of any intermittent or perennial stream graphically shown on: a topographic survey prepared by and certified by a Minnesota registered land surveyor at a contour interval of not less than two (2) feet; the U.S. Geological Survey (U.S.G.S.) 7.5-minute quadrangle topographic map of the area; or the large scale 1"=100' Wright County topographic maps except areas designated as wetlands, shoreland wetlands, floodlands, floodways, or 100-year recurrence interval floodplains.

**Drip Line.** The farthest distance, measured as a radius and the total area encompassed thereby, where the branches of a tree extend from its trunk indicating the extent of the canopy of a tree.

**Floodlands.** Those lands, including the channels, floodways, and floodplain fringe of any given reach, which are subject to inundation by the flood with a given recurrence frequency. The floodlands are all lands contained in the "regional flood" or 100-year recurrence interval flood.

**Floodplain.** Land subject to inundation by the 100-year recurrence interval flood.

**Floodway.** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

**Green Space.** A park, vegetated corridor, or open land reserved for recreation and wildlife habitat use to maintain and enhance environmental quality.

**Invasive Species.** Species that have been introduced, or moved, by human activities to a location where they do not naturally occur, causing ecological or economic problems.

<b>Invasive Plants (MN DNR)</b>	
Amur Maple	<i>Acer ginnala</i>
Amur Silver Grass	<i>Miscanthus sacchariflorus</i>
Birdsfoot Trefoil	<i>Lotus corniculatus</i>
Black Locust	<i>Robinia pseudoacacia</i>
Bull Thistle	<i>Cirsium vulgare</i>
Butter and eggs	<i>Linaria vulgaris</i>

Canada thistle	<i>Cirsium arvense</i>
Common Buckthorn	<i>Rhamnus cathartica</i>
Common Tansy	<i>Tanacetum vulgare</i>
Cow Vetch and Hairy Vetch	<i>Vicia cracca, Vicia villosa</i>
Creeping Charlie	<i>Glechoma bederacea</i>
Crown Vetch or Axseed	<i>Coronilla varia</i>
Curly-leaf Pondweed	<i>Potamogeton crispus</i>
Eurasian Watermilfoil	<i>Myriophyllum spicatum</i>
Exotic Honeysuckles	<i>Lonicera tartarica, L. morrowii, L. x bella</i>
Flowering Rush	<i>Butomus umbellatus</i>
Garlic Mustard	<i>Alliaria petiolata</i>
Glossy Buckthorn	<i>Frangula alnus</i>
Grecian Foxglove	<i>Digitalis lanata</i>
Hoary Alyssum	<i>Berteroa incana</i>
Japanese Barberry	<i>Berberis thunbergii</i>
Japanese Knotweed	<i>Polygonum cuspidatum</i>
Leafy Spurge	<i>Euphorbia esula</i>
Musk or Nodding Thistle	<i>Carduus nutans</i>
Norway Maple	<i>Acer platanoides</i>
Orange Hawkweed	<i>Hieracium aurantiacum</i>
Oxeye Daisy	<i>Chrysanthemum leucanthemum</i>
Perennial Sow Thistle	<i>Sonchus arvensis</i>
Purple Loosestrife	<i>Lythrum salicaria</i>
Queen Ann's Lace	<i>Daucus carota</i>
Reed Canary Grass	<i>Phalaris arundinacea</i>
Russian Olive	<i>Elaeagnus angustifolia</i>
Siberian Elm	<i>Ulmus pumila</i>
Siberian Peashrub	<i>Caragana arborescens</i>
Smooth Brome Grass	<i>Bromus inermis</i>
Spotted Knapweed	<i>Centaurea maculosa</i>
White and Yellow Sweet Clover	<i>Melilotus alba, M. officinalis</i>
Wild Parsnip	<i>Pastinaca sativa</i>
Yellow Iris	<i>Iris pseudacorus</i>

**Lake.** Any body of water two (2) acres or larger as measured by the shoreline at its maximum condition rather than the permanent pool condition, if there is any difference.

**Natural Resource Protection Standard.** The proportion of the natural features of a site (excluding land occupied by public street rights-of-way), which shall remain undeveloped and protected and is specifically designated for natural resource protection by deed restriction, protective covenant, zoning, or a combination thereof.

**Natural Resources.** Areas of bluffs, woodlands and forests (mature and young), lakes, ponds, streams, shore buffer, floodplains, floodlands, drainageways, wetlands, and shoreland wetlands as defined in this Ordinance.

**Pond.** An inland body of standing water that is smaller than a lake (less than two acres). Natural ponds form in small depressions and are usually shallow enough to support

rooted vegetation across most or all of their areas. Any body of water greater than 2500 square feet established or excavated for wildlife habitat.

**Shorelands.** All land, water and air located within the following distances from the ordinary highwater mark: one thousand (1,000) feet from a lake, pond or flowage; three hundred (300) feet from a river or stream or to the landward side of a floodplain (i.e., the outward edge of the floodplain), whichever distance is greater.

**Shrub.** A woody, perennial plant differing from a perennial herb in its persistent and woody stem(s) and less definitely from a tree in its lower stature and/or the general absence of a well-defined main stem.

**Toe of the Bluff.** The point on a bluff where there is, as visually observed a clearly identifiable break in the slope, from gentler to steeper slope above. If no break in the slope is apparent, the toe of the bluff shall be determined to be the highest end of the highest fifty (50) foot segment that exceeds twenty (20) percent slope.

**Top of the Bluff.** The point on a bluff where there is, as visually observed, a clearly identifiable break in the slope, from steeper to gentler slope above. If no break in the slope is apparent, the top of the bluff shall be determined to be the highest end of the highest fifty (50) foot segment that exceeds twenty (20) percent slope.

**Tree.** Any self-supporting, woody plant with its root system, growing upon the earth usually with one (1) trunk, or a multi-stemmed trunk system, supporting a definitely formed crown.

**Tree, Canopy.** A tree whose leaves would occupy the upper level of a forest in a natural ecological situation. This type of tree is often called a shade tree.

**Tree, Healthy.** A tree which is not dead, diseased, or in a weakened state and which does not pose a safety hazard to buildings, pedestrians, and/or vehicles.

**Tree, Understory.** A tree whose leaves would occupy the lower level of a forest in a natural ecological situation. This type of tree is often called an ornamental tree.

**Wetland.:** As defined in Minnesota rules section 70750.0130, subpart F, "wetlands" are those areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. "Wetlands" generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state. "Wetlands" must have the following attributes:

- a. A predominance of hydric soils;

b. Inundated or saturated by surface water or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and

c. Under normal circumstances support a prevalence of such vegetation.

**Wetland, Shoreland.** A wetland, as defined by this Ordinance, which is within a shoreland area.

**Woodland, Mature.** An area or stand of trees whose total combined canopy covers an area of one (1) acre or more and at least fifty (50) percent of which is composed of canopies of trees having a diameter at breast height (DBH) of at least ten (10) inches; or any grove consisting of eight (8) or more individual trees having a DBH of at least twelve (12) inches whose combined canopies cover at least fifty (50) percent of the area encompassed by the grove. Roadside, streamside, and shelterbelt strips of trees must have a crown width of at least one-hundred twenty (120) feet. Clearings within woodland areas shall be classified as woodlands if less than one-hundred twenty (120) feet in width.

**Woodland, Young.** An area or stand of trees whose total combined canopy covers an area of one-half (0.50) acre or more and at least fifty (50) percent of which is composed of canopies of trees having a diameter at breast height (DBH) of at least three (3) inches. Roadside, streamside, and shelterbelt strips of trees must have a crown width of at least one-hundred twenty (120) feet. Clearings within woodland areas shall be classified as woodlands if less than one-hundred twenty (120) feet in width.

## **SECTION 152.207 RESIDENTIAL AND NON-RESIDENTIAL REQUIREMENT AND EXCLUSIONS**

1. **Recognition of Natural Resource Features.** This Ordinance recognizes that landforms, parcel size and shape, and natural resource features vary from site to site and that development regulations must take into account these variations. The maximum density or intensity of use allowed in any zoning district is controlled by the various district standards set forth for each of the various zoning districts of this Ordinance, or where applicable district standards can be altered by a PUD for cluster development.

2. **When Site Intensity and Capacity Calculations Are Required.** The site intensity and capacity calculations set forth in this Chapter shall be made for each newly subdivided parcel of land to be used or built upon in the City of Annandale and shall include all new residential developments; all nonresidential development; and as may be required elsewhere in this Ordinance.

3. **Exclusions (When Site Intensity and Capacity Calculations Are Not Required).** The site intensity and capacity calculations set forth in this Division shall *not* be required for the construction of single-family and multiple family residential development located within existing platted subdivisions (with an approved final plat) existing at the time of the adoption of this Ordinance.

**152.208 NATURAL RESOURCE PROTECTION STANDARDS**

**1. Natural Resources to be Protected under this Division to Remain Undisturbed and in a Natural State.** All the natural resources required to be protected under this Section shall remain undisturbed and in a natural state except those natural resources where mitigation is in strict accord with requirements set forth in this Ordinance.

**TABLE 152.201 NATURAL RESOURCE FEATURES PROTECTION STANDARDS**

NATURAL RESOURCE FEATURE	ZONING DISTRICT TYPE			
	Residential (a)		Nonresidential (a)	
	Protection Standard	Mitigation Permitted	Protection Standard	Mitigation Permitted
Bluff and Bluff Setbacks	100%	No	100%	No
Woodlands & Forests: Mature (b) Young (c)	70% 50%	Yes Yes	70% 50%	Yes Yes
Lakes & Ponds	100%	No	100%	No
Streams	100%	Yes	100%	Yes
Shore Buffers	100%	No	100%	No
Floodplains/ Floodways/ Floodlands	100%	No	100%	Yes
Drainage-ways	30%	Yes	30%	Yes
Wetlands, Shoreland Wetlands, & Wetland Buffers (d)	100%	Yes	100%	Yes

- (a) Resource protection percentages indicated in this Table represent the portion of the total natural resource feature present on a site which shall be preserved (Also see Section 152.207 "Natural Resource Protection" of this Ordinance)
- (b) Up to 30% of the 70% protection requirement shall be allowed to be mitigated therefore, 40% of the total shall be completely preserved in its natural state.
- (c) Up to 20% of the 50% protection requirement shall be allowed to be mitigated therefore, 30% of the total shall be completely preserved in its natural state.
- (d) Mitigation is allowed if it is done in accordance with the Wetland Conservation Act.

**2. Clear Cutting and Destruction of Existing Natural Resources.** All clear cutting and destruction of natural resource features shall:

- a. Be required to meet the protection levels described in this Ordinance.

b. Where such clear cutting and/or destruction violations occur, shall be required to meet the mitigations standards set forth in this Ordinance.

**3. Natural Resource Features Determination**

a. Bluffs and Bluff Setbacks. Location of bluff(s) are to be determined by the following sources and /or methods in the order indicated below. If the first source is considered inaccurate or inappropriate, as determined by the City Council, the succeeding source shall be used:

1. A topographic survey prepared by and certified by a Minnesota registered land surveyor at a contour interval of not less than two (2) feet.
2. Large scale 1"=100' Wright County topographic maps.
3. USGS 7.5-minute topographic quadrangle maps

The area of the bluff(s) (in square feet or acres) shall be measured and graphically delineated on a topographic drawing and on a natural resource protection plan submitted by the developer. Such bluff drawing shall graphically indicate those bluff areas, by slope type, of the property pursuant to the bluff definition set forth in this Ordinance. Top and toe of the bluff shall be graphically delineated on the topographic drawing along with a thirty (30) foot setback from the top or toe of the bluff.

b. Woodlands and Forests

1. The determination of woodlands and forests (mature and young) forest boundaries shall be based on a field survey of trees compiled by a registered land surveyor and identified by a landscape architect, forester, arborist, or botanist with a professional degree in one of those fields and deemed acceptable by the City Council.
2. Woodlands and Forest Measurement. All land area within a proposed development, consisting of woodlands and forests as defined in this ordinance shall be accurately measured as follows:
  - a) Each woodland and forest area shall include the tree trunk and the area located within the drip line or tree canopy.
  - b) The canopy cover of woodlands and forests (mature and young), in square feet or acres shall be accurately measured and graphically delineated on the "Natural Resource Protection

Plan” submitted by the developer. Such “Natural Resource Protection Plan” drawing shall indicate all woodland and forest areas of the property. In cases where the drip line or canopy areas overlap, the areas of overlap shall be only counted once for area calculations. In cases where drip lines or canopies overlap property lines, property line(s) are to be used as the boundary for the woodland or forest area, with only that portion of the drip line area located on the subject property counted toward the woodland or forest area.

c) The location, size, and species of all healthy trees having a diameter of eight (8) inches or greater DBH that are located in woodland and forest areas within twenty-five (25) feet of any proposed improvement and/or in woodland and forest areas to be demolished due to the placement of improvements or grading are to be graphically show on the “Natural Resource Protection Plan” or submitted as a separate drawing.

d) For the remaining undisturbed areas of the development, only the canopy outline of woodland and forest areas indicating whether there are mature or young woodlands is required.

Note: Building footprints, driveways, and streets shall be place where there will be little or no destruction to the tree canopy.

c. Lakes and Ponds. Lakes and ponds are to be determined by using the definitions of “Lake” and “Pond” and the sources in the order indicated below. If the first source is considered inaccurate or inappropriate, as determined by the City Council, the succeeding source shall be used:

1. A topographic survey prepared by a certified Minnesota registered land surveyor at a contour interval of not less than two (2) feet.
2. Large scale 1”=100’ Wright County topographic maps
3. USGS 7.5-minute topographic quadrangle maps

The area of lakes and ponds (in square feet or acres) shall be measured and graphically delineated on the “Natural Resource Protection Plan”

Note: See Shore Buffers for setback requirements.

d. Streams. Streams are to be determined by using the definitions of “Channel” and “Stream” and the sources in the order indicated below. If the first source is considered inaccurate or inappropriate, as determined by the City Council, the succeeding source shall be used:

1. A topographic survey prepared by a certified Minnesota registered land surveyor at a contour interval of not less than two (2) feet.
2. Large scale 1"=100' Wright County topographic maps
3. USGS 7.5-minute topographic quadrangle maps

The area of streams (in square feet and acres) shall be measured and graphically delineated on the "Natural Resource Protection Plan".

Note: See Drainageway for setback requirements.

- e. Shore Buffers. Shore buffers are to be determined as the land within seventy-five (75) feet of the ordinary high water mark of all navigable water and parallel to that ordinary highwater mark. Navigable waters are to be determined by using one of the sources below. If the first source is considered inaccurate or inappropriate, as determined by the City Council, the succeeding source shall be used:

1. A topographic survey prepared by a certified Minnesota registered land surveyor at a contour interval of not less than two (2) feet.
2. Large scale 1"=100' Wright County topographic maps
3. USGS 7.5-minute topographic quadrangle maps

The area of shore buffer (in square feet and acres) shall be measured and graphically delineated on the "Natural Resource Protection Plan".

- f. Drainageways. Drainageways are to be determined as the land on either side of and within fifty (50) feet of the centerline of any intermittent or perennial stream graphically shown on those maps cited below, except areas designated as wetlands, shoreland wetlands, floodlands, floodways, or 100-year recurrence interval flood plains. Drainageways are to be determined by using the following sources and/or methods in the order indicated below. If the first source is considered inaccurate or inappropriate, as determined by the City Council, the succeeding source shall be used:

1. A topographic survey prepared by a certified Minnesota registered land surveyor at a contour interval of not less than two (2) feet.
2. Large scale 1"=100' Wright County topographic maps

3. USGS 7.5-minute topographic quadrangle maps

The area of Drainageways (in square feet and acres) shall be measured and graphically delineated on the "Natural Resource Protection Plan".

g. Floodplain/Floodways/Floodlands. The one hundred (100) year recurrence interval floodplain and floodways shall be determined as depicted on the FEMA Map.

h. Wetlands (including Shoreland Wetlands) and Wetland Buffer. Wetland and wetland buffer area shall be determined by reference to the following sources shown below:

1. Under the Minnesota Wetland Conservation Act and the Corps of Engineers Section 404 Program, delineations are conducted using the 1987 United States Army Corps of Engineers Wetland Delineation Manual (caution: large file). Delineations using this manual are prepared on the basis of field work, taking into account the three parameters of soils, hydrology, and vegetation. Under the DNR Public Waters Permit Program, the jurisdictional boundary of a wetland is the Ordinary High Water Level (OHWL). Information on determining the OHWL can be found in "Guidelines for Ordinary High Water Level (OHWL) Determinations," Minn. Department of Natural Resources (1993).

3. All wetland buffers shall not be less than thirty (30) feet

The area of wetlands, wetland buffer and/or shoreland wetlands (in square feet acres) shall be measured and graphically delineated on the "Natural Resource Protection Plan."

i. Natural Resources Measurement. All land area within a proposed development consisting of the natural resources defined in this Ordinance shall be accurately measured as follows:

1. The total square feet and acreage of each natural resource feature shall be multiplied by its respective "Natural Resource Protection Standard" as set forth in Table 152.201 "Natural Resource Protection Standards" of this Ordinance to determine the amount of each natural resource feature to be protected by a natural resource conservation easement. The methodology, termed "Site Intensity and Capacity Calculations," to be used for such calculations is set forth in Section 152.209 of this Ordinance.

2. If two (2) or more natural resource features are present on the same area of land, only the most restrictive natural resource protection standard shall be used. *[For example, if floodlands and woodlands*

*and forests occupy the same space on a site, the natural resource protection standard would be 100% (100% is the resource protection standard for a floodland) for this area representing the higher of the two standards.]*

3. Those areas to be demolished due to improvements or site grading or disturbed through the application of permitted mitigation techniques shall also be measured and so noted on the "Natural Resource Protection Plan" but shall not be counted as a natural resource area to be preserved.

**SECTION 152.209 SITE INTENSITY AND CAPACITY CALCULATIONS FOR RESIDENTIAL AND NONRESIDENTIAL USES REQUIRED**

**4. Calculation of Net Site Area.** The *net site area* shall be calculated as indicated in Table 152.202 for each parcel of land to be used or built upon in the City of Annandale as referenced in Section 152.206 of this Ordinance.

**5. Calculation of the Area of Natural Resources to be protected.** All land area with those natural resource features as described in Section 152.207 of this Ordinance and as listed in Table 152.203 and lying within the *net site area* (as defined in Section 152.206 Subd.4), shall be measured for each natural resource feature present. The actual land area encompassed by each type of resource is then entered into the column of Table 152.203 titled "Acres of Land in Resource Feature." The acreage of each natural resource feature shall be multiplied by its respective *natural resource protection standard* (to be selected from Table 152.201 of this Ordinance for applicable agricultural, residential, or nonresidential zoning district) to determine the amount of resource protection land or area required to be kept in open space to protect the resource or feature. The sum of all resource protection land on the site equals the *total resource protection land*. The *total resource protection land* shall be calculated as indicated in Table 152.203.

**Table 152.202 WORKSHEET FOR THE CALCULATION OF NET SITE AREA FOR BOTH RESIDENTIAL AND NONRESIDENTIAL DEVELOPMENT**

STEP 1:	Indicate the total gross site area (in acres) as determined by an actual on-site boundary survey of the property.	_____ acres
STEP 2:	Subtract ( - ) land which constitutes any <u>existing</u> access easement and/or access reservation, <u>existing</u> dedicated public street rights-of-way, land located within the ultimate road rights-of-way of <u>existing</u> roads, and the rights-of-way of major utilities.	- _____ acres
STEP 3:	Subtract ( - ) land required to be dedicated for public parks under the requirements of the City of Annandale Subdivision Ordinance as amended. (a)	- _____ acres

STEP 4:	Subtract ( - ) land which, as a part of a previously approved development or land division, was reserved for open space.	- _____ acres
STEP 5:	In the case of "Site Intensity and Capacity Calculations" for a proposed residential use, subtract ( - ) the land proposed for nonresidential uses; or In the case of "Site Intensity and Capacity Calculations" for a proposed nonresidential use, subtract ( - ) the land proposed for residential uses.	- _____ acres
STEP 6:	Equals "Net Site Area"	= _____ acres

(a) If there is a fee in lieu of land dedication, this deduction is not applicable.

**TABLE 152.203 WORKSHEET FOR THE CALCULATION OF RESOURCE PROTECTION LAND**

Natural Resource Feature	Protection Standard Based Upon Zoning District Type (circle applicable standard from Table 152.203 for the type of zoning district in which the parcel is located)		Acres of Land in Resource Feature	Acres of Land in Resource Feature to be Protected
	Residential Districts	Non-Residential Districts		
Bluff and Bluff Setbacks	1.0	1.0	X _____ =	_____
Woodlands & Forests:			X _____ =	_____
Mature	0.70	0.70	X _____ =	_____
Young	0.50	0.50	X _____ =	_____
Lakes & Ponds	1.0	1.0	X _____ =	_____
Streams	1.0	1.0	X _____ =	_____
Shore Buffer	1.0	1.0	X _____ =	_____
Floodplains/ Floodways/Floodlands	1.0	1.0	X _____ =	_____
Drainageways	0.30	0.30	X _____ =	_____
Wetlands, Shoreland Wetlands, & Wetland Buffer	1.0	1.0	X _____ =	_____

TOTAL RESOURCE PROTECTION LAND (Total Acres of Land in Resource Features to be Protected)	_____
TOTAL NET SITE AREA (from table 152.202)	_____
TOTAL ACRES ALLOWED TO BE DISTURBED (a) (Total net site area - Total Resource Protection Land)	= _____

Note: In conducting the calculations in Table 152.203, if two or more natural resource features are present on the same area of land, only the most restrictive resource protection standard shall be used. For example, if floodplain and young woodlands occupy the same space on a parcel of land, the resource protection standard would be 1.0 which represents the higher of the two standards.

(a) TOTAL ACRES ALLOWED TO BE DISTURBED shall be used to calculate the amount of disturbable land allowed per lot.

## SECTION 152.210 NATURAL RESOURCE FEATURES MITIGATION

1. **Intent of Mitigation.** The City of Annandale recognizes that, under certain circumstances, property owners and developers may wish to develop in portions of those protected natural resources areas. In this section the conditions for mitigation and mitigation standards are set forth for the various natural resource features for which mitigation is allowed. The intent of this Section is not to permit greater destruction of natural resources than is permitted under the requirements of this Ordinance for typical property or development. This Section sets specific standards for use when the extent of the natural resources on a site and the use of the regulations would create a major hardship for said natural resource feature protection. Thus, mitigation is intended to be used when the required percentages of Table 152.201 cannot be met.
  
2. **Mitigation Standards.** The following methods, requirements, standards and/or criteria shall be followed for the mitigation of those natural resource features that may be mitigated and as determined by the City Council.
  - a. **Woodlands and Forests.** Woodlands and forest areas may be mitigated as follows:
    1. For every one acre of disturbed woodland/forest the following shall be planted among the development of the disturbed acre:

50 canopy trees, minimum 2-inch caliper  
75 ornamental trees and/or shrubs, minimum 18-inches high
    2. The species of plants to be used in the mitigation of woodlands/forests shall be similar to those destroyed and a minimum mix of six (6) species is to be planted. Acceptable species for woodland and forest mitigation area as indicated in Table 152.204. No more than eighty (80) percent of the total

number of trees planted for mitigation purposes, however, shall be of the Sugar Maple (*Acer saccharum*) species.

3. The plantings shall be in place prior to the granting of a certificate of occupancy. The plantings shall be guaranteed by the developer for two years.
4. No tree cutting or removal, after the adoption of this Ordinance, shall reduce the woodland/forest natural resource features protection requirements of this Ordinance.
5. In those areas of a parcel or lot where trees are proposed to be eliminated, the relocation of those trees to designated undisturbed areas of the parcel or lot is to be encouraged. All plantings relocated shall be guaranteed for a minimum of two years.
6. Of the 70% of Mature Woodlands to be preserved 30% shall be allowed to be mitigated and 40% shall be fully preserved in its present natural state.
7. Of the 50% of Young Woodlands to be preserved 20% shall be allowed to be mitigated and 30% shall be fully preserved in its present natural state.

**Table 152.204 TREE SPECIES FOR WOODLAND AND FOREST MITIGATION**

Species Common Name	Species Scientific Name
<b>Sugar Maple</b>	<i>Acer saccharum</i>
<b>Yellowbud Hickory</b>	<i>Carya cordiformis</i>
<b>Hackberry</b>	<i>Celtis occidentalis</i>
<b>Northern Pin Oak</b>	<i>Quercus ellipsoidalis</i>
<b>White Ash</b>	<i>Fraxinus americana</i>
<b>Butternut</b>	<i>Juglans cinerea</i>
<b>Black Walnut</b>	<i>Juglans nigra</i>
<b>Ironwood</b>	<i>Ostrya virginiana</i>
<b>Red Oak</b>	<i>Quercus borealis</i>
<b>American Basswood</b>	<i>Tilia americana</i>
<b>American Elm</b>	<i>Ulmus americana</i>
<b>Slippery Elm</b>	<i>Ulmus rubra</i>

- b. Lakes and Ponds. Where permitted, the required lakes and ponds natural resource protection standard may be reduced and/or mitigated only if such reduction and/or mitigation is part of the City Engineer’s approved Stormwater Management Plan.

- c. Drainageways. The required Drainageway natural resource protection standard may be reduced and/or mitigated only if such reduction and/or mitigation is part of the City Engineer's approved Stormwater Management Plan.
  - d. Floodplains, Floodways, and Floodlands. Same as Drainageways.
  - e. Wetlands, Wetland Buffer and Shoreland Wetlands. In addition, a permit from the US Army Corps of Engineers pursuant to the requirements of Section 404 of the Clean Water Act (33 USC 1344) shall be submitted to the City of Annandale certifying that filling has been approved and permitted by the Corps, as a condition of City review. If a MN DNR water quality certification is needed, a copy of said certification shall be provided to the City
3. **Alternative to Mitigation**. In areas where the City Council has determined mitigation cannot occur, a per acre fee shall be charged for all immitigable acres which shall be dedicated to the General Park Fund by the developer. (See Fee Schedule section 30.12)

**SECTION 152.211 Preservation of Trees Not Located in Woodlands or in Areas Designated for a Proposed Building(s), Circulation Area, or Parking Area.**

- 1. The applicant shall submit a Tree Preservation Plan illustrating all trees on site not located within woodland. The Plan shall illustrate which trees shall be preserved and which trees shall be removed. The landscape plan shall show the existing and proposed planting of new trees.
- 2. When determining the location of improvements within a new residential or non-residential development and the location of structures on parcels or lots, every reasonable effort shall be made to protect and preserve healthy trees having a diameter of eight (8) inches or greater. For healthy trees not located in woodlands or in areas designated for a proposed building(s), circulation area, or parking area, the following measures shall be taken:
  - a. Site grading and construction equipment shall not encroach within the tree's drip line. No soil is to be removed from within one (1) foot of the drip line of an existing tree to be preserved.
  - b. Crushed stone or any other materials which may be detrimental to the tree shall not be dumped or stored within a tree's drip line or at any other such location where the drainage from said stone or materials would be directed towards the tree.

- c. In the case of healthy trees to be preserved, a snow fence shall be installed on the periphery of the tree’s drip line during construction in order to help assure the continual protection of the tree during construction.
- d. No attachment or wires, other than those of a protective or non-damaging nature, shall be attached to any existing tree(s) during construction.
- e. If possible, and in order to avoid destruction or razing, existing trees which are eight (8) inches or less in diameter at breast height may be relocated and replanted on a parcel or lot. All such trees which are relocated shall be maintained alive and healthy on the parcel or lot. Any such trees which die shall be replaced by the developer. The developer shall be required by the City Council to post a letter of credit to assure tree replacement if the trees die within a period of two years.
- f. In the event that a tree designated on any approved plan for preservation is destroyed or razed during the construction process, said tree shall be replaced by the developer with a species as set forth by the requirements of the City and in conformance with the size and number requirements of this Ordinance as outlined in Table 152.205. The developer shall be required by the City Council to post a letter of credit to assure tree replacement.

**TABLE 152.205 PRESERVED TREE REPLACEMENT STANDARDS**

Size of Existing Tree Destroyed or Razed (DBH in inches)	Replacement Criteria
8” to 11”	1½” of trees shall be replaced for every DBH inch removed
Greater than 11”	2” of trees shall be replaced for every DBH inch removed

- 3. Locations where it may be impossible to plant the minimum requirement of replacement trees, park dedication fees of the cost to replaced the tree shall be except instead as determined by the City Council.

**SECTION 152.212 PROTECTION OF ADJACENT LANDS.**

The City of Annandale recognizes its commitment to protect its natural resources to include adjacent land(s) that may affect such property within the present city limits and the quality of life for its citizens. Furthermore, the City is committed to work with other government agencies to protect such natural resources.