
Appendix H – Tree Removal Ordinance

§ 50-6.2. Natural Features Protection Overlay standards.

- A. Intent. The NFP Overlay District is intended to protect natural features in the City of Kalamazoo, specifically wetlands, water resources, trees, woodlands, floodplains, slopes, natural heritage areas, and habitat corridors.
- B. Applicability. The NFP Overlay District standards apply as follows.
 - (1) The natural features standards are divided by defined natural feature. When a parcel is developed, redeveloped, or the natural feature is impacted due to any site alterations, the standards for all applicable natural features are applied.
 - (2) The site development standards shall be applied to all parcels in the NFP Overlay District.
 - (3) Overlay standards shall not eliminate the need to obtain a permit from the Michigan Department of Environmental Quality (MDEQ) or any other state, federal, or regional permitting agency, if required.
 - (4) Structures existing on the effective date of the ordinance creating the NFP Overlay District that do not meet the setbacks required in this article are permitted and may be altered or expanded provided that they do not increase the amount of their nonconformance with the standards in this article.
- C. Natural feature standards: wetlands. A wetland is any area, regardless of parcel boundaries, that is characterized by the presence of water at a frequency and duration sufficient to support wetland vegetation or aquatic life, or otherwise defined in Part 303 of the NREPA..¹
 - (1) Wetland determination. If any area on a parcel appears to be supporting wetland vegetation or is identified on the National Wetlands Inventory (NWI) map, one of the following is required.
 - (a) The area in question shall be treated as a wetland and the standards of this section apply.
 - (b) A wetland determination shall be completed by a qualified professional, such as a professional wetland scientist, to confirm whether the area in question is a wetland.
 - (2) Altering a wetland. Alteration to a wetland is prohibited except as allowed by the NREPA. A copy of any required permits obtained from the State to alter a wetland must be submitted to the City.
 - (3) Wetland setbacks. Setback distance is measured from the outer edge of wetland vegetation. Refer to Figure 6.2-1, Measuring Wetland and

1. Editor's Note: See MCLA § 324.301.

Water Resource Setbacks, and Figure 6.2-2, Setbacks Across Parcel Boundaries.

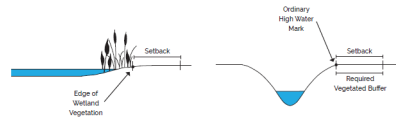


Figure 6.2-1 Measuring Wetland and Water Resource Setbacks

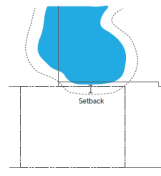


Figure 6.2-2 Setbacks Across Parcel Boundaries

- (a) The size of the wetland setback is based on the size of the parent parcel following the distances in Table 6.2-1, Wetland and Water Resources Setbacks.

Table 6.2-1	
Wetland and Water Resources Setbacks	
Size of Parent Parcel (acre)	Minimum Required Setback (feet)
Greater than 1	25
1/2 to 1	20
Less than 1/2	15

- (b) Prohibited activities. The following activities are prohibited in the setback:
 - [1] Development activities, such as structures, impervious surfaces, parking, driveways, etc.
 - [2] New stormwater BMPs.
- (c) Permitted activities. The following activities are permitted in the setback:
 - [1] Water and sewer lines, utility lines, bridge abutments or approaches, or semi-pervious, nonmotorized trailways, may be developed and maintained within a wetland setback with approval from all applicable local, state, and/or federal agencies.

- [2] Restoration activities, such as planting with native vegetation with approval from all applicable local, state, and/or federal agencies.
- [3] Mitigation activities required under the NREPA.
- (4) Protection during construction. Appropriate erosion control measures must be used according to Chapter 30 of the Kalamazoo City Code.
- D. Natural feature standards: water resources. A water resource is any lake, pond, or impoundment; a river, stream, or creek which may or may not be serving as a drain; or any other body of water that has defined banks, a bed, and visible evidence of a continued flow or continued occurrence of water, or as otherwise defined in Part 301 of the NREPA.²
 - (1) Altering a water resource. Alteration to a water resource is prohibited except as allowed by the NREPA. A copy of any required permits obtained from the state to alter a water resource must be submitted to the City.
 - (2) Water resource setbacks. Setback distance is measured from the ordinary high-water mark of all water resources, including when the water resource is located off the parcel but within the setback distance. Refer to Figure 6.2-1, Measuring Wetland and Water Resource Setbacks, and Figure 6.2-2, Setbacks Across Parcel Boundaries.³
 - (a) The size of the water resource setback is based on the size of the parent parcel following the distances in Table 6.2-1, Wetland and Water Resources Setbacks.⁴
 - (b) Prohibited activities. The following activities are prohibited in the setback:
 - [1] Development activities, such as structures, impervious surfaces, parking, driveways, etc.
 - [2] New stormwater BMPs.
 - (c) Permitted activities. The following activities are permitted in the setback:
 - [1] Up to 20% of the setback area may be developed with semipervious materials, such as paths or mowed turf grass.
 - [2] Water and sewer lines, utility lines, bridge abutments or approaches, or semi-pervious, nonmotorized trailways may be developed and maintained within a water resource setback

2. Editor's Note: See MCLA § 324.301.

3. Editor's Note: Figures 6.2-1 and 6.2.2 are included in Subsection C(3).

4. Editor's Note: Table 6.2-1 is included in Subsection C(3)(a).

with approval from all applicable local, state, and/or federal agencies.

- [3] Disturbance to the bank or shoreline, as expressly allowed under state law, is permitted when a restoration plan is prepared by a qualified professional, such as a Michigan certified natural shoreline professional or professional engineer.
 - [4] Operation and maintenance of existing flood control facilities or stormwater BMPs.
- (3) Required planting. The setback must contain natural vegetation, including a combination of trees, shrubs, grasses, and forbs to form a vegetated buffer in a riparian area. The vegetated buffer must meet one of the following:
- (a) Where the bank or shoreline contains natural vegetation:
 - [1] Existing vegetation must remain undisturbed during and after construction activities.
 - [2] Supplemental planting or seeding is allowed when native species are used. Mowed turf grass does not qualify as natural vegetation.
 - [3] Removal of invasive species and/or dead or diseased woody species are allowed, if they are replaced according to the parameters in § 50-6.2D(3)(b)[3].
 - (b) Where the bank or shoreline is not covered in natural vegetation:
 - [1] A vegetated buffer must be planted and maintained in the setback.
 - [2] Soil preparation for planting is allowed with proper soil erosion controls.
 - [3] A diverse mix of appropriate native species is required, as follows.
 - [a] At least 12 different species must be planted.
 - [b] At least two species from each of the following plant types must be planted: shrubs, graminoids, and forbs. Refer to Table 6.2-2, Example Plants for Vegetated Buffers. **[Amended 8-16-2021 by Ord. No. 2037]**

Table 6.2-2		
Example Plants for Vegetated Buffers		
Common Name	Scientific Name	Type
Silky dogwood	<i>Cornus amomum</i>	Shrub
Red osier, Red twig dogwood	<i>Cornus stolonifera, sericea</i>	Shrub
Common elderberry	<i>Sambucus canadensis</i>	Shrub
Atlantic ninebark	<i>Physocarpus opulifolius</i>	Shrub
Common winterberry	<i>Ilex verticillata</i>	Shrub
Northern spicebush	<i>Lindera benzoin</i>	Shrub
Highbush blueberry	<i>Vaccinium corymbosum</i>	Shrub
Gray dogwood	<i>Cornus foemina, syn C. racemosa</i>	Shrub
Steeplebush/meadowsweet	<i>Spiraea alba</i>	Shrub
Hardback/steeplebush	<i>Spiraea tomentosa</i>	Shrub
Lake sedge	<i>Carex lacustris</i>	Graminoid
Tussock sedge	<i>Carex stricta</i>	Graminoid
Bottlebrush sedge	<i>Carex hystericina</i>	Graminoid
Bebb's sedge	<i>Carex bebbii</i>	Graminoid
Common fox sedge	<i>Carex vulpinoidea</i>	Graminoid
Prairie cordgrass	<i>Spartina pectinata</i>	Graminoid
Dark-green bulrush	<i>Scirpus atrovirens</i>	Graminoid
Cottongrass bulrush/wool grass	<i>Scirpus cyperinus</i>	Graminoid
Bluejoint grass	<i>Calamagrostis canadensis</i>	Graminoid
Common rush	<i>Juncus effusus</i>	Graminoid
Wood reedgrass	<i>Cinna arundineacea</i>	Graminoid
Fowl mannagrass	<i>Glyceria striata</i>	Graminoid
New England American aster	<i>Symphyotrichum novae-angliae</i>	Forb
Flat-topped white aster	<i>Doellingeria umbellata</i>	Forb
Tall sunflower	<i>Helianthus giganteus</i>	Forb
Spotted joe-pye-weed	<i>Eutrochium maculatum</i>	Forb
White turtlehead	<i>Chelone glabra</i>	Forb
Canada anemone	<i>Anemone canadensis</i>	Forb
Common boneset	<i>Eupatorium perfoliatum</i>	Forb

Table 6.2-2		
Example Plants for Vegetated Buffers		
Common Name	Scientific Name	Type
Swamp milkweed	Asclepias incarnata	Forb
Cutleaf coneflower	Rudbeckia laciniata	Forb
Pin oak	Quercus palustris	Tree
Swamp white oak	Quercus bicolor	Tree
Black tupelo, Black gum	Nyssa sylvatica	Tree
Tamarack, American larch	Larix laricina	Tree

[c] Trees may be planted if appropriate to the site. Refer to Table 6.2-5, Replacement Tree List.⁵

[4] Any combination of native seed mix, plant plugs, bare root trees or shrubs, and/or container plants, trees, or shrubs is permitted.

(c) Exceptions. The vegetated buffer is not required when a structure or parcel is being redeveloped unless the project increases the site's impervious coverage on the parcel by more than 10% or if the project is being conducted within 20 feet of the water resource setback.

(4) Protection during construction. Appropriate erosion control measures must be used according to Chapter 30 of the Kalamazoo City Code.

(5) Operation and maintenance agreement. The vegetated buffer must be included in the stormwater operation and maintenance agreement, if an agreement is required for the project.

E. Natural feature standards: floodplains. (Reserved)

F. Natural feature standards: trees. Trees that provide special value to the community or ecosystem are protected through the NFP Overlay District. **[Amended 8-16-2021 by Ord. No. 2037]**

(1) Tree criteria. When trees meet any of the following criteria and are not counted as part of a woodland, the tree is considered a protected tree, and the standards of this overlay apply:

(a) Trees on the Protected Tree List in Table 6.2-4.

5. Editor's Note: Table 6.2-5 is included in Subsection F(4)(a)[3].

Table 6.2-4		
Protected Tree List		
Common Name	Scientific Name	DBH (inches)¹
Ash	Fraxinus spp. (not cultivars)	18
Basswood, linden	Tilia americana	18
Beech	Fagus spp.	18
Buckeye (Horsechestnut)	Aesculus spp.	18
Cherry, black	Prunus serotina	18
Elm, American	Ulmus americana	18
Elm, slippery	Ulmus rubra	18
Elm, winged	Ulmus alata	18
Fir	Abies spp.	18
Fir, Douglas	Pseudotsuga menziesii	18
Kentucky coffeetree	Gymnocladus dioicus	18
Maple, red	Acer rubrum	18
Maple, silver	Acer saccharinum	18
Maple, sugar	Acer saccharum	18
Pine, red	Pinus resinosa	18
Pine, white	Pinus strobus	18
Spruce	Picea spp.	18
Sycamore, American	Plantanus occidentalis	18
Tuliptree	Liriodendron tuliperifera	18
Walnut, black	Juglans nigra	18
Honey locust	Gleditsia triacanthos	16
Oak, black	Quercus velutina	16
Oak, bur	Quercus macrocarpa	16
Oak, northern red	Quercus rubra	16
Oak, white	Quercus alba	16
Arbor-vitae, Eastern white cedar	Thuja occidentalis	12
Birch	Betula spp.	12

Common Name	Scientific Name	DBH (inches)¹
Birch, river	<i>Betula nigra</i>	12
Cherry, flowering	<i>Prunus</i> spp.	12
Eastern hemlock	<i>Tsuga canadensis</i>	12
Hickory, bitternut	<i>Carya cordiformis</i>	12
Hickory, pignut	<i>Carya glabra</i>	12
Hickory, shagbark	<i>Carya ovata</i>	12
Hickory, shellbark	<i>Carya laciniata</i>	12
Oak, chinkapin	<i>Quercus muehlenbergii</i>	12
Oak, northern pin	<i>Quercus ellipsoidalis</i>	12
Oak, swamp white	<i>Quercus bicolor</i>	12
Persimmon	<i>Diospyros virginiana</i>	12
Poplar	<i>Populus</i> spp.	12
Sassafras	<i>Sassafras albidum</i>	12
Sweet gum	<i>Liquidambar styraciflua</i>	12
Willow	<i>Salix</i> spp.	12
American chestnut	<i>Castanea dentata</i>	8
Black tupelo, Black gum	<i>Nyssa sylvatica</i>	8
Butternut	<i>Juglans cinerea</i>	8
Cedar, eastern red	<i>Juniperus virginiana</i>	8
Hackberry	<i>Celtis occidentalis</i>	8
Larch/tamarack	<i>Larix laricina</i>	8
Maple, mountain/ striped	<i>Acer spicatum/pensylvanicum</i>	8
American hophornbeam	<i>Ostrya virginiana</i>	4
American hornbeam, Blue beech	<i>Carpinus caroliniana</i>	4
Dogwood, flowering	<i>Cornus florida</i> (native only)	4
Pagoda dogwood	<i>Cornus alternifolia</i>	4

Table 6.2-4 Protected Tree List		
Common Name	Scientific Name	DBH (inches) ¹
Dwarf hackberry	<i>Celtis tenuifolia</i>	4
Eastern redbud	<i>Cercis canadensis</i>	4
Pawpaw	<i>Asimina triloba</i>	4
Serviceberry	<i>Amelanchier</i> spp.	4

NOTES:

- ¹ Tree species with DBH greater than or equal to the values in this column of the table require replacement with any species on the Replacement Tree List if removed for construction/development.
- ² Gray highlight = Tree species must be replaced with a different species from the Replacement Tree List.

- (b) Any tree larger than 24 inches DBH.
- (2) Tree protection. Protected trees and their CRZ shall be protected during site development and construction.
 - (a) Disturbance. No disturbance is allowed within a CRZ, except as follows:
 - [1] Fences are permitted when they meet all other applicable zoning standards.
 - [2] Management of other protected trees or woodlands with a plan by a qualified professional, such as an International Society of Arboriculture (ISA) certified arborist.
 - (b) Protection during construction. The CRZ of protected trees shall be protected following the standards of § 50-6.2K(8), Protection during construction.
- (3) Protected tree removal. Protected trees may be removed in the following circumstances:
 - (a) The protected tree is located such that it impedes access to the site or prevents utility connection, or prevents the use of a property for its zoned purpose.
 - (b) There is clear evidence that a protected tree is diseased, dying, or has sustained substantial damage prior to site work.

- (c) Location of the protected tree presents a threat to the structural integrity of an existing structure or infrastructure.
- (4) Replacement. Any protected tree which is removed from a parcel as part of a development project that requires site plan review must be replaced at a ratio of 1:1, where for every protected tree removed a tree must be planted as follows:
 - (a) Replacement trees shall be selected from the Replacement Tree List in Table 6.2-5. Site context and site condition should be taken into consideration when selecting a replacement tree.

Table 6.2-5		
Replacement Tree List		
Common Name	Scientific Name	Condition Code
Basswood, Linden*	<i>Tilia americana</i>	Cs
American chestnut	<i>Castanea dentata</i> (hybrid)	Cr, F, Cul
American hophorn-beam*	<i>Ostrya virginiana</i>	P, Cr
American horn-beam, Blue beech*	<i>Carpinus caroliniana</i>	Cr, P
Arborvitae, eastern white cedar	<i>Thuja occidentalis</i>	Cv, Cs
Birch	<i>Betula</i> spp.	Cv
Birch, river	<i>Betula nigra</i>	P, Ri
Black tupelo, Black gum*	<i>Nyssa sylvatica</i>	Cr, Ri
Cedar, eastern red*	<i>Juniperus virginiana</i>	Cr, P
Cherry, wild black*	<i>Prunus serotina</i>	
Cherry, flowering	<i>Prunus</i> spp.	
Dogwood, flowering*	<i>Cornus florida</i> (native only)	Cr
Eastern redbud	<i>Cercis canadensis</i>	Cr, P
Elm, American	<i>Ulmus americana</i> (re-sistant variety)	Cul, Cs
Elm, slippery	<i>Ulmus rubra</i>	
Hackberry*	<i>Celtis occidentalis</i>	Cr
Hickory, bitternut*	<i>Carya cordiformis</i>	Cr, F, Ri, Cs

Table 6.2-5		
Replacement Tree List		
Common Name	Scientific Name	Condition Code
Hickory, pignut*	<i>Carya glabra</i>	Cr, F, Cs
Hickory, shagbark*	<i>Carya ovata</i>	Cr, F, Cs
Hickory, shellbark*	<i>Carya laciniosa</i>	F, Ri, Sc
Honey locust	<i>Gleditsia triacanthos</i>	Cr
Kentucky coffee-tree*	<i>Gymnocladus dioicus</i>	Cr
Larch/tamarack*	<i>Larix laricina</i>	Ri, Cs
Maple, red	<i>Acer rubrum</i>	Cv, Cs
Maple, sugar	<i>Acer saccharum</i>	Cv, Cul
Oak, black*	<i>Quercus velutina</i>	Cr, Cs
Oak, bur*	<i>Quercus macrocarpa</i>	Cr, Cul, Cs
Oak, chinquapin*	<i>Quercus muehlenbergii</i>	Cr, Cs
Oak, pin*	<i>Quercus palustris</i>	Cr, Ri, Cs
Oak, northern red*	<i>Quercus rubra</i>	Cr, Sc
Oak, swamp white*	<i>Quercus bicolor</i>	Cr, Ri, Cs
Oak, white*	<i>Quercus alba</i>	Cr, Cul, Cs
Pawpaw	<i>Asimina triloba</i>	Cr, F
Persimmon	<i>Diospyros virginiana</i>	Cr, F
Pine, red	<i>Pinus resinosa</i>	
Pine, white	<i>Pinus strobus</i>	
Sassafras	<i>Sassafras albidum</i>	
Serviceberry*	<i>Amelanchier spp.</i>	P, F
Sycamore, American*	<i>Plantanus occidentalis</i>	Cr
Tuliptree*	<i>Liriodendron tuliperifera</i>	Cr, Cs
Willow, black	<i>Salix nigra</i>	Ri
Pecan tree	<i>Carya illinoensis</i>	
Sweetgum tree	<i>Liquidambar styraciflua</i>	
Oak, post	<i>Quercus stellata</i>	

NOTES:

¹ Condition Codes:

Prohibited = Species not to be used as replacement tree.

Cr = Climate resilient

Cs = Carbon sequestration

Cul = Culturally significant

F = Food source

P = Suitable for parking lots and roadways

Ri = Suitable for riparian/wet plantings

Cv = Climate vulnerable

* Denotes species where one-inch caliper tree may be substituted when Wild-Type is planted (full credit for two-inch caliper applies)

(b) Replacement trees shall be located as follows:

[1] Replacement trees shall be located on the site from which they are removed.

[2] The NFP Review Board can approve alternative locations if on-site replacement is not possible, provided that the alternative is within the City of Kalamazoo.

[3] Replacement trees cannot be located within a parking lot.

G. Natural feature standards: woodlands. Woodlands provide important ecosystem services and habitat corridors and are protected by the NFP Overlay District.

(1) Woodland criteria. When trees located on a parcel meet the following criteria, the area shall be considered a woodland and the standards of this overlay apply:

(a) Minimum area. Trees cover a minimum area of 21,780 square feet or a half acre, regardless of parcel boundaries. Refer to Figure 6.2-3, Defining and Delineating a Woodland.

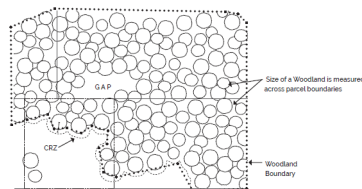


Figure 6.2-3 Defining and Delineating a Woodland

(b) Tree count. The area contains the equivalent of at least 40 trees

per acre of at least two inches DBH and reach or at maturity will reach at least 50 feet in height.

- (c) Natural ground cover. No more than 25% of the ground area is mowed turf grass. **[Amended 8-16-2021 by Ord. No. 2037]**
 - (d) Understory. The area contains a layering of shorter understory trees and/or shrubs and forbs.
- (2) Woodland delineation and assessment. Refer to Figure 6.2-3, Defining and Delineating a Woodland. Existing woodland coverage on the parcel shall be delineated and assessed as follows:
- (a) Gaps. Areas without trees or that have sparse trees are common within a woodland and should be included in area and density measurements except when the gap is larger than 8,000 square feet.
 - (b) Woodland assessment tools. A woodland must be assessed using a basal area, woodland ecosystem assessment, or tree survey conducted by a qualified professional, such as an ISA certified arborist.
- (3) Woodland protection. For areas meeting the definition of a woodland, a portion of the woodland on the parcel must be preserved as follows:
- (a) Woodland preservation minimums. Woodlands shall be preserved following the coverage requirements in Table 6.2-3, Woodland Preservation.

Table 6.2-3	
Woodland Preservation	
Woodland Coverage of Parcel	Minimum Required Woodland Coverage to be Preserved
75% to 100%	25%
50% up to 75%	50%
25% up to 50%	75%
Less than 25%	90%

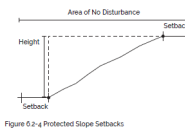
- (b) Criteria for woodland preservation. In determining which areas of a woodland are to be preserved, the following priorities shall be applied:
 - [1] Woodlands contiguous to woodlands on adjacent parcels or areas serving as habitat corridors.
 - [2] Woodlands on or adjacent to another natural feature(s), floodplain, or a publicly accessible open space.

- [3] Woodlands in the best condition as determined by a qualified professional, such as an ISA certified arborist, and based upon the basal area score or another woodland ecosystem assessment.
 - [4] Woodlands with older growth, higher DBH trees, or trees noted in Table 6.2-4, Special Status Tree List, and Table 6.2-5, Replacement Trees List.⁶
- (4) Prohibited activities.
- (a) Disturbance. No disturbance is allowed within a woodland preserved area, the boundary of which is defined by the CRZ of trees along its edges, except for the following activities.
 - [1] Fences are permitted when they meet all other applicable zoning standards.
 - [2] Management of the woodland vegetation with a plan by a qualified professional, such as an ISA certified arborist.
 - (b) Stormwater. No new stormwater BMPs within the CRZ.
- (5) Permitted activities. Operation and maintenance of public utilities is permitted within the CRZ. Directional boring shall be used whenever possible.
- (6) Construction protection. Woodlands trees and their CRZ shall be protected during site construction following the standards of § 50-6.2K(8), Protection during construction.
- H. Natural feature standards: slopes. Slopes associated with water resources and other natural features are protected by the NFP Overlay District.
- (1) Slope criteria. Slopes protected by the NFP Overlay District are those with a grade of 20% or greater and meet at least one of the following:
 - (a) Slope face contains a woodland: refer to § 50-6.2G.
 - (b) Slope face contains natural heritage area: refer to § 50-6.2I.
 - (c) Any portion of the slope face is within 500 feet of a wetland or water resource: refer to §§ 50-6.2C and 50-6.2D.
 - (d) Any portion of the slope face extends onto adjacent parcels.
 - (2) Slope determination. If any area on a parcel appears to meet the slope criteria, one of the following is required:
 - (a) A slope analysis by a professional is not completed and the area

6. Editor's Note: Table 6.2-4 is included in Subsection F(1)(a), and Table 6.2-5 is included in Subsection F(4)(a)[3].

is assumed to meet the slope criteria; the standards of this overlay are applied.

- (b) A slope analysis shall be completed by a licensed surveyor, licensed professional engineer, or a geologist certified by the American Institute of Professional Geoscientists (AIPG) following all acceptable practices to determine whether any part of the slope face meets the slope criteria.
- (3) Slope protection. Slopes shall be maintained and protected as follows:
 - (a) Setbacks. A setback is required from the top of slope and the toe of slope equal to half the height of the slope, regardless of whether or not the entire slope is contained within the parcel, or 10 feet, whichever is greater. Refer to Figure 6.2-4, Slope Setbacks.



- (b) Permitted activities in the setbacks. Setback areas from the top or toe of slope shall remain undisturbed except as follows:
 - [1] Any work necessary to maintain the stability of the slope.
 - [2] Restoration and management of other natural features, provided that they meet the requirements of this overlay.
 - [3] Fences are permitted when they meet all other applicable zoning standards.
 - [4] Normal maintenance that does not disturb existing terrain.
 - [5] Maintenance of existing impervious surfaces and structures.
 - [6] In addition to the requirements in § 50-6.2B(4), existing structures located in the setback may be expanded up to 25% of the existing building footprint as follows:
 - [a] The expansion does not disturb the slope face.
 - [b] Ground disturbance is the minimum needed for the expansion.
- (c) Permitted activities in the slope face. The slope face shall remain undisturbed except as follows:
 - [1] Any work necessary to maintain the stability of the slope face, including the top and toe of slope.

- [2] Restoration and management of other natural features, provided that they meet the requirements of this overlay.
 - [3] Normal maintenance that does not disturb existing terrain.
 - [4] Maintenance of existing impervious surfaces and structures.
 - [5] In addition to the requirements in § 50-6.2B(4), existing structures where a portion of the structure is in the slope face may be expanded up to 25% of the existing building footprint as follows:
 - [a] The expansion can only occur on slopes with a grade of 30% or less.
 - [b] Expansion in the slope face is limited to no more than 15% of the existing building footprint.
 - [c] Ground disturbance is the minimum needed for expansion.
 - (d) Prohibited activities. The following activities are prohibited:
 - [1] Surface water shall not be directed toward any slope regulated by this overlay.
 - [2] Stormwater BMPs are not permitted within the slope face or the setbacks, including storm sewer outlets.
 - [3] No new underground utilities may be placed within the slope face or setbacks.
 - (e) Construction protection. The slope face and setbacks shall be protected during site development and construction following the standards of § 50-6.2K(8), Protection during construction.
- I. Natural feature standards: natural heritage areas. Rare species and remnants of historically and culturally significant ecosystems are protected by the NFP Overlay District.
- (1) Natural heritage area criteria. A natural heritage area is defined by the presence of either of the following:
 - (a) Any species considered to be rare, threatened, or endangered by the State of Michigan, federal government, or listed on the Michigan Natural Features Inventory (MNFI) Database.
 - (b) Any remnant of a natural community listed on the MNFI Michigan's Natural Communities List.
 - (2) Determination of natural heritage area. The MNFI Natural Heritage Database shall be used to determine if any rare species have been

located within a two-mile radius of the parcel.

- (3) On-site survey. When a database search indicates a rare species has been identified within two miles of the parcel, an on-site survey shall be conducted. The survey must be conducted by a consultant with a Michigan endangered species permit or another qualified professional approved by the City Planner
 - (4) Natural heritage area protection. If the on-site survey confirms that a natural heritage area exists on the parcel, all state and federal protections and/or mitigation activities must be followed. A copy of any required permit obtained from a state or federal agency must be submitted to the City.
- J. ⁷Site development standards. The following standards apply to all properties within the NFP Overlay District:
- (1) Building setbacks. When a conflict exists between meeting the NFP standards in § 50-6.2C through J and the required placement of structures, the setbacks or built-to zones or lines may be adjusted to eliminate or reduce the conflict provided that the adjustment is the minimum required to meet the NFP standards.
 - (2) Use. In addition to the uses permitted in the base zoning district, the following apply:
 - (a) Appendix A, § 3.5, Wellhead Protection Overlay ten-year use restrictions.
 - (b) Outdoor storage of loose materials is prohibited within 500 feet of a water resource or wetland.
 - (c) Appendix A, § 3.5, Wellhead Protection Overlay one-year use restrictions apply within 500 feet of a water resource or wetland.
 - (3) Lot coverage. Areas designated to meet the pervious surface requirement of the base zoning district shall meet the following requirements:
 - (a) Natural features. Areas left undisturbed per the standards in § 50-6.2C through J can be applied to a parcel's pervious lot coverage requirement, except that stormwater BMPs shall count at a ratio of two square feet of BMP to one square foot of pervious coverage ratio or at a rate of 50%.
 - (b) Undisturbed areas. All areas designated to meet a parcel's overall pervious lot coverage requirement must remain undisturbed

7. Editor's Note: Former Subsection J, Natural feature standards: habitat corridors, which was reserved, was repealed 8-16-2021 by Ord. No. 2037. This ordinance also provided for the redesignation of former Subsections K through N as Subsections J through M, respectively.

except in the following circumstances:

- [1] Restoration or maintenance of the pervious area when guided by a plan developed by a qualified professional.
 - [2] Planting or restoration of plants or trees per the natural features standards of § 50-6.2.
 - [3] Installation of stormwater BMPs from the Michigan Low Impact Development (LID) Manual BMP Matrix Table in the Runoff Volumes and Infiltration Categories.
- (c) Location. Areas designated to meet a parcel's overall pervious lot coverage requirement shall be located as follows:
- [1] Contiguous. Pervious areas shall be located in one contiguous area or clustered into areas that each equal at least 20% of the total pervious area.
 - [2] Adjacent to natural features. Pervious areas shall be located adjacent to defined natural features.
- (d) Construction. Pervious areas shall be protected during construction and site development through barrier fencing as described in § 50-6.2K(8).
- (e) Semi-pervious allowance. A semi-pervious allowance of up to 15% may be utilized to meet the lot coverage requirement.
- (4) Landscape and screening. Additional landscape and screening activities apply within the NFP Overlay District.
- (a) Relief. reduction in a parcel's required building perimeter, parking lot, loading zone, perimeter screening, or interior landscaping requirements (refer to Appendix A, § 6.2, Landscaping and Open Space) may be permitted to eliminate conflicts with meeting the requirements of § 50.6-2.
 - [1] Relief shall be the minimum required to meet the NFP standards.
 - [2] Landscaping serving as a buffer between residential and nonresidential uses and between a vehicular parking lot and a street shall not be reduced.
 - (b) Plant selection. Native species must be used for all site landscaping required under Appendix A, § 6.2, Landscaping and Open Space, or required elsewhere in Chapter 50. When additional landscaping is proposed on the site plan beyond the minimum requirements of Chapter 50, the NFP Review Board may allow the use of nonnative, noninvasive species which have been

determined not to cause adverse environmental impacts. Plants in Table 6.2-6, Prohibited Planting List, or species recognized by the Midwest Invasive Species Network as nonnative invasive shall not be planted on any portion of a parcel. **[Amended 8-16-2021 by Ord. No. 2037]**

Table 6.2-6	
Prohibited Planting List	
Common Name	Scientific Name
Trees	
Norway maple	<i>Acer platanoides</i>
Tree-of-heaven	<i>Ailanthus altissima</i>
Silktree	<i>Albizia julibrissin</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Black locust	<i>Robinia pseudoacacia</i>
Siberian elm	<i>Ulmus pumila</i>
Callery pear	<i>Pyrus calleryana</i>
Princess tree	<i>Paulownia tomentosa</i>
Black alder	<i>Alnus glutinosa</i>
Shrubs	
Japanese barberry	<i>Berberis thunbergii</i>
Common barberry	<i>Berberis vulgaris</i>
Autumn olive	<i>Elaeagnus umbellata</i>
Glossy buckthorn	<i>Frangula alnus</i>
Common or european privet	<i>Ligustrum vulgare</i>
Showy fly honeysuckle (or hybrid)	<i>Lonicera x. bella</i>
Amur honeysuckle	<i>Lonicera maackii</i>
Morrow honeysuckle	<i>Lonicera morrowii</i>
Tatarian honeysuckle	<i>Lonicera tatarica</i>
Common buckthorn	<i>Rhamnus cathartica</i>
Multiflora rose	<i>Rosa multiflora</i>
Japanese meadowsweet	<i>Spiraea japonica</i>
European cranberrybush	<i>Viburnum opulus</i>
Vines	
Asian bittersweet	<i>Celastrus orbiculatus</i>

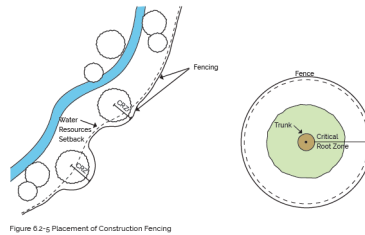
Table 6.2-6	
Prohibited Planting List	
Common Name	Scientific Name
Black swallow-wort	<i>Cynanchum louiseae</i>
European swallow-wort	<i>Cynanchum rossicum</i>
English ivy	<i>Hedera helix</i>
Japanese honeysuckle	<i>Lonicera japonica</i>
Mile-a-minute weed	<i>Persicaria perfoliate</i>
Kudzu	<i>Pueraria montana</i>
Grasses	
Reed canary grass	<i>Phalaris arundinacea</i>
Common reed	<i>Phragmites australis</i>
Japanese stiltgrass	<i>Microstegium vimineum</i>
Herbs	
Garlic mustard	<i>Alliaria petiolata</i>
Spotted knapweed	<i>Centaurea biebersteinii</i> or <i>C. maculata</i>
Canada thistle	<i>Cirsium arvense</i>
Bull thistle	<i>Cirsium vulgare</i>
Leafy spurge	<i>Euphorbia esula</i>
Dame's rocket	<i>Hesperis matronalis</i>
Creeping jenny or moneywort	<i>Lysimachia nummularia</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Japanese knotweed	<i>Polygonum cuspidatum</i>
Giant knotweed	<i>Polygonum sachalinense</i>
Crown vetch	<i>Securigera varia</i>
Baby's breath	<i>Gypsophila paniculate</i>
Goutweed	<i>Aegopodium podagraria</i>
Lesser celandine	<i>Ficaria verna</i>
Moneyplant	<i>Lunaria annua</i>
Sweet woodruff	<i>Galium odoratum</i>
Sweet clovers	<i>Melilotus</i> spp.
Aquatic Plants	
	<i>Euonymus fortune</i>

Table 6.2-6	
Prohibited Planting List	
Common Name	Scientific Name
	E. euopaeus
	E. alata
	Miscanthus sp.

- (c) Existing vegetation. When a parcel's existing vegetation is being preserved and utilized to meet landscaping requirements in Appendix A, § 6.2, Landscaping and Open Spaces, the following apply:
 - [1] Existing nonnative plants must be contained within the planting areas.
 - [2] Existing invasive plants must be removed. Refer to Meeting the Challenge of Invasive Plants by MNFI or Table 6.2-6, Prohibited Planting List.
- (5) Lighted signs. Internally illuminated, automatic changeable copy, and blinking and/or flashing lighted signs are not permitted within 300 feet of a preserve.
- (6) Stormwater management criteria. Refer to the City of Kalamazoo Performance Standards for Groundwater Protection within Wellhead Protection Capture Zones for additional information and definitions.
 - (a) Channel protection performance standard. Parcels 1/2 acre or greater shall maintain the post-development project site runoff volume and peak flow rate at or below predevelopment levels for all storms up to the ten-year, twenty-four-hour event.
 - (b) Water quality treatment runoff volume standard. The first one inch of runoff generated from the entire parcel must be treated using one of the following:
 - [1] Multiple methods. Two or more BMPs shall be utilized with at least 25% of the required runoff volume treated by BMPs from the Low Impact Development Manual for Michigan, Table 7.1 BMP Matrix Table from Runoff Volume/Infiltration and Runoff Volume/Non-infiltration Categories.
 - [2] Underground methods. All required runoff shall be treated by underground detention or infiltration BMPs.
 - [3] Noninfiltration methods. Sites requiring noninfiltration BMPs, such as those with contamination or within Wellhead Protection Overlay,⁸ use BMPs from Low Impact Development

Manual for Michigan, Table 7.1 BMP Matrix Table, Runoff Quality/Non-infiltration Category.

- (c) Maintenance agreement. A stormwater operation and maintenance agreement is required by and between the City of Kalamazoo and the owner of the property when stormwater BMPs are used.
- (d) Exceptions. Development or redevelopment of a single-family home or duplex is exempt from these stormwater standards.
- (7) Fill materials. Use of fill material containing regulated substances above any state and/or federal cleanup criteria for soils is prohibited. Fill material shall be sourced as follows:
 - (a) Fill material shall not be sourced from industrial or commercial sites where hazardous materials were used, handled, or stored or from unpaved parking areas.
 - (b) Fill material shall not be sourced from sites that contain species that are legally designated by the State of Michigan as prohibited or restricted.
- (8) Protection during construction. A temporary construction fence is required to protect natural features and not-to-be disturbed areas, such as those designated to meet pervious lot coverage requirements, during the duration of any site work or construction.
 - (a) Fence construction. Construction fences shall be erected as follows:
 - [1] Fencing must be built using posts six feet in height, spaced no more than eight feet apart on center and buried at least two feet below grade.
 - [2] Fence must have two cross beams placed approximately at two and six feet above grade.
 - [3] Plastic mesh barrier fence shall be affixed to the front of the posts.
 - (b) Fence placement. Refer to Figure 6.2-5, Placement of Construction Fencing. Fencing shall be located no closer than the required setback or edge of a not-to-be disturbed area.



[1] Where a tree is located in the setback or not-to-be disturbed area, the fencing shall be placed to protect the CRZ. Refer to Figure 6.2-5, Placement of Construction Fencing.

[2] Trees and woodlands protected through §§ 50-6.2F and 50-6.2G shall have construction fencing placed outside of the CRZ.

(c) Prohibited activities. The following activities are prohibited within the construction fencing:

- [1] Spreading of soil spoils.
- [2] Heavy equipment and vehicle traffic.
- [3] Storage of construction materials and debris.
- [4] Site grading changes that increase or decrease the moisture conditions within a CRZ on a temporary or permanent basis.

K. NFP review bodies and processes. Projects located in the NFP Overlay District require special review.

(1) Project review. Review of projects in the NFP Overlay District shall occur as follows:

- (a) Where site plan is not required. Administrative review of the site development or construction permit request shall be completed by the City Planner or designee.
- (b) Where site plan is required. The NFP Review Board shall review the NFP Plan in conjunction with the site plan review process. NFP Review Board approval is required for a project to achieve site plan approval.
- (c) Where site plan is required and a zoning review from the Planning Commission is requested and/or Zoning Board of Appeals is requested or the site is located within 100 feet of a wetland or water resource or adjacent to land publicly used for open space or recreation, the following shall occur prior to review by the NFP Review Board.

- [1] Owner or developer shall send notice by first class postage paid of a project in the NFP Overlay District to all property owners and occupants within 300 feet of the parcel and the neighborhood association or contact.
 - [2] Notice shall at a minimum include information on the proposed project, a location (physical or digital) where plans can be reviewed, instructions on how to provide comments, and a timeline for project review and construction.
 - [3] Notice shall be postmarked a minimum of 14 days before application is made for review by the NFP Review Board.
- (2) NFP Review Board. A board will be formed to review projects in the NFP Overlay District.
- (a) Intent. The NFP Review Board will review projects to ensure the standards of the NFP Overlay District are met and assist the City with regular review of the NFP standards, map, outreach, and City-wide education.
 - (b) NFP Review Board members.
 - [1] Board will be comprised of seven members.
 - [2] Members will be those who live or work in the greater Kalamazoo community.
 - [3] At a minimum, the Board must have at least one member with education or experience in each of the following features in this chapter:
 - [a] Water resources/wetlands;
 - [b] Plants/trees;
 - [c] Slopes; and
 - [d] Site development/building construction.
 - [4] Board members are to be appointed by the Mayor and approved by the City Commission.
 - [5] A City staff will be appointed by the City Planner to be the Board's liaison.
 - (c) The NFP Review Board is subject to the Open Meetings Act, MCL § 15.261 et seq., and shall establish its own bylaws and meeting procedures.
- (3) Relief from NFP Overlay District standards. Relief from the NFP Overlay District standards may be sought from the Zoning Board of

Appeals.

(a) Criteria. Relief from the NFP Overlay District Standards in § 50-6.2 may be granted when all the following conditions are met.

- [1] The parcel cannot be reasonably utilized for its zoned use without the requested relief.
- [2] The extent of relief requested is the minimum needed to permit reasonable utilization of the site.
- [3] It is demonstrated that the relief can be granted without substantial detriment to the public good and will not substantially impair the intent and the purpose of the NFP Overlay District.
- [4] The requested relief is balanced by the use of conservation and/or green development tools and actions, such as utilizing stormwater BMPs from the Michigan Low Impact Development Manual that promote infiltration, restoration or expansion of a natural feature on the site, or use of wild-type native plants or desired trees as detailed in Table 6.2-5, Replacement Tree List.⁹

(b) Process. The following process shall be followed when relief is sought from § 50.6-2, Natural Features Protection Overlay Standards.

- [1] NFP Review Board shall review the request using the NFP site plan documentation and make a recommendation on the requested relief to the Zoning Board of Appeals.
- [2] Application for relief from the Zoning Board of Appeals must include the NFP Review Board's recommendation.

L. Bonding of projects.

- (1) Intent. To ensure the protection of natural features, a financial assurance will be required when seeking site development permits for a lot or structure from the City of Kalamazoo.
- (2) Applicability. During the review and approval of all NFP site plans, the NFP Review Board will determine whether a bond or lien is required for NFP projects based on: **[Amended 8-16-2021 by Ord. No. 2037]**
 - (a) Whether natural features are present on the site such that the cost of replacement or restoration if damaged or destroyed during construction would place an undue burden on the City if not remedied in a reasonable time frame.

9. Editor's Note: Table 6.2-5 is included in Subsection F(4)(a)[3].

- (b) The activities proposed on the site present a reasonable threat of damaging or destroying natural features.
 - (3) Financial assurance amount. The amount of the assurance shall be in an amount satisfactory to the City to restore and/or stabilize a natural feature that has been disturbed, not properly managed during site work or construction, or has been abandoned for more than six months.
 - (4) Release of financial assurance. The assurance shall be released when a certificate of occupancy is granted. Except when a project includes a vegetated buffer or required tree planting where the assurance may be reduced by 60% at the time of the certificate of occupancy is granted with the remaining percentage released no sooner than three years after the granting of the certificate of occupancy.
- M. Penalty. A violation of the provisions of this chapter is a municipal civil infraction punishable as follows.
- (1) Any person, firm, or corporation violating any provision of this chapter is responsible for a municipal civil infraction and shall be fined up to \$2,500 for each violation. A civil infraction citation for a violation of this chapter may be issued by the Building Official, or by such person as the City Commission or City Manager may designate.
 - (2) Each day a violation exists or continues shall be deemed as a separate offense.
 - (3) Any person, firm, or corporation found responsible for a subsequent violation of this chapter within two years of having been found or admitted responsible for a violation of this chapter shall be responsible for a civil fine of up to \$5,000.
 - (4) Imposition of court-imposed costs.
 - (5) Issuance of an order by the court to replace, mitigate, or restore a natural feature damaged or destroyed by a violation.