

**ARTICLE XXIV
CRYSTAL LAKE WATERSHED OVERLAY DISTRICT**

Sec. 24.1 PURPOSE

The purpose of this Article is to protect the environmental quality of Crystal Lake, the Crystal Lake shoreline, and the Crystal Lake watershed through appropriate land use and design regulations. The protection of the Crystal Lake watershed is deemed a public purpose in order to preserve important environmental, historical, residential, recreational, cultural, scenic, and economic attributes of the region.

More specifically, the purpose of this Article is to protect the public health, safety, and welfare; to prevent and control water pollution; to protect fish spawning grounds, aquatic life, bird, and other wildlife habitat; to protect buildings and lands from accelerated erosion; to protect wetlands; to control building sites, placement of structures, and land uses; to conserve shore cover; to conserve natural beauty and open space; and to anticipate and respond to the impacts of development in shoreland areas.

Sec. 24.2 WATERSHED OVERLAY DISTRICT

All areas that are in the Crystal Lake watershed, according to the Crystal Lake Watershed Overlay Map shall meet all requirements of this Article. The Crystal Lake Watershed Overlay Map shall be on file with the Township Clerk and the Zoning Administrator at all times. Any interpretations of the boundaries of this map shall be the responsibility of the Zoning Administrator, whose decision may be appealed to the Township Board of Appeals.

In cases where a parcel is partially inside and partially outside of the overlay district, only those portions located within the overlay district are required to comply with the regulations of this Article.

Sec. 24.3 USES PERMITTED

All uses permitted by right or by conditional or special land use permit in the underlying zoning district shall be permitted, in the Crystal Lake Watershed Overlay District except for:

- A. Confined Feedlots
- B. Slaughterhouses
- C. Gas Stations
- D. Auto Repair Shops
- E. Auto Washes

- F. Oil-change Establishments
- G. Industrial uses involved in the manufacturing, compounding, processing, or treating of products.

Sec. 24.4 LOT SIZE, WIDTH, AND SETBACK

Minimum lot size, lot width, and setback requirements of the underlying zoning district shall be met unless this Article specifically states otherwise.

Sec. 24.5 APPROVAL PROCESS

A. All of the following uses or buildings (including additions or extensions to such uses or buildings) that are located wholly or partially within the Watershed Overlay District shall be required to obtain site plan approval pursuant to Article XIV.

- 1. Commercial Establishments.
- 2. Industrial Establishments.
- 3. Multifamily Housing Developments.
- 4. Subdivisions and Condominium Subdivisions.
- 5. Parking Areas Containing Four or More Parking Spaces.
- 6. Private Roads or Paved Areas Exceeding Four Thousand (4,000) Square Feet.
- 7. Planned Residential Developments, Planned Unit Developments.

Sec. 24.6 DESIGN REQUIREMENTS

The purpose of the design requirements of this section are to slow the rate of stormwater runoff, to reduce erosion and sedimentation, to protect water quality, to keep nutrients from entering lakes and streams, to maintain water temperatures at natural levels, to preserve fish and wildlife habitat, and to preserve aesthetic and scenic values of the watershed environment.

All new development, including additions or extensions to existing buildings, shall meet the design requirements of this section.

- A. Setbacks from Crystal Lake:
 - 1. All principal buildings shall be set back at least thirty-five (35) feet from the ordinary high-water mark of Crystal Lake, subject to Sec. 3.2.
 - 2. Within thirty-five (35) feet of the ordinary high-water

mark of Crystal Lake, a maximum of 400 square feet of land shall be covered by impervious surfaces, including all structures and paving for each 100 linear feet of lake frontage.

3. No unsightly, offensive, or potentially polluting material, including but not limited to lawn clippings, leaves, garbage, trash, refuse, or toxic materials, may be dumped or stored within thirty-five (35) feet of the ordinary high-water mark of Crystal Lake.

B. Vegetative Buffer: All existing vegetation located within thirty-five (35) feet of the ordinary high-water mark of Crystal Lake shall be maintained as a vegetative buffer in accordance with this Section.

1. Removal of vegetation in the natural vegetative buffer shall be limited to no more than twenty-five (25) percent of the length of this buffer, provided that cutting of this twenty-five (25) percent shall not create a clearcut opening greater than twenty-five (25) feet wide for every one hundred (100) feet of shoreline.
2. Natural shrubbery, trees, or other vegetation shall be preserved as far as practical and, where removed, shall be replaced with other naturally occurring vegetation that is equally effective in retarding runoff, preventing erosion, and preserving natural beauty. A mowed lawn is not a desirable vegetative buffer adjacent to the shoreline.
3. Native plants, shrubbery, and trees are encouraged when new vegetation is planted.
4. Existing soil and organic matter shall not be altered or disturbed within the natural vegetative buffer.
5. These provisions shall not apply to the removal of dead, diseased, or dying trees at the discretion of the landowner.

C. Development on Steep Slopes: Development on slopes of twelve (12) percent or greater shall meet the design requirements of this Section.

1. Density: The permitted density for residential

dwelling shall be based on the existing slope of the site. The permitted number of dwellings shall be based on the procedures outlined in Section 16.19 (e) by applying the maximum density requirements of this Section.

<u>Maximum Density Without Sewer</u>	<u>Maximum Density With Sewers</u>	<u>Existing Slope</u>
1.00 Unit per Acre	2.00 Units per Acre	12 to 17
Percent		
0.75 Unit per Acre	1.50 Units per Acre	18 to 24
Percent		
0.50 Unit per Acre	1.00 Unit per Acre	25+ Percent

2. Lot Coverage: The amount of land allowed to be covered by impervious surfaces shall be based on the existing slope of the site. Lot coverage shall be defined as the percentage of the lot (excluding rights-of-way and wetlands) that is covered by impervious surfaces, including structures and paving. In the case of PUDs, PRDs, and Condominiums, each individual lot need not meet the requirements of this section, provided that the total project does meet the requirements of this section.

The maximum lot coverage shall be as follows:

<u>Lot Coverage</u>	<u>Existing Slope</u>
30 Percent	12 to 17 Percent
20 Percent	18 to 24 Percent
10 Percent	25+ Percent

3. Natural Vegetative Cover: As much of the existing vegetation, including bushes, shrubs, natural ground cover, and trees, shall remain on the site as possible. Lawn areas shall not qualify as natural vegetative cover required in this section. The required amount of vegetative area to remain undisturbed shall be based on the existing slope on the site and shall be clearly indicated on the proposed site plan or sketch plan. The natural vegetate areas shall be located along lot lines, natural drainage courses, wetlands, and steep slopes to the extent possible. In the case of PUDs, PRDs, and Condominiums, each individual lot need not meet the requirements of this Section, provided that the total project does meet the requirements of this Section.

<u>Percent of Lot to Remain in Natural Vegetative Cover</u>	<u>Existing Slope</u>
30 Percent	12 to 17 Percent
40 Percent	18 to 24 Percent
50 Percent	25+ Percent

4. Development of Slopes of Twenty-Five (25) Percent or Greater: Development on slopes of twenty-five (25) percent or greater shall be prohibited unless there are no other reasonable or prudent alternatives. If the property owner believes that no reasonable or prudent alternatives exist, he or she must first obtain a Special Land Use Permit as provided for in this Ordinance prior to any development on slopes of twenty-five (25) percent or greater. In reviewing the Special Land Use request, the Zoning Administrator or Planning Commission must find that the following conditions are met:

- (a) That no other reasonable or prudent alternatives exist.
- (b) That the development will not create excessive soil erosion or sedimentation and that it will not impair the quality of water discharged from the site.
- (c) That the peak rate of stormwater runoff after development will not exceed the peak rate of stormwater runoff that has occurred prior to the proposed development.
- (d) That all design requirements of this Section are met.

5. Determination of Slope: The determination of slope shall be made by the Zoning Administrator based on the Slope Map. The Slope Map shall be on file with the Township Clerk and the Zoning Administrator at all times. The Zoning Administrator shall make the best possible determination using the scale of the map and shall record his or her determination on a site plan that is made available by the property owner. In cases where there is more than one slope category on a lot or proposed development, the Zoning Administrator shall indicate these areas on the site plan.

If the property owner disagrees with the slope determination made by the Zoning Administrator, he or she may request a review of the determination by the Planning Commission during the site plan review process. In making its case, the property owner shall present topographic mapping or a survey prepared and sealed by a licensed community planner, a licensed architect, a registered civil engineer, or a licensed surveyor. Based on the evidence presented by the Zoning Administrator and the property owner, the Planning Commission shall make a slope determination and shall record its decision on the proposed site plan.

D. Development on Ridge Lines: A "ridge line" shall be defined as a line at which a critical slope area breaks to a slope of less than eight (8) percent for a distance of a least twenty (20) feet. A "critical slope area" shall be defined as all slopes facing Crystal Lake that have a significant portion of their grade being twelve (12) percent or greater for a distance of at least one hundred (100) feet.

1. All principal buildings shall be set back at least fifty (50) feet from all ridge lines.
2. All principal or accessory buildings or structures located within one hundred (100) feet of a ridge line shall not exceed eighteen (18) feet in height.
3. All accessory structures, such as but not limited to signs, sheds, garages, and satellite dishes, shall be set back at least thirty (30) feet from all ridge lines.
4. A building setback from the ridge line of only twenty (20) feet may be permitted if any of the following conditions exist:
 - (a) There are no other reasonable or prudent alternatives to achieve the required fifty (50)-foot setback.
 - (b) There would be significant environmental consequences if the fifty (50)-foot setback was required.
 - (c) The building is not located within a special or unique viewing area or view shed within the Crystal Lake Overlay District.

5. All existing vegetation located within twenty (20) feet on either side of the ridge line shall be maintained as a vegetative buffer in accordance with this Section.

(a) Removal of vegetation in the natural vegetative buffer shall be limited to no more than twenty-five (25) percent of the length of this buffer, provided that cutting of this twenty-five (25) percent shall not create a clear-cut opening greater than twenty-five (25) feet wide for every one hundred (100) feet of ridge line.

(b) Natural shrubbery, trees, or other vegetation shall be preserved as far as practical and, where removed, shall be replaced with other naturally occurring vegetation that is equally effective in retarding runoff, preventing erosion, and preserving natural beauty. A mowed lawn is not a desirable vegetation buffer adjacent to the ridge line.

(c) Native plants, shrubbery, and trees are encouraged when new vegetation is planted.

(d) Existing soil and organic matter shall not be altered or disturbed within the natural vegetative buffer.

E. Private Roads: All private roads located in the Watershed Overlay District shall meet the requirements of this Section.

1. Private roads shall not be located within thirty (30) feet of Crystal Lake or within ten (10) feet of a wetland or stream.

2. Private roads in hilly terrain shall be encouraged to locate along natural contours of the land in order to minimize cutting, filling, and erosion.

F. General Design Standards: For all developments in the Watershed Overlay District, the following general design standards shall be followed:

1. Natural vegetation shall be maintained wherever possible. If the removal of vegetation is required, reestablishment of a compatible plant material shall be required.

2. Existing mature trees shall be incorporated into the project design where feasible.
3. Natural drainage courses shall be protected from grading activity.
4. Where known, groundwater flow patterns shall not be interrupted.
5. Slopes created by the grading of the site should generally not exceed a slope ratio of one (1) foot of vertical slope to three (3) feet of horizontal distance.
6. Buildings shall be clustered as much as possible to retain open space and surrounding tree cover and to minimize changes in topography.
7. Screening along roadways shall make maximum use of berming and landscaping but shall not interfere with sight distances.

G. Construction Guidelines: For all developments in the Watershed Overlay District, the following construction guidelines shall be followed:

1. Whenever feasible, natural vegetation shall be retained and protected.
2. Where inadequate vegetation exists, temporary or permanent vegetation shall be established.
3. All exposed slopes and graded areas shall be landscaped with ground cover, shrubs, and trees as soon as possible.
4. The smallest practical area of land shall be exposed at any one time during development.
5. When land is exposed during development, the exposure shall be kept to the shortest practical period of time and, if possible, shall be scheduled during seasons of minimum precipitation.
6. The permanent final vegetation and all structures shall be installed as soon as practical.

7. Trees are susceptible to all development in their immediate vicinity; and, unless extreme measures are taken during construction to protect them, their life span will inevitably be shortened. The developer must demonstrate how trees will be protected during construction or how to relocate trees if necessary.

8. For relocating trees, the root ball must be approximately ten (10) to twelve (12) inches in diameter for every inch of the tree's diameter. Adequate drainage and backfill shall be necessary to complete the relocation. Root protection during construction is essential in saving mature trees. Recommended techniques include using a geotextile aeration mat to allow structures to have adequate ventilation, while protecting the roots from excessive compaction and steel-reinforced concrete paving patterned with voids to be filled with gravel or grass that allow drainage, while protecting the tree from root compaction in highly trafficked areas.