

## Article 12 ENVIRONMENTAL PROTECTION

### **Section 12.1 Purpose**

The purpose of this Article is to promote a healthy environment as it relates to natural resources and sensitive ecosystems, the provision of adequate sewage disposal and potable water, and reduction of environmental nuisances associated with noise, lighting, odors and vibrations.

### **Section 12.2 Natural Resources, General**

**A. Compliance with Local, County, State, and Federal Regulations:** All land uses and construction activities shall comply with to the provisions of this Ordinance and all local, county, state and federal rules and regulations including the requirements of the County Health Department and Drain Commissioner; regulations pertaining to the loading/unloading, transport, storage, use and/or disposal of hazardous substances including fuels and other flammable liquids; and requirements of the Michigan Department of Environment, Great Lakes and Energy including those applying to high risk erosion areas, air and water quality protection, use and disturbances to wetlands, fills in or near water bodies or in flood plains, stream crossings, waste disposal, and discharges into the air, surface or ground waters.

**B. Sensitive Lands:**

1. Avoidance of Significant Environmental Areas: Where a portion of a lot is characterized by sensitive or fragile environmental features, including wetlands, hydric soils, or flood plains, new development on the lot shall only occur on those portions of the lot void of such features where reasonably feasible. Where not reasonably feasible, new development shall comply with all county, state and federal laws, rules and permit and approval requirements.
2. County, State and Federal Permits: Except where required to do so by state or federal law, the Township shall not give final approval to any land use which requires a county, state, or federal permit until such permit has been obtained and satisfactory evidence has been submitted verifying the acquisition of the necessary permits.
3. Mitigation: The Township may require mitigation measures be taken to replace those resources disturbed or destroyed by a land use, or to otherwise lessen the impact of a new land use upon natural resources and sensitive areas.

**C. Clearing of Top Soil, Grading, and Drainage:**

1. Removal of Topsoil: Stripping and removal of topsoil from a lot is prohibited prior to the completion of all approved site improvements and the seeding, sodding, and landscaping of all disturbed areas, except where expressly authorized as part of an approved site plan. "Disturbed areas" shall be interpreted to mean any area of a lot that is altered by grading or other construction activities and which area is not proposed to be paved or otherwise built upon. This subsection (1) shall not apply in the case of a single family dwelling for which a zoning permit and building permit has been issued, provided the topsoil to be removed is limited to the immediate area of the proposed site improvements according to such permits.
2. Drainage/Flow Restrictions:
  - a. Temporary and permanent ground elevations surrounding a building or structure shall be designed and landscaped such that surface waters flow away from the building or structure.
  - b. It shall be prohibited to increase the rate or quantity of water runoff upon adjacent properties or public roads, to cause erosion or filling of a roadside ditch, stream or other water body, to block a public watercourse, or create standing water over a sewage disposal drainage field.
  - c. See Section 12.3 regarding buffer areas for natural resources and Section 12.4 regarding storm water management.
3. Nuisance Conditions: No grading or modifications to existing drainage patterns, including the erection of retaining walls, shall result in nuisance conditions for adjacent lots including increases in the quantity and/or rate of water runoff upon such lots.

**D. Groundwater Interference or Diversions:** No use, activity or undertaking shall occur on a lot that interferes with, degrades the quality of, alters the groundwater level or otherwise negatively impacts (in a measurable fashion) the groundwater on or for an adjoining or nearby lot not owned by the person or entity causing such impact, interference, or lessening of such groundwater. Groundwater or surface water shall not be withdrawn or diverted so as to unreasonably impact or adversely affect an adjoining or nearby lot.

## **Section 12.3 Natural Resources, Buffer Areas**

**A. Definitions:** For the purpose of this Section, the following words and phrases shall have the following meanings:

1. Impervious Cover: Any manmade paved, hardened or structural surface regardless of material including but not limited to rooftops, buildings, streets, roads, decks, patios including those of a brick or stone material, swimming pools, and any concrete or asphalt.
2. Natural Feature: A wetland or watercourse.
3. Natural Feature Edge: The ordinary high water mark, except that in the case where there exists a bank along the natural feature such as a stream or creek bank, where the bank exceeds a slope of ten percent (10%), the natural feature edge shall be considered the top of the bank or a line thirty (30) feet from the ordinary high water mark, whichever is less.
4. Ordinary High Water Mark: The line between upland and bottomland which persists through successive changes in water levels below which the presence and action of the water is so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil, and the vegetation. In the case of Lake Huron, the ordinary high water mark shall be construed to be set at 581.5 feet above sea level as established by the United States Army Corps of Engineers.
5. Watercourse: Any waterway including a river, stream, creek, lake, vernal pool, pond, or any body of surface water having definite banks, a bed and visible evidence of a continued flow or continued occurrence of water.
6. Wetlands: Land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support, wetland vegetation or aquatic life, and is commonly referred to as a bog, swamp, or marsh.

**B. Natural Feature Setback Required:**

1. Buildings and Structures Greater Than Three (3) Feet in Height: A natural features setback of fifty (50) feet shall be maintained from the natural feature edge for all buildings, and any structures in excess of three (3) feet in height above the ground below, except as follows:
  - a. The minimum natural features setback in the case of Lake Huron shall be thirty-five (35) feet, subject to Footnote 7 of Table 3-4 of Article 3.
  - b. Excluding (a) above, where there exists one (1) or more dwellings located along such natural feature and where such one or more dwelling is within one hundred fifty (150) feet of a side lot line of the lot on which construction of a dwelling is proposed, the required setback shall be the average setback of such existing dwellings measured from the natural feature edge. However, in no case shall such natural feature setback be less than thirty-five (35) feet nor shall such setback be required to be greater than fifty (50) feet. Steps, and those portions of unroofed decks and porches with a floor surface eighteen (18) inches or less above the ground, shall not be considered in determining such average setback. Where only a portion of a dwelling is located within the one hundred fifty (150) foot measured distance, the setback of the entire dwelling shall be used for determining such average setback.
2. Structures Three (3) Feet or Less in Height: Unless otherwise specified in this Ordinance, a natural features setback of twenty-five (25) feet shall be maintained from the natural feature edge for all decks, patios, and any structures of three (3) feet or less in height above the ground below.

**C. Use Restrictions within a Natural Feature Setback:** Within a natural feature setback, unless and only to the extent determined to be in the public interest by the designated approving body for the proposal, there shall be no clearing, grubbing or stripping; no removal of vegetation; no application of fertilizers or pesticides; no dredging, grading, excavation, removal or addition of soil or filling of land; no erection or addition of structures, buildings or any other construction including concrete or asphalt paving; and no installation of any impervious cover. In addition, no vegetation cutting or removal within the natural features setback shall occur prior to all approvals from the designated approving body(s) have been obtained.

1. Determination of Public Interest: In determining if proposed construction or operations in a natural resources setback are in the public interest, the benefit that would be expected to result from the proposal shall be balanced against the reasonably foreseeable detriments, taking into consideration the local, state and national concern for the protection and preservation of the natural feature in question. If, as a result of such a balancing, there remains a debatable question whether the proposal is clearly in the public interest, authorization for the construction and/or operation within the natural feature setback shall not be granted. The following criteria shall be applied in undertaking this balancing test:
  - a. The relative extent of the public and private need for the proposed activity;
  - b. The availability of feasible and prudent alternative locations and methods to accomplish the

- expected benefits from the activity;
- c. The extent and permanence of the beneficial or detrimental effects which the proposed activity may have on the public and private use to which the area is suited, including the benefits the natural feature and/or natural feature setback provides;
- d. The probable impact of the proposed construction and/or operation in relation to the cumulative effect created by other existing and anticipated activities on the natural feature to be protected;
- e. The probable impact on recognized historic, cultural, scenic, ecological, or recreational values, and on fish, wildlife and the public health;
- f. The degree of proposed encroachment into the natural features setback, and the proximity of the proposed construction and/or operation in relation to the general natural feature, taking into consideration the degree of slope, general topography in the area, soil type and the nature of the natural feature to be protected;

**D. Exemptions:** If and to the extent the Township is prohibited from regulating the proposed activity in or on the respective natural feature by its ordinances or the laws of county, state or federal government or the rules of county, state or federal agencies, regulation under this Section shall be exempted. In addition, the following activities shall be exempted from regulation under this Section provided such activities shall comply with all county, state or federal laws and the rules of county, state or federal agencies, and all necessary approvals and permits have been granted. It is not the intent of this subsection (D) to exempt regulation by other ordinances and laws applicable to the natural feature.

1. Installation of a fence.
2. Maintenance of previously established lawn areas.
3. Grading and filling necessary in order to conform to express requirements imposed by the Township.
4. Installation of docks for watercourse use provided the portion of such dock or access way extending through or across a wetland does not exceed ten (10) feet in width at any point.
5. Planting of non-invasive trees and other vegetation, but not the use of fertilizers.
6. Work consisting of the repair or maintenance of any lawful use of land approved for such use.
7. Agriculture, landscaping, gardening and lawn maintenance, including the removal of dead and diseased trees.
8. The clearing of up to thirty percent (30%) of the vegetation in the natural features setback to afford views and/or access to the natural feature, provided adequate measures are taken to prohibit the exposure of bare soil and soil erosion, such as the establishment of grasses or other vegetative cover.
9. Any lawful activity that is under construction and for which all necessary permits have been granted.

## **Section 12.4 Storm Water Management**

**A. Construction Liability:** During the construction process, both the owner of the property involved and the contractor doing the work shall be jointly and severally responsible and liable for storm water runoff, flooding, or other water problems or damages to other properties or public roads caused by or attributable to such construction. The Zoning Administrator shall have the authority to suspend or revoke a zoning compliance permit should the requirements of this section be violated. No such suspended or revoked zoning compliance permit shall be reinstated until the property owner posts monetary security with the Township as determined by the Zoning Administrator. Once construction has been completed and thereafter, the owner of the property involved shall be responsible for ensuring that drainage and storm water from that property do not adversely impact adjoining properties, lakes, streams, or wetlands.

**B. Drainage Plans:** In the case of a use subject to site plan approval, the site plan submittal shall include a drainage and storm water runoff site plan for review by designated site plan review bodies. Such submittal shall be prepared and signed by a registered engineer and shall include the final contours and drainage patterns after the construction has been completed. The submittal shall indicate what site plan measures shall ensure compliance with this Ordinance including this Section. The site plan approving body may require changes to such drainage and storm water runoff site development plan prior to the approval of such drainage and storm water runoff site development plan and prior to the issuance of a zoning permit. The applicant shall reimburse the Township for any reasonable fees and cost incurred by the Township's reliance on a professional engineer or other qualified professional requested by the Township to review such plan. The landowner shall fully comply with any drainage and storm water runoff site plan as approved by the Township.

1. In the case of a use subject to plot plan approval according to Section 2.4, the Zoning Administrator may require a drainage plan where on-site or adjacent conditions, and the proposed modifications, raise reasonable concerns about adequately addressing storm water including erosion, flooding, and off-site impacts.

**C. General Standards:** Uses shall be designed, constructed, and maintained to prevent flooding, protect water quality, reduce soil erosion, maintain and improve wildlife habitat, and contribute to the aesthetic values of the project. In meeting these requirements, uses subject to site plan approval according Article 14 shall comply with all of the following standards:

1. All storm water drainage and erosion control plans shall meet the rules and regulations of the County Drain Commissioner and any additional regulations as this or other ordinance may provide, including standards pertaining to discharge volumes and the design of retention and detention areas. Compliance with such standards shall, to the maximum extent feasible, utilize nonstructural control techniques such as limitation of land disturbance and grading; maintenance of vegetated buffers and natural vegetation; minimization of impervious surfaces; use of terraces, contoured landscapes, runoff spreaders, and grass or rock-lined swales; and use of infiltration devices.
2. The particular facilities and measures required on-site shall reflect and incorporate existing topographic conditions, natural features, wetlands, and watercourses on the site.
3. Storm water management systems shall be designed to prevent flooding and the degradation of water quality related to storm water runoff and soil erosion from proposed development for adjacent and downstream property owners.
4. Site development and storm water management systems shall maintain natural drainage patterns and watercourses.
5. The conveyance of storm water shall rely on swales and vegetated buffer strips to the greatest extent feasible and practical.
6. Drainage systems shall be designed to be visually attractive including the integration of storm water conveyance systems and retention and detention ponds into the overall landscape concept. Ponds shall be designed to be naturally contoured, rather than a square or rectangular design.
7. It shall be prohibited to increase the rate or quantity of runoff upon adjacent properties or public roads, to cause erosion or filling of a roadside ditch, stream or other water body, to block a public watercourse, or create standing water over a sewage disposal drainage field.
8. Whenever a landowner is required to provide on-site storm water retention and/or surface drainage to wetlands, or whenever other protective environmental measures including monitoring devices are required, such measures or facilities shall be provided and maintained at the landowner's expense. The landowner shall provide satisfactory assurance to the Township, by written agreement, that the landowner shall bear the responsibility for providing and maintaining such measures or facilities.
9. Sand, dirt and similar materials shall not be used to build up or add to the natural grade of the land in connection with the installation, building, or expansion of a building or structure if such alteration would unreasonably increase water runoff or drainage onto one or more adjoining properties due to the amount, concentration, or flowage rate of runoff waters, or otherwise present a safety hazard to children or pedestrians. In the case of a use, building or structure subject to plot plan review according to Section 2.4(B), any party aggrieved by the decision of the Zoning Administrator under this section may appeal that determination to the Zoning Board of Appeals within the time limits and procedures specified in Article 16 of this Ordinance.

**D. Minimizing Storm Water Runoff**

1. Roads constructed as part of a subdivision or similar unified development shall be designed to minimize storm waste runoff such as limiting road paving to the minimum necessary width, including cul-de-sacs, while adequately addressing anticipated traffic levels, on-street parking, and emergency vehicle needs.
2. Roof-top runoff shall be directed to pervious areas such as lawns, open channels, or other vegetated areas.
3. Clearing and grading shall be limited to only those locations approved for such landscape alterations as delineated on the approved site plan.

**E. Use of Wetlands:** Wetlands may be used for storm water management if all the following conditions are met:

1. All runoff from the development will be pre-treated to remove sediment and other pollutants prior to discharge to a wetland. Such treatment facilities shall be constructed before property grading begins. Storm water runoff discharged to wetlands must be diffused to non-erosive velocities before it reaches the wetland. Direct discharge of untreated storm water to a natural wetland is prohibited.
2. Wildlife, fish, or other beneficial aquatic organisms and their habitat in the wetland shall not be impaired.
3. The wetland has sufficient holding capacity for storm water, based on calculations prepared by the applicant and approved by the township after consultation with an engineer of applicable expertise.
4. Adequate on-site erosion control is provided to protect the natural functioning of the wetland.
5. Adequate private restrictions are established, such as a conservation easement over the wetlands, to

- insure that the wetland is not disturbed or impaired in the future relative to the needed storage capacity.
6. Applicable permits from the Michigan Department of Environmental Quality and any other agency of jurisdiction are obtained.

#### **Section 12.5 Potable Water and Sewage Disposal**

Any building intended for human occupancy and used for dwelling, businesses, industrial, recreational, or institutional purposes shall not be erected, altered, used or moved upon any premises unless said building shall be provided with a potable water supply and waste water disposal system that ensures a safe and effective means of collection, treatment, and disposal of generated wastes. All sewage disposal and potable water facilities shall be constructed and maintained in accordance with the requirements and standards of the County Health Department as well as those of other applicable local, county, state, or federal agencies.

#### **Section 12.6 Vibration**

The operation of any land use including equipment and devices associated therewith, that creates vibrations that are typically discernible by human senses at or beyond the lot line of the source, is prohibited. For the purposes of this Section, "typically discernible by human senses" means vibrational motion of such character to cause a normal person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or observation of moving objects.

#### **Section 12.7 Glare and Heat**

Any operation that produces glare or heat shall be conducted within an enclosed building or other enclosure so as to be completely imperceptible from any point beyond the lot lines of the lot upon which the source of glare or heat is located.

#### **Section 12.8 Noise and Sound**

All land uses shall comply with any Township ordinances pertaining to noise and/or sound.

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