

27.00

**ARTICLE XXVII
ENVIRONMENTALLY SENSITIVE AREAS**

27.10 REGULATIONS OF ENVIRONMENTALLY SENSITIVE AREAS.

All land uses shall comply with the standards set forth in this section regulating the land use of environmentally sensitive areas. These requirements shall be supplemental to land use restrictions and other applicable zoning regulations.

27.11 INTENT.

It is the intent of these regulations to identify and guard those areas of the Township that are considered to be environmentally sensitive to development due to soil types, drainage, vegetation, wildlife habitats, historical features or other factors that are subject to being seriously endangered, damaged or destroyed if allowed to develop in a manner inconsistent with their conservation and preservation. Since the welfare and well-being of the citizens of the Township are directly linked and related to the natural environment of the area, it is recognized by this Township that in order to maintain sensitive areas in their natural and /or historical conditions for the benefit of mankind, it is necessary to protect such areas.

27.12 DEFINITION OF ENVIRONMENTALLY SENSITIVE AREAS.

Areas which meet any one (1) of the following definitions shall be considered an Environmentally Sensitive Area:

A. WETLANDS AND LANDS ADJACENT TO WETLANDS.

1. The following areas shall be considered wetlands:

a. Any area identified as a wetland by Michigan Department of Natural Resources. See Page 109.

(1) Those area wholly or largely covered by marsh or swamp flora.

2. The following lands shall be considered adjacent to wetlands:

a. All lands lying within five hundred (500) feet of an identified wetland.

B. DUNELAND.

The following areas shall be considered duneland:

1. When the following soils predominate, singly, or in any combination (using the standard U.S. Soil Conservation Service classification), the area shall be considered a duneland:

- a.** Wind eroded land, sloping
- b.** Wind eroded land, strongly sloping

2. Those areas wholly or largely covered by flora characteristic of beaches, or stabilized or unstabilized dunes.

C. SOILS SUBJECT TO LEACHING.

1. When the following soils predominate, singly or in any combination (using the standard U. S. Soil Conservation Service Classification), they shall be considered subject to leaching:

- a. Alpena-East Lake gravelly loamy sands
- b. AuGres-Saugatuck Sands
- c. Croswell loamy sands
- d. Croswell-Rubicon sands
- e. East Lake-Mancelona loamy sands, 0-6 per-cent slopes
- f. Eastport Roscommon sands
- g. Gravelly land
- h. Gravel pits
- i. Grayling sand
- j. Kalkaska loamy sand
- k. Kalkaska sand
- l. Lake beach and Eastport sand
- m. Leelanau-Kalkaska loamy sands
- n. Mancelona loamy sands
- o. Mancelona-East Lake loamy sands
- p. Rubicon sands

2. When the following soils predominate, singly or in any combination (using the standard U. S. Soil Conservation Service Classification), they shall be considered subject to leaching if effluent reaches the subsoil:

- a. East Lake- Mancelona loamy sands, 6-35 per-cent slopes
- b. Karlin loamy sands
- c. Karlin sandy loams
- d. Mancelona gravelly sand loam
- e. Montcalm-Kalkaska loamy sands

D. STEEP SLOPES.

The provision of this Ordinance pertaining to steep slopes shall be applicable on slopes exceeding fifteen (15) per-cent. When the slope on a site is in question, the Township may require five (5) to ten (10) foot contour maps at and near any proposed structures (buildings or roadways).

E. SHORELINE AREAS.

Shoreline areas shall be defined as those areas lying within fifty (50) feet of a stream, river, pond, lake or wetland area, or the designated flood plain of these water bodies, whichever is greater. For the purposes of this Ordinance, the measurement shall be taken as follows:

- 1. For any stream or part thereof, which is generally less than 15 feet in width: from the center of the channel.
- 2. For any stream or part thereof, which is generally greater than 15 feet in width, and for any pond, lake or wetland: the line of the mean high water level, as indicated by eroded stream banks, changes in vegetation, or other reliable indicators.

F. GROUND WATER RECHARGE ZONES.

The following land shall be considered Ground Water Recharge Zones:

1. Those lands which, based on well drilling logs, the Grand Traverse County Health Department identifies as ground water recharge zones or probable ground water recharge zones.

G. OTHER AREAS.

Other areas may be designated by the Township Board, after review and recommendation of the Township Planning Commission, as areas of Environmental Sensitivity, including, but not limited to:

1. Rare or valuable ecosystems;
2. Significant undeveloped agricultural, grazing or watershed areas;
3. Forests and related land which require long stability for continuing renewal;
4. Scenic or historical areas (including burial grounds);
5. Archaeologically significant areas; and
6. Such additional areas as may be determined by the State of Michigan or the Township.

27.13 ENVIRONMENTALLY SENSITIVE LAND USE PERMIT APPLICATION;

An Environmentally Sensitive Land Use Permit application shall be required for construction or development, including but not limited to tree harvesting, of Environmentally Sensitive Areas regardless of size, and in addition to (or as part of) any other applicable permit required by this Ordinance. The application for the land use permit shall:

A. Demonstrate that the proposed development will not adversely affect the environmental quality of the property and the surrounding area by means of the following:

1. The applicant shall provide written evidence that the proposed development of the property will conform to the provisions of such Soil Erosion and Sedimentation Control as may be in effect in accordance with the Soil Erosion and Sedimentation Act of 1972 (P.A. 1972, #347, effective March 30, 1973) as enforced by Grand Traverse County.
2. The applicant shall provide written evidence that a sewage treatment or disposal system has been approved by the County Health officer and Waste Water Division of the Department of Natural Resources when applicable and that a sewage treatment or disposal system is in conformance with this Ordinance, including but not limited to setbacks from water bodies, height above water level and other applicable requirements.
3. The applicant shall provide evidence that the cutting and removing of trees and other native vegetation will be performed according to the following standards:
 - a. Cutting shall be done in a manner as to avoid erosion, to preserve rare species of trees and other vegetation, to preserve scenic qualities and to preserve desirable screening from neighboring habitation.

- b.** Clear cutting (or tree removal) shall be permitted when necessary to accommodate building sites as follows:

(1) Grading or clearing of a site shall not commence prior to issuance of an Environmentally Sensitive Land Use Permit as required by this Ordinance and a building permit, if required.

(2) For single family dwellings and amenities for the private (non-commercial) use of the occupants of the single family dwelling, said clear cutting shall not exceed a ratio of 10,000 square feet per acre.

B. Provide such data concerning the physical development and extent of disruption to the site as may be required by the Planning Commission for a site plan review.

C. The review of the site plan shall be made in the manner prescribed in Sec. 25.00 of this Ordinance (Site Plan Review).

27.14 SPECIAL REQUIREMENTS FOR ENVIRONMENTALLY SENSITIVE AREAS.

A particular site may be classified under one or several definitions as being Environmentally Sensitive. In those cases, the most restrictive provision of these regulations shall apply.

A. WETLANDS AND LANDS ADJACENT TO WETLANDS.

1. No in-ground or above ground tanks, bins or vessels for the storage of fuels or chemicals shall be permitted in wetland areas.

2. Above ground tanks or vessels or bins for the storage of fuels or chemicals shall be permitted on lands adjacent to wetland areas provided that they are installed in such a way that leakage or spillage of any or all contents shall be safely contained and prevented from reaching the soil.

A detailed, written plan for the containment and clean-up of any leakage or spillage shall be kept on file in the office of the Zoning Administrator and a copy of this plan shall be furnished to the Fire Chief. Any leakage or spillage shall be immediately reported to the Township Zoning Administrator.

3. Stormwater and all other water run-off, whether retained or detained, shall be filtered or purified as necessary to be suitable for introduction to the wetland prior to allowing such run-off to flow or percolate to the wetland area so that the wetland and its waters are not degraded.

4. Discharge of any aqueous or wet or dry materials on the soil of wetlands or lands adjacent to wetlands shall not be permitted unless it can be shown that such material will not, over time, result in the degradation of the wetland and its waters.

B. DUNELANDS.

1. Because such soils as defined above percolate at a rate such that:
 - a. Wastes may percolate through the edaphic layer of bacterial activity before acted upon by the bacteria, or
 - b. By passing untreated into ground water sources, wastes may contaminate surface water bodies fed from ground water sources, on-site disposal shall not be permitted unless an on-site sewage system be designed to insure the effluent will not degrade the quality of ground waters. The on-site sewage system shall be located a minimum of one hundred (100) feet from any existing or proposed well location. The system must be approved by the Grand Traverse County Health Department.
2. No in-ground tanks, vessels or bins for the storage of fuels or chemicals shall be permitted.
3. Above ground tanks, vessels or bins for the storage of fuels or chemicals shall be installed in such a way that leakage or spillage of any or all contents will be safely contained and prevented from reaching the soil.

C. SOILS SUBJECT TO LEACHING.

1. Where a land use may entail intentional or accidental application or discharge of chemicals, fuels, waste or effluent which could prove harmful to ground water, soil borings and engineering reports analyzing the potential impact shall be required and special conditions shall be imposed to assure that ground water quality and the standards recommended by the County Health Department and the Grand Traverse Soil Conservation District are fully met. In addition, elements of an environmental impact statement may be required (see section 27.15 of this Ordinance).
2. On site sewage disposal will be allowed only if designed such that effluent will not degrade the quality of surface and ground waters.
3. No in ground tanks, vessels or bins for the storage of fuels or chemicals shall be permitted.
4. Above ground tanks, vessels or bins for the storage of fuels or chemicals shall be installed in such a way that leakage or spillage or any or all of their contents will be safely contained and prevented from reaching the soil.

A detailed, written plan for the containment and clean up of any leakage shall be kept on file in the office of the Zoning Administrator and a copy of this plan shall be furnished to the Fire Chief. Any leakage or spillage shall be immediately reported to the Township Zoning Administrator.

D. STEEP SLOPES.

1. No structure shall be permitted on a slope of greater than fifteen (15%) percent unless it shall be done in accordance with plans prepared for the site by a registered professional architect or engineer. Plans shall be prepared for the disposal of storm waters without erosion of topsoil and without sedimentation of any stream or other body of water.
2. Prior to approval, such plans for site alterations for steep slope areas shall be provided to the Grand Traverse County Drain Commission for comment or review and recommendation. A permit may be conditioned to require compliance with such recommendations.

E. SHORELINES.

1. The plans for filling, grading or other alteration of natural drainage within the shoreline area shall be reviewed and approved by the Planning Commission prior to commencing construction, earth movement or excavating.
2. Whether or not a land use permit is required, except if required by state law or to allow occasional parking sites so that two vehicles may pass, no existing private road and no newly constructed private road shall be more than twelve (12') feet wide, except where necessary to allow access to emergency vehicles. A private road shall mean any road other than a state or county road in the shoreline area.
3. The digging or drilling of wells or domestic water supply sources in the flood plain is prohibited.
4. Setbacks for structures shall comply with section 12.11 of this ordinance.

F. GROUNDWATER RECHARGE ZONES.

1. Any land use which will result in the coverage of more than thirty percent (30) of a lot or parcel of land with structures and/or parking and/or storage areas with impervious surfaces shall be designed and constructed in such a way that all run-off water shall be collected, retained, filtered or purified as necessary to be suitable for return by natural percolation to the naturally occurring aquifer, and returned to the land in such a way that the full, natural recharge of the ground water aquifer is maintained. Such plans for land uses shall be provided to the Grand Traverse County Drain Commission for comment or review and recommendations. A permit shall be conditioned to require compliance with such recommendations.

G. OTHER AREAS.

1. Archaeologically or historically significant areas and structures: No development, excavation or modification of such areas or structures may be undertaken without first obtaining an Environmentally Sensitive Land Use Permit which shall be conditioned to meet the requirements and standards recommended by recognized experts in the fields of archeology and/or history.

2. Other areas designated by the Township as Environmentally Sensitive Areas, in accordance with Section 27.12 G, may have special requirements for development.

27.15 ENVIRONMENTAL IMPACT STATEMENT.

The purpose for requiring the Environmental Impact Statement (EIS) is to evaluate the impact of a proposed project on the environmental quality of the project area and adjacent lands. The objective of the EIS is to encourage the development of those projects which protect or enhance the environmental quality of the project area by conserving its natural resources. In reviewing each EIS, consideration will also be given to the effect that the proposed project will have on the immediately adjacent properties as well as upon the entire environs of the Township which may be directly affected by it.

A. The Township Board and/or the Township Planning Commission shall require an Environmental Impact Statement for:

1. All development in Environmentally Sensitive areas when three (3) or more acres will be disturbed by development,
2. Any development which, in the opinion of the Planning Commission affects natural features of environmental sensitivity, or of archeological or historical significance which could be damaged or destroyed through alteration or development which is not done according to the requirements of this Ordinance.

B. The Township Board and/or the Planning Commission may require that the EIS include drawings, graphics and data including:

1. Name(s) and address(es) of the applicants(s).
2. Ownership (legal and/or equitable and/or beneficial) of applicants holding the proposed site property.
3. Name(s) and address(es) and professional qualifications of the proposed professional design team members, including the designation of the professional coordinator (or person responsible for the preparation of the EIS)
4. Project description and purpose including a descriptive explanation of the project, its nature, location, and purpose.
 - a. Six (6) copies of the schematic development plan of the proposed development showing:
 - b. General site location of the proposed development.
 - c. Major existing physical and natural features such as water courses, rock outcropping, wetlands, wooded areas, etc.
5. Location of the existing utilities and drainageways.

6. Location and names of public streets, parks, and railroad and utility rights-of-way within or adjacent to the proposed development.
7. General location and dimensions of proposed streets, driveways, sidewalks, pedestrian ways, trails, off-street parking, and loading areas.
8. General location and approximate dimensions of proposed structures.
9. Major proposed change of land form as new lakes, terracing, and excavating.
10. Approximate existing and proposed contours and drainage patterns of the area proposed to be developed showing two (2) foot contour intervals.
11. Sketch(es) showing the scale, character and relationship of buildings, streets and open space.
12. Approximate location and type of proposed drainage, water and sewage facilities.
13. Legal description of property.
14. An aerial photo and contour map showing the project site in relation to the surrounding area of the Township.
15. A general narrative, physical description of the site, including its dominant characteristics, its vegetative character, its present use, and other relevant information.

C. The Township Board and/or the Township Planning Commission may require that the EIS include one or more of the following reviews as applicable:

1. **Soil Review-** The soil review element shall include a short descriptive summary of the soil types found in the project area and whether they permit the use of septic tanks or require central sewer. Such report may be based on the "Unified Soil Classification System" as adopted by the U.S. Government Corps of Engineers and Bureau of Reclamation, January, 1952, or similar recognized U.S. Department of Agriculture, Soil Conservation Service System of Classification, and such standards for developability that have been offered for each environmental area.
2. **Natural Hazards Review-** This element consists of a resume of such natural hazards as periodic flooding, poor soil bearing conditions, and hazards peculiar to the site.
3. **Substrata Review-** The substrata review element shall include a descriptive summary of the various geologic bedrock formations underlying the project site. This will include the identification of any known aquifers, their approximate depths and, if being tapped for use, the principal uses to be made of these waters, i.e. irrigation, domestic water supply, industrial.

4. Surface and Groundwater Review- The surface groundwater review shall include the identification of all natural and man-made water features in the project site, and shall include the identification of all known confined and unconfined groundwater aquifers and their approximate water level or water table, and may be correlated with item 3., Substrata Review. Since the conservation of the natural sources and resources of fresh water in the Township is absolutely essential and must be a prime consideration, this review should quantify the effects of development on the quality of surface and groundwater, particularly with regard to possible degradation of such waters from sewage disposal.

5. Storm Drainage Review- The storm drainage review should clearly indicate how the storm drainage resulting from the proposed development will be handled.

The following aspects must be taken into account in the preparation of the review:

- a. Consider the location of the development in the natural drainage basins;
- b. Consider changes that the development may cause in natural drainage characteristics;
- c. Consider the effects of lake storage facilities on controlling storm run-off water retention, and recharging the aquifer;
- d. Consider the effects of the development on the characteristics of original groundwater recharge areas;
- e. Consider the influences of the proposed facilities on upstream and downstream conditions if along a water body.

6. Erosion Review- This review should show how erosion control shall be achieved and shall illustrate such plans, programs or schemes which may be required by any existing Soil Erosion and Sedimentation Ordinance. At a minimum, plans for compliance with the following minimum standards shall be required for construction and post-construction periods:

- a. Surface drainage designs and structures shall be "erosion proof". Control of the direction, volume and velocities which promote natural growths such as grasses, shall be included in the design in order that drainage waters may be impeded in their flow and percolation encouraged. These designs should include trash collection devices when handling street and parking drainage to trap solid waste and trash.
- b. Water course designs should similarly control volumes and velocities to prevent bottom and bank erosion. In particular, changes of direction should be such as to guard against undercutting of banks.

c. Where vegetation has been removed or has not been able to occur on surface areas such as in fill zones, it shall be the duty of the developer to stabilize and control said surface areas to prevent erosion and the blowing of surface materials through the planting of grasses, wind-breaks, etc.

7. Solid Waste Disposal- This review should show proposed methods for disposal of ALL SOLID WASTE using one or a combination of the following methods:

a. Solid waste transfer stations; or

b. Pick-up service by department of public works or by a licensed private waste hauler.

8. Potable Water Review- This review shall describe the source of potable water for each residence or other structure for which potable water may be used.

a. A letter shall be obtained from the water utility agency committing delivery of water service prior to issuance of any building permits for the development.

b. Any on-site operation producing excess fresh water must include provisions for the return of the water to the ground water table.

9. Industrial Waste Review- This review shall provide:

a. An air and water pollution efficiency inventory.

b. Provision for disposal and handling of liquid, gaseous and solid wastes, and,

c. Provisions for retention and treatment of water used in any industrial or commercial process before being returned to the aquifers.

10. Sewage Review- This review shall demonstrate whether on-site septic facilities or central sewer facilities are required for the development, according to the standards of the County Health Department and Waste Water Division of the Department of Natural Resources and this Ordinance.

If the development has its own sewage system or can be connected to an approved central sewer system, the review shall state the provisions for requiring all structures to be connected to the system, along with adaptability of any sewer system without impairment to a present or future public system.

11. Streams and Water Bodies Review- The proposed design treatment of natural, created or altered streams and other water bodies should be discussed in this review, focusing attention of pre and post development flow rate, capacity, quality (pollutant level), nature and cover of banks and other relevant factors. This review shall ensure that:

a. Effluent will not be discharged into such water bodies (from sanitary landfills or sewage);

b. The natural courses of streams etc. are not substantially altered;

c. Adequate means have been taken to trap (by natural vegetation or otherwise) and consume fertilizers, pesticides, herbicides and fungicide runoffs;

d. The water bodies will not be so altered as to cause:

- Siltation
- Accelerated Eutrophication
- Bottom or bank erosion
- Excessive weed or aquatic plant growth

12. Flora and Fauna Review. This review shall include a listing of the dominant terrestrial and aquatic plant species, as well as the major animal species native to the site, if any. Any unusual plant or animal species which may be considered endangered, or which may be considered unique to the area shall be so identified. This review shall:

a. Describe the effects of the proposed development on the listed species and their habitats, when appropriate.

b. Describe conservation efforts that will be needed to protect areas (such as dunes) from wind or water erosion and the extent to which the development will destroy vegetation that would ordinarily serve to prohibit such erosion.

c. Describe the preservation and proposed use of recreation areas and greenbelts, including conservation measures.

13. Archeological and Historical Resources Review. This review shall include the identification of all historical features (buildings, cemeteries, town sites, battles, Indian mounds, etc.).

In the site inventory, this review will also pinpoint indicators of unique geological formations and/or natural or artificial historical sites. The developer shall be responsible for the appropriate preservation of geographical, topographical or historical features, whether or not sufficiently significant for action (excavation, study, removal or preservation) by local, state or federal agencies.

14. Additional Data. The Township may require such additional data or information as determined necessary in order to make a thorough and exact environmental impact evaluation of the site and the effect of the proposed development.

15. WETLAND DEFINITION:

Wetland" means 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 and which is any of the following:

A. Contiguous to the Great Lakes or Lake St. Clair, an inland lake or pond, or a river or stream.

B. Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and more than 5 acres in size; except this subdivision shall not be of effect, except for the purpose of inventorying, in counties of less than 100,000 population until the department certifies to the commission of natural resources it has substantially completed its inventory of wetlands in that county.

C. Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and 5 acres or less in size if the department determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment, or destruction and the department has so notified the owner; except this subdivision may be utilized regardless of wetland size in a county in which subdivision (B.) is of no effect; except for the purpose of inventorying, at the time. (MDNR - P. A. 295, 1992)