

CHAPTER 5

NATURAL FEATURES PROTECTION REQUIREMENTS

- 5.01 Purpose.
- 5.02 Applicability.
- 5.03 Escarpments.
- 5.04 Drumlins.
- 5.05 Dunes.
- 5.06 Rockholes.
- 5.07 Woodlands.
- 5.08 Ridges and swales complexes.
- 5.09 Shoreland vegetation.
- 5.10 Wetland setbacks.

**5.01 Purpose.** These requirements are intended to preserve interesting geological features, protect against soil erosion and groundwater contamination, preserve the natural beauty of Door County, and protect wild flora and fauna.

**5.02 Applicability.** These requirements shall be in effect in all zoning districts. They shall be applied independently of other applicable requirements of this Ordinance. Wherever other requirements of this Ordinance conflict with requirements of this chapter, the most stringent requirement shall govern.

Commentary: Certain other natural features, not included in here, are subject to regulation. Presence of those natural features on property can significantly affect the way that that property may be used or developed. The reader is advised to consult the following references for pertinent regulations:

<u>Natural Feature</u>	<u>Regulatory Reference</u>
Bodies of Water	Chapters 30, 31, 88, and 144, Wis. Stats.
Floodplains	Door County Floodplain Zoning Ordinance
Wetlands	This Ordinance, s. 2.05(4)

**5.03 Escarpments.**

- (1) Purpose. The purposes of these regulations are to:
  - (a) Promote safe conditions by preventing placement of roads on highly inclined surfaces.
  - (b) Preserve escarpments as landmark features that contribute to the scenic diversity and attractiveness of the county.

(2) Determination. The location of escarpments subject to the requirements of this section shall be determined by reference to a map entitled "*Door County Escarpment Protection Areas*" on file in the office of the Planning Department.

Commentary: Generally, the escarpment protection areas include lengthy slopes of 20% and greater and the areas associated with the crest of the escarpment.

(3) Requirements.

(a) No roads or driveways shall be placed on slopes of 30-39% unless the roads or driveways are placed parallel to the escarpment face. No roads or driveways shall be placed on slopes of 40% or greater.

(b) The clearing of trees located within escarpment protection areas shall be permitted for:

1. Building footprints.
2. Sites for wastewater disposal systems.
3. Driveways.
4. The area on a lot extending not more than 25 feet from the exterior walls of principal buildings and 15 feet from accessory buildings.

(c) In the area on a lot lying between 25 feet and 100 feet from the exterior walls of principal buildings, selective clearing is permitted provided that:

1. No more than 30 percent of this area on the lot shall be cleared.
2. The clearing of the 30 percent described above shall not result in strips of cleared openings of more than 30 feet in any 100-foot wide strip nor create a cleared opening strip greater than 30 feet wide.
3. In the remaining 70 percent of this area, cutting and pruning shall leave sufficient cover to screen vehicles, dwellings, and other structures.

(d) In the area on a lot lying more than 100 feet from the exterior walls of principal buildings, and for lots which contain no principal buildings, selective clearing shall be permitted provided that within escarpment protection areas there shall be no cleared area greater than 5,000 square feet, and provided that the shade of the remaining trees over 15 feet in height covers at least 70% of the wooded land surface of the lot.

(e) Pruning of trees is permitted, except that trees shall not be pruned completely clear of branches above a height equal to one half the height of the trees.

(f) In addition, the woodlands located within escarpment protection areas shall also be subject to the requirements of s. 5.07, Woodlands.

#### **5.04 Drumlins.**

(1) Purpose. The purpose of these regulations is to protect the historical value and intactness of drumlins as unique land forms directly shaped by glaciers. Their existence demonstrates that the Door Peninsula shares a continuity with the glacial features in the remainder of Wisconsin and they contribute to the special aggregate landscape of Door County.

(2) Drumlins which are at least 25 feet in height and at least 150 feet in length are subject to the requirements in this section.

(3) Determination. The location of drumlins shall be determined by reference to a map entitled "*Door County Natural Features Map*" on file in the office of the Planning Department.

(4) Requirements.

(a) Drumlins shall not be mined, or in any other way removed, in part or in total, except for customary excavation necessary to construct foundations for permitted buildings or for utilities which serve permitted buildings.

(b) For any lot, the total area of the building footprints of all buildings placed on a drumlin shall not exceed 10% of the surface area of that portion of a drumlin located on the lot.

**5.05 Dunes.**

(1) Purpose. Dunes are an uncommon Door County landform formed by the dynamic forces of water and wind acting upon the land. The purposes of these regulations are to perpetuate the existence and intactness of the dunes as unique habitat areas and to protect the visual integrity of the dunes.

(2) Dunes which are at least 20 feet in height are subject to the requirements in this section.

(3) Determination. The location of dunes shall be determined by reference to a map entitled "*Door County Natural Features Map*" on file in the office of the Planning Department.

(4) Requirements.

(a) Dunes shall not be mined, or in any other way removed, in part or in total, except for customary excavation necessary to construct foundations for permitted buildings or for utilities which serve permitted buildings.

(b) For any lot, the total area of the building footprints of all buildings placed on a dune shall not exceed 10% of the surface area of that portion of a dune located on the lot.

**5.06 Rockholes.**

(1) Purpose. Rockholes provide easy opportunity for contaminated surface water to enter Door County's groundwater system. Since Door County's people rely on groundwater for drinking water, human health and public welfare will be benefited by minimizing opportunity for entry of contaminated surface water into rockholes. The purpose of these regulations is to reduce entry of contaminant-bearing surface water into rockholes.

(2) Each of the following shall be subject to the requirements of sub. (4):

(a) Rockholes where the rockhole opening is one square foot or greater in size.

(b) Rockholes where the area bounded by the associated rockhole depression is 100 square feet or greater in size.

(c) Rockhole channels where the rockhole channel cross-sectional area is 3 square feet or greater in size.

(3) Determination. Rockholes, particularly rockhole openings, can appear suddenly at the ground surface or disappear. Because rockholes are not necessarily permanent features on the ground surface, the location of rockholes on a lot shall be determined by the lot owner at time of zoning permit application or by a Zoning Administrator at time of lot inspection while processing the zoning permit application.

Commentary: Some rockhole openings and rockhole depressions receive sufficient surface water to cause formation of an eroded channel in the ground to form. This section places regulations upon those channels of the size specified in sub. (2), par.(c).

(4) Requirements. The requirements of either par. (a) or (b) shall be met.

(a) The following items shall not be placed within 75 feet of rockhole openings, rockhole depressions, or rockhole channels:

1. Buildings.
2. Surface water discharge pipes or channels that drain into a rockhole opening, rockhole depression, or rockhole channel.
3. Petroleum products storage facilities.
4. Wastewater treatment and disposal systems.
5. Livestock manure storage facilities.
6. Parking lots.
7. Livestock barnyards and feedlots.
8. Fertilizer distribution plants.
9. Sanitary landfills.
10. Animal shelters.
11. Kennels.
12. Salvage yards.

(b) Alternative protection plan. It is recognized that, in some instances, there may be other methods of groundwater protection regarding rockholes such as drainage diversion, berming, filling the rockhole, etc. A landowner may devise and submit an alternative protection plan for the prevention of groundwater contamination through rockholes. Such plan must be approved by the Door County Soil and Water Conservation Department and shall specify the measures to be undertaken. If approved, the applicant shall adhere to the requirements of the alternative protection plan rather than the requirements of par.(a).

**5.07 Woodlands.**

(1) Purpose. The woodlands of Door County significantly contribute to the county's scenic attractiveness and provide to people recreational opportunities. They provide habitat for numerous species of plant and animal life. The purpose of these regulations is to perpetuate the existence of the woodlands.

(2) Woodland areas possessing both of the following characteristics on the effective date of this Ordinance shall be subject to the requirements of sub.(4):

(a) The woodland area must be 5 acres or more in size, and

(b) The shade of trees over 15 feet in height must cover at least 70% of the land surface of the woodland area.

(3) Determination. The location of regulated woodland areas shall be determined by using aerial photographs taken at or near the effective date of this Ordinance coupled with a field survey, if necessary.

(4) Requirements.

(a) Woodland clearing. The proportion of total woodland area on a lot that may be cleared shall not exceed that shown below:

<u>Zoning Districts</u>	<u>Proportion of Total Woodland Area That May Be Cleared</u>
W, NA, EA, PA, GA, CS, HL3.5, HL5, HL10, ES	20 %
SF20, SF30, SE, RR, HD	40 %
MC, RC, LI	70 %
CC	100 %

(Amended: May 28, 1996 - Ord. 13-96)

(b) Cleared areas which are 10,000 square feet or greater shall be included in the calculation of the percent of woodland area that is cleared. Cleared areas which are less than 10,000 square feet shall not be included in the calculation of the percent of woodland area that is cleared provided that the noncleared area on the lot still meets the characteristic listed in sub. (2), par.(b).

(5) Woodland management. Woodlands that have been left remaining in compliance with sub. (4), par. (a) may be used or managed as follows:

(a) Selective cutting is permitted, provided that after cutting, the woodland area on a lot still meets the characteristics shown in sub. (2), par. (b), and provided that the selective cutting does not result in a cleared area greater than 10,000 square feet.

(b) Clearcutting is permitted subject to the following requirements:

1. Clearcutting is allowed only in areas where 40% or more of all the trees in the area are either aspen, white birch, or white cedar trees over 10 inches in caliper.

2. No area of clearcutting shall exceed 10 acres in size.

3. Clearcutting on contiguous land under any one ownership shall not exceed the greater of 10 acres or 25% of the area referenced in subd. 1. in a 10-year period.

4. A clearcut area shall not be converted or developed for another use, but shall be allowed to regenerate woodland cover naturally.

Commentary: The purpose of the clearcutting provisions is to aid in the propagation of those tree species which are benefited by periodic clearcutting in order to regenerate.

(c) Salvage cutting of trees severely damaged by storms, ice, fire, insects, fungi, or disease is permitted. An area of salvage cutting may not be converted or developed for another use, but shall be allowed to regenerate woodland cover naturally or by replanting.

(d) Other woodland management techniques designed to enhance or protect the woodlands are permitted upon written approval of a qualified forester as a sound forestry practice as defined in NR 46.02 or NR 46.15, Wis. Admin. Code.

(6) Woodlands that are located in escarpment protection areas are also subject to provisions contained in s. 5.03., escarpments; woodlands that are located in shorelands are also subject to the shoreland vegetation protection provisions listed in s. 5.09, shoreland vegetation.

**5.08 Ridges and swales complexes.**

(1) Purpose. The purpose of these regulations is to recognize and protect landforms that owe their existence to the dynamic forces of water acting upon the land during various periods of rising and falling lake levels. The events that produced these landforms apparently occurred during approximately the last 4,000 years. These geologic features and the wild plant and animal life supported on them are of significant scientific interest. The ridges and swales complexes also contribute to the special aggregate landscape of Door County.

(2) Determination. The location of ridges and swales complexes shall be determined by reference to a map entitled "*Door County Natural Features Map*" on file in the office of the Planning Department.

(3) Requirements.

(a) Buildings and structures shall be placed, to the greatest practical extent, on the uppermost ground surfaces of ridges.

(b) No buildings and structures, except roads constructed in accordance with par.(e), shall be placed in swales.

(c) The ridges ground surfaces shall not be reshaped by excavation, except for customary excavation necessary to construct roads and foundations of buildings and structures; by grading; or by filling, except for customary backfilling around foundation walls of buildings and structures, construction of roads in accordance with par.(e), and construction of parking areas.

(d) The swales ground surfaces shall not be reshaped by excavating, grading, or filling, except as necessary for road construction in accordance with par.(e).

(e) Road construction in ridges and swales complexes shall occur in accordance with the following:

1. Roads shall be placed, to the greatest practical extent, on the uppermost ground surfaces of the ridges.

2. Roads shall not be placed in swales, except for that portion which is the minimum necessary to continue a road from one ridge to the adjacent ridge. The road portion in the swale shall be constructed so as to allow free and continuous movement of surface water through the road by means of culverts and/or bridges.

3. The road shall be constructed with the minimum cross-sectional area necessary to serve the intended use.

4. Road construction activities shall be carried out in the immediate area of the road only.

#### **5.09 Shoreland vegetation.**

(1) Purpose. The purposes of these requirements are to preserve shoreland vegetation in order to:

(a) Protect the scenic beauty of the shoreland in Door County.

(b) Abate soil erosion along the shoreline.

(c) Reduce the flow of effluent, sediments, and nutrients from the shoreland to surface water.

(2) These requirements apply to any cutting of trees and shrubbery in shorelands.

(3) Requirements.

(a) Cutting less than 35 feet inland. Except as provided in par. (c), tree and shrubbery cutting in an area parallel to the ordinary high water mark and extending 35 feet inland from all points along the ordinary high water mark shall be in accordance with the following provisions:

1. No more than 30% of the length of this 35-foot wide strip on any lot shall be cleared to the depth of the strip. Such clearing shall not result in openings of more than 30 feet in any 100 feet nor create a cleared opening in this strip greater than 30 feet wide and no clearing shall be allowed within 10 feet of the neighbor's lot line.

2. In the remaining 70% length of this 35-foot wide strip, cutting shall leave sufficient cover to screen vehicles, buildings, and structures seen from the water; and to control erosion.

(b) Cutting more than 35 feet inland. Except as provided in par. (c), in shorelands which are more than 35 feet inland of the ordinary high water mark, the clearing of 10,000 square feet or more of any single lot in any one calendar year shall require the prior approval of a qualified forester as a sound forestry practice as defined in NR 46.02 or NR 46.15, Wis. Admin. Code.

(c) Alternative cutting plan. As an alternative to pars. (a) and (b), a special cutting plan allowing greater cutting may be permitted by the Resource Planning Committee upon issuance of a conditional use permit. The application for such a permit shall include: a sketch of the lot, location of parking, topography of the land, existing vegetation, proposed cutting, and proposed replanting. The Resource Planning Committee may grant such permit only if it finds that such special cutting plans:

1. Will not cause undue erosion or destruction of scenic beauty.
2. Will provide substantial visual screening from navigable water of buildings, structures, and parking areas. Where the plan calls for replacement of plantings, the Resource Planning Committee may require the submission of a bond which guarantees the performance of the planned tree or shrubbery replacement by the lot owner.

(4) Shoreland Vegetative Buffer Zone. To qualify for an exemption from the ordinary high water mark as provided in Section 3.07(3)(1), a shoreland vegetative buffer plan shall be established.

(a) Plan. The shoreland vegetative buffer zone plan shall include the following:

1. A description of how the landowner intends to carry out the project including methods, materials, and equipment that will be used.
2. A proposed schedule and sequence of work activities.
3. The names and descriptions of native species to be utilized in the shoreland vegetative buffer zone.
4. A description of the site before the project begins and a description of the site once the shoreland vegetative buffer is completed.
5. The erosion control measures that will be used during construction of the permitted structure to control sediment runoff and protect water quality.

(b) Implementation. Upon approval of the shoreland vegetative buffer plan by the planning department, the shoreland vegetative buffer plan shall be completed before the planning department will grant the regular zoning permit for the structure. The shoreland vegetative buffer shall be established for a least one growing season before the permit to build the structure is granted. No mowing shall be

allowed in the shoreland vegetative buffer zone so as to maximize the growth of grasses and shrubs.

(c) Standards. Shoreland vegetative buffer plant materials shall be required so as to accumulate 100 landscape points per 100 sq. ft. of shoreland vegetative buffer zone. Landscape points shall be accumulated according the table "LANDSCAPE POINTS" of Section 7.03(2)(b) of this ordinance. One canopy tree with a caliper of at least 2 inches shall be required for each 100 square feet of shoreland vegetative buffer zone and shall be spaced no more than 10 feet apart.  
(Added: 18 April 2000; Ord. 07-00)

**5.10 Wetland setbacks.**

(1) Requirements of this section shall apply to all zoning districts in all towns.

(2) All buildings and structures, unless specifically permitted within Wetland zoning districts per s. 2.05(4), shall be set back from wetlands, as defined in s. 13.02, a minimum of 35 feet, except for buildings and structures in SF20 and SF30 zoning districts, where the required setback from wetlands shall be 10 feet.

(3) All wetland boundaries shall be determined by field verification by Door County Planning Staff.  
(Added: 8 September 1998; Ord. 20-98)