

## Chapter 6: Environmental and Natural Resources Element

*Credit to Pat Emery, who originally drafted and presented this element.*

### 6.A. Vision Statements

1. Sound conservation practices will result in continued good air, land, and water quality.
2. Knowledge and understanding of natural drainage patterns and watersheds will guide planning and development in a manner that protects natural and environmental resources.
3. Wetlands will remain intact for their many functions and values (*see 6.D. Surface Water and Wetlands*).
4. Environmentally sensitive areas will be free from disturbance and development.
5. The Town will continue to have adequate lands needed for open space and recreational use.
6. Areas with unique vegetation and wildlife habitats are critical components of biodiversity and will continue to provide natural surroundings for threatened and diverse species.
7. The Town will have adequate natural habitat for wildlife.

### 6.B. Strategies

1. The Town of Concord will continue to support and work with the UW Extension and the Rock River Coalition to determine the existence and extent of water quality and supply problems and to educate the public on these issues.
2. The Town will use the resources of the State and County, as well as the Rock River Coalition, whenever appropriate in the planning process.
3. The Town of Concord will continue to consider existing drainage patterns and watersheds in all planning.
4. The draining of wetlands and development in floodplains will be severely limited.
5. The Town of Concord will protect its natural communities, particularly areas with unique vegetation and wildlife, by preventing development of these areas and by providing needed buffer areas between incompatible land uses and wildlife habitat.
6. To protect environmental corridors, the Town will follow the Jefferson County Environmental Corridor Policies set forth in the *Jefferson County Agricultural Preservation and*



*Land Use Plan*, as adopted in October 1999.<sup>1</sup> The key features of this strategy are as follows:

- a. Environmental corridor policies will be applied to these areas in addition to the land use regulations and zoning requirements.
- b. Developmental densities should be no greater than one dwelling per 10 acres. Wisconsin Department of Natural Resources (WDNR)-delineated wetlands and lands in the 100-year floodplain are not used in calculating allowable densities.
- c. Building, road construction, or land disturbance associated with non-agricultural development should be prohibited on slopes in excess of 20 percent.
- d. All proposed non-agricultural development in these areas is subject to site plan review to evaluate its impact on the environment.
- e. No buildings should be constructed within 75 feet of WDNR-designated wetlands or navigable bodies of water.

## 6.C. Issues

The Town has worked with the UW Extension and the **Rock River Coalition** to provide information and education to the Town citizens as to potential water quality and supply problems in the Rock River Basin. The Town has participated in the Rock River Coalition program to formulate a **GFLOW model** to help identify current or potential water supply and quality problems.

## 6.D. Background<sup>2</sup>

The Town of Concord is located in the glacial part of the State. The topography includes end moraines, ground moraines, a large glacial lake basin, wetlands, and eskers. Ground moraines in much of the Town of Concord are from the Green Bay Glacier. A ground moraine usually forms a gently undulating plain with moderate relief. The elongated hills of ground moraines, called drumlins, are aligned along the direction of the ice movement.

### **Drainage Patterns and Watersheds**

As a part of the Upper Rock River Basin, almost all surface waters in the Town of Concord drain to the Rock River. The Oconomowoc River Watershed encompasses most of the Town of Concord. From its source, the Oconomowoc River flows in a southwesterly direction for 49 miles before entering the Rock River in the Town of Ixonia. Urbanization is continuing in the Oconomowoc River Watershed, especially on or near lakes. The City of Oconomowoc is the only municipality in the watershed with a wastewater discharge to surface water.

An exception to the above is the area in the southwestern part of the township in the Bark River Watershed. This watershed is part of the Lower Rock River Basin. Agriculture is the predominant land use in the Bark River Watershed (*see map 6, Appendix A*).

<sup>1</sup> *Jefferson County Agricultural Preservation and Land Use Plan* (Jefferson County, October 1999), p. 142.

<sup>2</sup> Information from the *Jefferson County Agricultural Preservation and Land Use Plan Background Report* associated with the *Jefferson County Agricultural Preservation and Land Use Plan* (Jefferson County, 1999), pp. 25–70.

### **Surface Water and Wetlands**

Surface water in the Town of Concord includes lakes, rivers, and streams. Named lakes include Golden, Goose, Round, Mud, and Spence lakes.

The Town of Concord has significant acreage in wetlands, which are transition areas between uplands and water and perform valuable functions. They trap sediment and retain and remove nutrients, thereby reducing pollution and siltation. Wetlands help replenish groundwater and maintain the water table, protect watersheds and reduce flood problems, provide habitat for flora and fauna, and have scientific, educational, and recreational benefits. These areas have severe limitations for residential, industrial, and commercial development.

### **Floodplains**

The 100-year floodplains in Jefferson County are found along the many rivers, streams, and intermittent creeks in the County. The Town of Concord is one of four towns in Jefferson County that contain large wetland areas having the potential to store flood water (*see map 7, Appendix A*).

### **Groundwater**

All of Jefferson County is in the Rock-Fox River Basin, and bedrock furnishes most of the groundwater for the basin. Groundwater and surface water are plentiful in Jefferson County and the Town of Concord. The Town of Concord is a member of the Rock River Coalition for the purpose of maintaining water quality and supply through the tracing of water flow within the Rock River Basin.

### **Environmental Corridors**

Environmental corridors are continuous systems of open space that include environmentally sensitive lands, natural resources requiring protection from disturbance and development, and the lands needed for open space and recreational use. They consist of open water and land in the 100-year floodplains, wetlands, steep slopes, woodlands, and publicly owned recreational and conservancy lands (*see map 8, Appendix A*).

The Town of Concord has three town parks: Dahnert Park, Golden Lake Park Drive Recreation Park, and the Green Space on Ruders Circle. In addition, there is the county-owned Joy Park on Spence Lake (*see 4.D. for more information on parks*).

### **Metallic/Non-Metallic Mineral Sources**

There are areas throughout the Town of Concord that have fair to good potential for the extraction of sand or gravel (*see map 9, Appendix A*). Town of Concord ordinance Chapter 19, *Non-Metallic Mineral Extraction Regulation and Control*, regulates and controls the operation of non-metallic mineral extraction operations in the Town.

### **Vegetation and Groundcover**

Prior to settlement, the Town of Concord was primarily heavily forested lands that included oak savannah, southern mesic forest, sedge meadow, prairie, and conifer swamp, as well as forests of sugar maple and basswood. In addition, the land supported open stands of open-grown oak intermingled with tall prairie grasses, tamarack bog, and marsh. As settlement took place, much of

the land was cleared for farming. Many of the original wetlands were drained; however, much of the tamarack swamp and marsh still exists as wildlife habitats.

According to the 1978 Agricultural Preservation Plan,<sup>3</sup> there were approximately 3,180 acres of woodland in the Town of Concord. In 1996 there were 1,198 acres of woodland in the Town of Concord, as reported by the 1996 Land Use Inventory of Jefferson County (includes woodlands that are greater than 25 acres).

### **Rare, Threatened, and Endangered Species**

Table 6-1: Threatened and Endangered Species in Jefferson County<sup>4</sup>

COMMON NAME	SPECIES NAME	WISCONSIN STATUS	TAXA
<b>ANIMALS</b>			
Giant Carrion Beetle	Nicrophorus americanus	Endangered	Beetle
Barn Owl	Tyto alba	Endangered	Bird
Black Tern	Chlidonias niger	Rule	Bird
Black-Crowned Night-Heron	Nycticorax nycticorax	Rule	Bird
Caspian Tern	Sterna caspia	Endangered	Bird
Great Egret	Casmerodius albus	Threatened	Bird
Piping Plover	Charadrius melodus	Endangered	Bird
Black Dash	Euphyes conspicuus	Special Concern	Butterfly
Greater Redhorse	Moxostoma valenciennesi	Threatened	Fish
Lake Chubsucker	Erimyzon sucetta	Special Concern	Fish
Lake Sturgeon	Acipenser fulvescens	Rule	Fish
Least Darter	Etheostoma microperca	Special Concern	Fish
Pugnose Minnow	Opsopoedus emiliae	Special Concern	Fish
Pugnose Shiner	Notropis anogenus	Threatened.	Fish
Redfin Shiner	Lythrurus umbratilis	Threatened	Fish
River Redhorse	Moxostoma carinatum	Threatened	Fish
Slender Madtom	Noturus exilis	Endangered	Fish
Weed Shiner	Notropis texanus	Special Concern	Fish
Western Sand Darter	Ammocrypta clara	Special Concern	Fish
Blanchard's Cricket Frog	Acris crepitans blanchardi	Endangered	Frog
Queen Snake	Regina septemvittata	Endangered	Snake
Blanding's Turtle	Emydoidea blandingii	Threatened	Turtle

<sup>3</sup> *Jefferson County Agricultural Preservation Plan* (Jefferson County, 1980).

<sup>4</sup> Information from the *Jefferson County Agricultural Preservation and Land Use Plan Background Report* associated with the *Jefferson County Agricultural Preservation and Land Use Plan* (Jefferson County, 1999), p. 59.

COMMON NAME	SPECIES NAME	WISCONSIN STATUS	TAXA
<b>PLANTS</b>			
American Cromwell	Lithospermum latifolium	Special Concern	
Common Bog Arrow grass	Triglochin maritimum	Special Concern	
Crawe Sedge	Carex crawei	Special Concern	
Cross Milkwort	Polygala cruciata	Special Concern	
Cuckoo Flower	Cardamine pratensis var. palustris	Special Concern	
Downy Willow-Herb	Epilobium strictum	Special Concern	
Dragon's Mouth	<u>Arethus bulbosa</u>	Special Concern	
False Asphodel	Tofieldia glutinosa	Threatened	
Kitten Tails	Besseyia bullii	Threatened	
Linear-Leaved Sundew	Drosera linearis	Threatened	
Marsh Blazing Star	Liatris spicata	Special Concern	
Nodding Pogonia	Triphora trianthophora	Special Concern	
Northern Blue Violet	Viola septentrionalis	Special Concern	
Ohio Goldenrod	Solidago ohioensis	Special Concern	
Pink Milkwort	Polygala incarnata	Endangered	
Prairie Indian Plantain	Cacalia tuberosa	Threatened	
Prairie Milkweed	Asclepias sullivantii	Threatened	
Prairie Sagewort	Artemisia frigida	Special Concern	
Prairie Straw Sedge	Carex suberecta	Special Concern	
Prairie White-Fringed Orchid	Platanthera leucophaea	Endangered	
Purple Milkweed	Asclepias purpurascens	Endangered	
Showy Lady's-Slipper	Cypripedium reginae	Special Concern	
Slender Sedge	Carex gracilescens	Special Concern	
Small Yellow Lady's-Slipper	Cypripedium parviflorum	Special Concern	
Tuberled Orchid	Platanthera flava var. herbiola	Threatened	
White Lady's-Slipper	Cypripedium candidum	Threatened	
Yellow Giant Hyssop	Agastache nepetoides	Threatened	
Small Fringed Gentian	Gentianopsis procera	Special Concern	
Toothed Evening Primrose	Calylophus serrulatus	Special Concern	

**Wildlife, Waterfowl, and Fisheries**<sup>5</sup>

There is an abundance of wildlife present in the Town of Concord. Fishing can be found in Golden Lake and in the rivers and streams of the township. The vegetation communities provide habitat for a variety of game animals, fur bearers, birds, mammals, reptiles, and amphibians. The following lists include some of the wildlife found in the County.

<b>Birds</b>	<b>Birds</b>	<b>Mammals</b>	<b>Amphibians and Reptiles</b>	<b>Waterfowl</b>
Great Horned Owl	Eastern Phoebe	Opossum	Bullfrog	Mallard
Red-tailed Hawk	Cedar Waxwing	Woodchuck	American Toad	Wood Duck
Red-bellied Woodpecker	Purple Martin	Cottontail Rabbit	Leopard Frog	Blue-winged Teal
Red-headed Woodpecker	Field Sparrow	Chipmunk	Garter Snake	Pintail
Ruby-throated Hummingbird	Indigo Bunting	Ground Squirrel	Snapping Turtle	American Wigeon
Black-capped Chickadee	Song Sparrow	Gray Squirrel		Green-winged Teal
White-breasted Nuthatch	Mourning Dove	Red Squirrel		Canada Goose
Downy Woodpecker	Common Crow	Vole		Great Blue Heron
Long-billed Marsh Wren	Catbird	Muskrat		King Fisher
Red-winged Blackbird	Starling	Raccoon		Egret
American Robin	Cardinal	Short-tailed Weasel		Swan
Swamp Sparrow	Pheasant	Striped Skunk		
Eastern Oriole	Wild Turkey	White-tailed Deer		
American Goldfinch	Dickcissel	Beaver		
Yellow Warbler	Bluebird	Otter		
American Eagle	Bittern	Coyote		

<sup>5</sup> Information from the *Jefferson County Agricultural Preservation and Land Use Plan Background Report* associated with the *Jefferson County Agricultural Preservation and Land Use Plan* (Jefferson County, 1999), pp. 61–62.