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PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN, 2ND EDITION VOLUME 2

Section 8

GOALS AND POLICIES

GOAL 1.0

Incorporate natural resources as a primary consideration in all planning efforts.

Call Out: Natural resources have significant environmental, educational, economic, recreational, and aesthetic value. Finite as they are, natural resources can be susceptible to irreversible damage and are very difficult or impossible to replace if damaged or destroyed. and are highly vulnerable to misuse and destruction due to high resource demand, urban expansion, rapidly changing technology, and other aspects of contemporary civilization.

GOAL 2.0

Protect and enhance the City's natural resources, including surface waters, woodlands, and habitat areas, and provide access to these areas from adjacent residential, commercial, industrial, and recreational uses.

Call Out: Components of the natural resource base lay the foundation that make the City a practical and attractive place to live and do business and have a limited capacity to support urban development. It is necessary to understand the character and importance of the various elements of the natural resource base to avoid neglecting the City's heritage, causing significant environmental degradation, and incurring excessive monetary costs.

GOAL 3.0

Consider how geologic resources within the City can be best used and managed in planning processes and whenever land is being considered for development.

Call Out: The depth to bedrock may impact the cost and feasibility of building site development and the provision of public facilities and infrastructure.

Policy 3.1

Consider opportunities to protect areas containing viable amounts of marketable nonmetallic mineral deposits, including areas in which existing nonmetallic mineral extraction sites have potential to expand.

Policy 3.2

Protect Carroll College Quarry, a scientifically and historically important geological site that is classified as being of statewide or greater significance.

Call Out: Carroll College Quarry is the source of large fossil collections, including those of major museums across the Nation. As the first quarry in Waukesha County, the site was visited by many prominent 19th-century geologists.

GOAL 4.0

Utilize information from soil surveys, which support regional planning, engineering, and resource conservation efforts, to determine how certain soils may be best used or managed.

Call Out: Soils have varying physical, chemical, and biological properties. These properties can therefore affect the costs and feasibility of urban development and therefore exert a strong influence on how people use land. As mounting development pressures increase the value of developable land, it can be increasingly important to ensure that planning programs recognize the value of soil resources.

Policy 4.1

Protect soils in the City that may be significant for their ability to support water management, including areas with wetlands.

Graphic: [Hydric soils make up 14 percent of the City's total land area.] Hydric soils are very poorly drained soils are saturated with water, or have a water table at or near the surface. These soils are generally unsuitable for development¹ or are best undeveloped and left in open space, where they serve as important locations for wetland restoration, as wildlife habitat, and for stormwater detention.

GOAL 5.0

Protect groundwater beneath the City, which is subject to a continuous process of natural and artificial forces.

Call Out: Groundwater is an extremely important component of the natural resource base

Graphic: Groundwater in the shallow aquifer system generally moves from beneath topographic high areas (higher elevations) to lower elevations, thereby sustaining lake levels and wetlands and providing the perennial base flow of streams.

Policy 5.1

Promote the recharge of groundwater within shallow and deep aquifers underlying the City by ensuring the infiltration of precipitation within the City.

Graphic: The primary, natural process of groundwater recharge is by precipitation that escapes evapotranspiration or runoff and percolates into the ground. Shallow aquifers are generally replenished by precipitation relatively easily.² Recharge of the deep aquifer, however, is impeded by the Maquoketa Formation, a relatively impermeable geologic feature underlying the City. The deep aquifer is therefore recharged primarily by the slow, downward leakage of water from overlying, shallow aquifers through the Maquoketa Formation or by the infiltration of precipitation in areas outside the City where the Maquoketa Formation does not separate the shallow and deep aquifers.

¹ Unless they are drained.

² As described in Volume 1 of this report.

Call Out: A 2013 report indicates that the deep aquifer underlying the City has had severe groundwater level drawdown and significant water quality issues. The shallow aquifer underlying the City, which feeds sensitive surface water resources, was also found to have water quality issues.³

Policy 5.2

Research best practices to establish policies to reduce or eliminate groundwater degradation caused by human activities, such as contamination from bacteria, nitrate, pesticides, and volatile organic compounds (VOCs).

GOAL 6.0

Protect and enhance surface water resources and groundwater resources, which are interrelated components of a single hydrologic system.

Call Out: Surface water resources, including lakes and streams and their associated wetlands, floodplains, and shorelands, and groundwater resources, have significant aesthetic, environmental, recreational, and economic value.

Photo: Lakes and streams are a focal point of water-related recreational activities and provide an attractive setting for properly planned development, including river front properties, which generally have high-assessed valuations, also serve to enhance the property tax base of the City.

Photo: Surface waters also provide substantial economic benefits. Expenditures by recreational users of surface waters benefit the owners of restaurants, grocery and convenience stores, service stations, and sporting goods stores.

Photo: When viewed in the context of open space areas, surface waters greatly enhance the aesthetic and scenic characteristics of the natural environment.

Policy 6.1

Carefully manage urban land uses while maintaining surface water and groundwater quality.

³ See Volume 1 of this report.

Policy 6.2

Conduct watershed protection planning, recognizing that water within the City is returned to two

Call Out: The Pebble Creek Watershed Protection Plan is a planning effort aimed at protecting a cold-water stream in an area experiencing significant development pressures,

Policy 6.3

Enhance the recreational and aesthetic values of surface water resources, especially the Fox River, which hosts urban riverwalk trails and plazas and access to natural resource areas via a water trail, boardwalk, and other recreational trails.

Policy 6.4

Recognize Lake Michigan as a surface water resource whose quality and environmental and economic value is reciprocally related to that the City.

GOAL 7.0

Integrate floodplain considerations into planning and development efforts, especially planning to protect areas adjacent to surface waters that are subject to inundation during the 1-percent-annual-probability (100-year recurrence interval) flood event.

Call Out: Minor flood events can cause discharges from perennial rivers and streams that typically occupy their channels to exceed a stream channel's capacity

Policy 7.1

Consider potential changes that may occur to floodplains as rainfall levels vary due to changes in climate and in relation to efforts to promote water quality.

Call Out: Floodplains the wide, gently sloping areas contiguous to, and usually lying on both sides of, a surface water body, often contain important natural resources, such as high-value riparian woodlands, wetlands, and refuges for wildlife.

Policy 7.2

Preserve and promote awareness of the importance of floodplains by establishing passive, nature-based recreational uses, such as hiking, bird watching, and nature study, in floodplain areas.

Call Out: Floodplain areas are generally not well suited to urban development, not only because of the flood hazard, but also because of the presence of high water tables and, generally, of soils poorly suited to urban uses.

GOAL 8.0

Preserve and protect wetlands, which have important recreational and ecological values.

Policy 8.1

Consider how wetland preservation can help to reduce peak flows, mitigate stormwater runoff, and prevent flooding by providing areas for floodwater impoundment to naturally and temporarily store excess runoff.

Policy 8.2

Plan and promote development site design to enable wetlands to filter pollutants and store sediments and contribute to stabilizing the base flow of rivers and streams in the City.

Policy 8.3

Promote the use of wetland areas as breeding, nesting, resting, and feeding grounds and predator escape cover for many forms of wildlife.

Policy 8.4

Discourage wetland draining, filling, and urbanization, which can be costly in both monetary and environmental terms.

GOAL 9.0

Preserve and enhance woodland areas within the City.

Call Out: Woodlands provide immeasurable scenic beauty; can host a variety recreational opportunities; and contribute to sustaining a diversity of plant and animal life by providing flora and fauna habitat.

Policy 9.1

Establish best practices to protect woodlands and other tree cover throughout the City to improve air and water quality

Policy 9.2

Plan to enhance and increase woodlands and other tree cover to reduce heat islands.

Call Out: Woodlands may require a century or more to develop—but can be destroyed through mismanagement within a comparatively short time. Their destruction can cause extensive environmental damage and have significant economic repercussions. The deforestation of hillsides contributes to the destruction of wildlife habitat as well as to rapid stormwater runoff and the siltation of lakes and streams.

GOAL 10.0

Support regional planning recommendations to protect grassland and shrubland sites to ensure City residents can continue to enjoy the aesthetic, cultural, historic, educational, ecological, and scientific value of such sites.

Policy 10.1

Work with the Wisconsin Department of Natural Resources (DNR) to protect and educate City residents about grasslands and shrublands, including the eight small remnant sites along the Glacial Drumlin State Trail.⁴

Call Out: Grasslands and shrublands are open, treeless, or generally treeless areas dominated by native grasses. once covered large portions of the City.

GOAL 11.0

Protect natural areas and critical species habitat areas.

GOAL 12.0

Protect environmental corridors and isolated natural resource areas.

Call Out: Environmental corridors are the areas in which concentrations of the best remaining elements of the natural resource base occur, including rivers, streams, lakes and associated riparian buffers and floodplains; wetlands; woodlands; grasslands and shrublands; wildlife habitat areas; wet, poorly drained, and organic soils; and rugged terrain and high relief topography. Cultural, recreational, and natural resource-related features, including park and open space sites, natural areas, historic sites, and scenic viewpoints, are also considered in identifying and delineating environmental corridors and isolated natural resource areas.

⁴ Remnant grassland and shrubland sites are less than 5 acres each in size.

Policy 12.1

In compliance with regional planning recommendation, allow for types of development to be accommodated within environmental corridors and isolated natural resource areas while maintaining the overall integrity of the existing resources.

Policy 12.2

Protect primary environmental corridors from intrusion by incompatible rural and urban uses, and thereby from degradation and even destruction.

Policy 12.3

Preserve the City's primary environmental corridors, including those along the Fox River, Mill Creek, Pebble Creek, and Pebble Brook, in an essentially open, natural state, including park and open space uses, to help to maintain a high level of environmental quality, protect the City's natural beauty, and provide valuable recreational opportunities.

Call Out: Preserving primary environmental corridors will also avoid the creation of serious and costly environmental and developmental problems, such as flood damage, poor drainage, wet basements, failing pavements and structures, excessive infiltration of clear waters into sanitary sewers, and water pollution.

Policy 12.4

Preserve secondary environmental corridors in essentially open, natural uses as urban development proceeds within the City, particularly when the opportunity is presented to incorporate such corridors into urban stormwater detention areas, associated drainageways, and neighbor-hood parks and open space.

Policy 12.5

Protect and preserve in a natural state isolated natural resource areas, which may provide the only available wildlife habitat in an area, offer good locations for local parks and nature areas, and lend aesthetic character and natural diversity to the City,

Call Out: Isolated natural resource areas contain smaller concentrations of natural resource base elements, such as pockets of wetlands, woodlands, surface water, or wildlife habitat, that are separated from the environmental corridor network by urban development or agricultural uses and measure at least five acres in size,
