5. Environmental Stewardship

Introduction

Environmental stewardship is a priority for Fort Wayne and Allen County. It is also an overlapping issue that must be dealt with on a variety of policy and planning levels. Land use, transportation and utility initiatives, policies and impacts need to be integrated with environmental policies. Effective environmental stewardship also requires partnerships at federal, state and local levels. The goals, objectives and strategies outlined in this chapter provide a framework for enhancing environmental protection in Allen County and Fort Wayne, focusing attention on a variety of land, water, air and wildlife resources.

Overview

This chapter outlines the recommendations for addressing environmental stewardship in Allen County and Fort Wayne, and is organized in the following sections:

- Policy Foundation of the Plan;
- Key Findings;
- Goal; and
- Objectives and Strategies.

Policy Foundation of the Plan

The foundation of the Plan was shaped by an extensive community involvement and planning process (see Executive Summary). The Comprehensive Plan has three key layers of policies: goals, objectives and strategies. Goals are the broadest policy statements that state a desired outcome in general terms. Objectives indicate a more specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective – such as a program or project. There are multiple objectives for each goal and multiple strategies for each objective. The recommendations for each element of the Plan contain all three policy layers.

Key Findings

A summary of key findings derived from the existing conditions analysis related to environmental stewardship in Allen County and Fort Wayne is outlined below. For a more detailed explanation of each finding, see the Environmental Stewardship Chapter of the Existing Conditions report.

Geology, Soils and Vegetative Cover

The landscape of Allen County was shaped through the movement of glaciers. This natural history, coupled with the impacts of human settlement, has made the water supply, soils and other environmental features what they are today. Planning related to these resources should take into account the variations and unique vulnerabilities that exist in different parts or ecoregions of the County. While deciduous forests dominated the landscape at one point in time, today most forests have been converted to agricultural or urban land uses. The Cedar Creek corridor and Fox Island Park contain the County's largest remaining contiguous forest areas. Smaller woodlots can be found in rural areas and along streams. Prime farmland soils are an abundant natural resource. A significant percentage of the County's undeveloped land area qualifies as productive farmland. Due to both past and current trends of increased development, a significant amount of productive agricultural land

with prime characteristics is currently at risk of being irrevocably converted to nonagricultural, suburban, residential and industrial uses.

Wildlife and Ecological Preservation

Less than 1 percent of County and City lands have been set aside for ecological preservation. Parklands as a whole, including parks that primarily serve recreational purposes, represent only 2 percent of the land in the County, and 8 percent of the land in the City of Fort Wayne. Residents have indicated strong public support for the preservation of more parklands and open space to achieve both recreational and environmental objectives. There are over 100 rare, threatened and endangered species in Allen County that would benefit from strategic protection initiatives, particularly near unique aquatic communities, along riparian zones and within other linear habitat corridors. Due to their connection to the Great Lakes, Allen County's waterways are susceptible to invasive nuisance species. Over 30 invasive species of plants, fish, and aquatic organisms have been identified and are currently monitored and controlled by the Allen County Parks and Recreation Department and the Indiana Department of Natural Resources.

Groundwater Resources

The vast majority of residents in Allen County (outside of Fort Wayne) rely upon groundwater systems to meet their drinking water needs. There are three major aquifer systems in the County. The Huntertown and Aboite aquifers are near-surface systems formed in glacial deposits and exhibit a high sensitivity to contamination. A bedrock aquifer can be found throughout the County at greater depths and is less sensitive to groundwater contamination. There are currently 107 active public water systems in Allen County. While Wellhead Protection Programs are required for "community" public water systems, no protective requirements apply to small "noncommunity" public systems or individual wells.

Surface Water Resources

The City of Fort Wayne manages the largest water supply system in the County, which relies on surface water rather than groundwater. The health of the County's rivers and streams is essential for protecting this water supply. Many of the County's streams have been modified to improve drainage, at the expense of environmental standards. Channelization, removal of vegetation, and maintenance dredging tend to have adverse impacts on ecological health and represent significant challenges for surface water management. Failed and improperly maintained septic systems represent another significant challenge, and are a potential source of high E. coli levels in various Allen County waterways and wells. Other potential sources include sewer overflows, livestock and natural waterfowl concentrations. Protection of rivers and streams through planning regulations, such as overlay districts, and attention to preserving and expanding riparian buffers should be a top priority for protecting surface water quality in Allen County and Fort Wayne.

Wetlands

Historically considered to be of little value, the majority of the County's wetlands have been drained and converted to agricultural lands. Smaller wetlands are scattered throughout the area, but tend to be concentrated in the northern and western areas of the County. Today, wetlands are recognized as areas of significant ecological importance, which help improve water quality, mitigate floods and provide habitats for wildlife. Protection of existing wetlands should be considered in future planning regulations and development frameworks. The prevalence of hydric soils in the County represents a significant opportunity to restore wetlands, which can be accomplished relatively

easily though interventions that restore natural hydrology, including for example, the removal of drainage tiles.

Floodplains

Flooding is of great concern in Allen County. Since a major flood inundated Allen County in 1982, many structural modifications and policy changes have been implemented to mitigate the impact of floods. Most significantly, the City has pursued buyouts of floodplain properties in partnership with the Maumee River Basin Commission. Acquired properties have been returned to a more natural state, allowing for floodplain mitigation. These areas now offer more recreational and alternative transportation opportunities along waterways. The Association of State Floodplain Managers has recently launched a No Adverse Impact initiative, which provides a holistic approach to floodplain management and should be considered as a guide for future land use decisions within river basins in Allen County.

Air Quality

In 2004, Allen County was designated as a nonattainment area with respect to federal ozone standards. Based on data collected in 2005 and averaged over the 2003 to 2005 time frame, Allen County regained eligibility for maintenance status. Ozone can be attributed to transportation-related emissions from cars and trucks, as well as nitrogen oxide emission from power plants. The transportation element of this Plan provides a number of strategies addressing transportation efficiency, which can lead to reductions in vehicle emissions.

Brownfields

To date, the City of Fort Wayne has completed two successful brownfield cleanup and redevelopment projects: one at the former Bowser Pump facility, located just east of downtown Fort Wayne and one at the former Myers Petro Terminal at University of Saint Francis. Additional opportunities for brownfield redevelopment can be found in Fort Wayne, as well as in other Allen County communities. By coordinating projects through the state's Voluntary Cleanup Program, communities have the ability to leverage financial, legal and technical assistance resources.

Goal

The following goal for environmental stewardship was developed by the Comprehensive Plan Committee based upon citizen input:

A healthy, sustainable, and enjoyable environment with clean air and water, greenways and open spaces for residents, habitats for wildlife, protection from flooding, utilization of rivers, protection of other environmental assets (farmland, woodlands and wetlands), and promotion of a strong ethic among residents and businesses to control pollution and support environmental stewardship efforts.

Objectives and Strategies

Outlined below are objectives and strategies to support improving the condition of the natural environment.

OBJECTIVE ES1.
ENSURE THE CONSERVATION OF SIGNIFICANT LAND RESOURCES, INCLUDING BUT NOT LIMITED TO, AGRICULTURAL LANDS, WOODLANDS AND WETLANDS.

Current development trends have demonstrated the need to protect open spaces in Allen County and Fort Wayne, with particular attention to valuable agricultural and natural resources. Adoption of

the following strategies will help to ensure the conservation of agricultural landscapes, woodlands, wetlands and other natural greenspace.

ES1.A Coordinate and combine existing maps and inventories of agricultural, woodland and wetland areas. Identify areas of contiguous prime soil, significant agricultural heritage and prime lands for targeted conservation efforts.

Efforts to conserve agricultural lands should be pursued in a strategic manner, in part because maintaining contiguous agricultural lands is important to the health of an agricultural economy. Contiguous farmlands can support a critical mass of readily available agricultural infrastructure, such as equipment sale and repair, seeds and fertilizer suppliers, without which an agricultural community can become increasingly difficult to sustain. Continuity of farmland also minimizes conflicts between farming and nonfarming neighbors. Agricultural, woodland and wetland areas should be surveyed, mapped, analyzed, noted for agricultural heritage issues and classified in order to identify critical lands for targeted conservation efforts.

ES1.B Continue stewardship efforts and identify areas for possible expansion of contiguous forested and natural areas (such as the Cedar Creek corridor, Fox Island Park, Eagle Marsh, Little Wabash River Corridor, Black Marsh, and other environmentally significant areas).

The Cedar Creek watershed represents an important natural corridor, and is designated as an Indiana Natural, Scenic and Recreational waterway. Fox Island County Park contains a nature preserve with diverse marshes, wetlands, deciduous forests and important wildlife habitats. Allen County should continue to work with local environmental groups like the Fox Island Alliance, ACRES, St. Joseph River Watershed Initiative and the Cedar Creek Wildlife Project to continue to protect these important natural areas.

ES1.C Investigate the value of adopting local wetland protection ordinances and regulations.

Allen County and Fort Wayne should consider the value of adopting local wetland protection ordinances and regulations in order to preserve and mitigate wetlands. These regulations may concentrate protection efforts along the Maumee, St. Joseph and St. Mary's Rivers, Little River, Cedar Creek, Aboite Creek, and other floodplain/wetland areas.

ES1.D Pursue wetlands restoration initatives.

In many parts of the County, native hydric soils are still in place and represent an opportunity for restoring some wetlands that were previously drained. Allen County and Fort Wayne should collaborate with local environmental organizations and the Natural Resource Conservation Service to target key areas for wetlands restoration, particularly those areas near critical wildlife habitats along natural corridors and in areas where wetland restoration would result in decreased flooding potential.

ES1.E Consider zoning and subdivision standards to protect natural features and environmentally sensitive land.

Zoning and subdivision standards can be used as an important tool to reduce human impact on natural areas. Conservation zoning should be investigated as a mechanism to reduce the impact on the development potential of properties that are located within natural resource areas. For example, some communities have used conservation zoning to promote cluster developments, which retain a large percentage of a development site in its natural state or open space.

OBJECTIVE ES2.
PROTECT WILDLIFE HABITATS AND LIMIT INVASIVE SPECIES.

Over time, human actions have transformed and degraded many of the County's original natural habitats. Efforts should be made to conserve and expand remaining habitats in order to protect native plant and animal species. The following strategies recommend ways to protect wildlife and their habitats in Allen County.

ES2.A Collaborate with federal and state agencies and not-for-profit organizations in the protection of endangered species.

The U.S. Fish and Wildlife Service, the Natural Resources Conservation Service, and the Indiana Department of Natural Resources can serve as important funding and technical- assistance resources in the identification and protection of the County's endangered species. Allen County and Fort Wayne should also enlist assistance from local environmental organizations, particularly those involved in watershed initiatives, to protect the area's unique aquatic ecosystems.

ES2.B Work with local organizations to protect natural habitat areas, particularly along linear riparian corridors and around critical aquatic communities.

Habitat corridors are important environmental assets. Unlike fragmented natural parcels, these corridors allow animals to move freely and plants to colonize more successfully over a wider area. Allen County, Fort Wayne, local environmental groups, and land trusts should collaborate to protect and expand these critical habitat areas through the acquisition/protection of lands in and adjacent to existing habitat corridors. Particular attention should be paid to rivers and streams in Allen County, which are home to unique aquatic communities that host a variety of rare and endangered mussels, amphibians, and plant species.

ES2.C Work with state and local partners to determine the types of invasive plant species which should be discouraged in project planting plans.

In an effort to protect native plant species in our region, local planning and permitting agencies should work with state and local partners to determine types of invasive plant species which should be discouraged in project planting plans for new development.

OBJECTIVE ES3.
PRESERVE AND IMPROVE THE QUALITY OF GROUNDWATER AND SURFACE WATER RESOURCES.

Water is a vital resource that supports agriculture, industry, household needs and recreation opportunities. The following strategies provide recommendations for protecting the County's groundwater and surface water resources. The Utilities Chapter addresses a number of issues related to the protection and preservation of water resources.

ES3.A Encourage Wellhead Protection Plans to cover additional types of wells.

Wellhead Protection Plans are required for the County's 11 "community" public water systems. These plans identify the wellhead protection area (typically those waters that can travel to the well within five years), identify potential sources of contamination, and develop a plan for minimizing risk from these sources. In order to protect more of the groundwater resources throughout the county, the requirement for developing a Wellhead Protection Plan should be considered for other well types.

Examples of theses types include: “noncommunity” systems, large capacity wells, significant withdrawal wells, and those wells that are sited in highly vulnerable areas.

ES3.B Support and collaborate in the establishment of watershed management plans that recommends actions to address major sources of surface water contamination.

Based on assessment data from the Indiana Department of Environmental Management (IDEM), which was developed as part of the Total Minimum Daily Load (TMDL) for the St. Mary’s and Maumee Rivers, the overall quality of surface water in Allen County can generally be described as “good to fair.” However, high levels of E. coli, nutrients, PCBs, and mercury in fish have been found in certain segments of the County’s streams. IDEM has designated these segments as “impaired”. Watershed management plans which also address transported sediments may be developed, using a stakeholder involvement process, to address each of these contaminants. Allen County and Fort Wayne should collaborate with local watershed management groups, the Allen County-Fort Wayne Board of Health, and other stakeholders in the consideration of these management plans to address these surface water contaminants.

OBJECTIVE ES4. PROTECT THE NATURAL AND BUILT ENVIRONMENT THROUGH COMPREHENSIVE FLOODPLAIN MANAGEMENT INITIATIVES.

Over the years, Allen County’s natural green infrastructure in floodplains, and in the watershed in general, have been lost to development and agricultural uses. As a consequence, floods have become more damaging to both the natural and built environment. The following strategies present recommendations for managing floodplains and restoring green infrastructure in a manner that benefits both human and ecological communities.

ES4.A Using the No Adverse Impact principle as a guide, develop a program to map floodplains, track impacts of floods and enhance green infrastructure in floodplains.

The No Adverse Impact management principle supported by the Indiana Association of Floodplain and Stormwater Managers implies that any action taken by a property owner should not negatively affect the rights of other property owners, as measured in terms of flooding, erosion and sedimentation. It also looks at floodplain management from a community-based perspective, rather than relying upon regulations imposed by FEMA. Allen County, Fort Wayne, and local watershed groups should use the NAI principle to develop an appropriate floodplain management program. Initiatives may include floodplain mapping, flood tracking and monitoring, introduction of riparian overlay districts, wetlands restoration and the restoration of green infrastructure within floodplains.

ES4.B Consider tools, such as overlay districts along river basins and streams to encourage the expansion of riparian buffers and enhance public access to waterfronts.

Riparian zones surrounding rivers and streams help filter sediments and nutrients, and mitigate the effects of storms and flooding. Riparian buffers are also aesthetically pleasing and can lend themselves to recreation opportunities in the form of greenways and trails. The forested corridors that were originally found along waterways throughout the County have been greatly diminished to meet agricultural, development and drainage needs. Allen County and Fort Wayne should collaborate with watershed partners to develop plans for limiting development along waterways, restoring and protecting riparian corridors, and enhancing public access to waterfronts. The Fort Wayne Rivergreenway Overlay District, as well as the local floodplain ordinances, serve as an exemplary

tool for defining and protecting riparian zones, mitigating flooding impacts, and improving human access to waterways. Similar overlay districts may be applied along rivers and streams throughout the County.

ES4.C Provide education to the public about the natural benefits, protection and restoration of floodplain and wetland areas, and the laws pertaining to floodplain development.

Educate the public through the provision of information, publications and other materials about the natural benefits of floodplains and wetlands, how to protect and restore floodplain and wetland areas and the federal, state and local ordinances which pertain to floodplain development.

OBJECTIVE ES5.
ENCOURAGE BROWNFIELD REDEVELOPMENT.

Brownfields are abandoned or underutilized properties that have real or perceived environmental contamination, which may constrain redevelopment potential. While federal funding and tax incentives are available to address these problems, local governments often must take the lead in guiding the cleanup and redevelopment of these sites.

ES5.A Develop an inventory of brownfields.

Through a regional brownfield inventory, government and stakeholder groups should work together to identify and characterize brownfields that impact the Fort Wayne-Allen County area in order to better understand the extent of cleanup efforts that will be required.

ES5.B Set priorities for brownfield redevelopment in the region.

By prioritizing brownfield redevelopment projects, communities can better target investments, leverage funding for key projects and maximize impacts in terms of economic recovery and environmental mitigation.

ES5.C Secure resources to assist with assessment, remediation and redevelopment of brownfields.

Federal, state, and local governments can all provide assistance in the assessment, remediation, and redevelopment of brownfields. This assistance can come in the form of tax incentives, grants, low-interest loans, technical assistance and liability protection. The Environmental Protection Agency offers extensive information on funding and financing opportunities.

OBJECTIVE ES6.
ENCOURAGE UTILIZATION OF GREEN BUILDING TECHNOLOGIES TO PROMOTE SUSTAINABLE DEVELOPMENT.

Whenever possible, major civic, institutional and governmental uses and developments should be designed and operated using the principles of the latest “green” building technologies.

ES6.A Incorporate green building technologies into community informational and educational materials.

Green technologies are design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas:

- Sustainable site planning;
- Safeguarding water and water efficiency;
- Energy efficiency and renewable energy;

- Conservation of materials and resources; and
- Indoor environmental quality.

The U.S. Green Building Council has adopted the Leadership in Energy and Environmental Design (LEED) Green Building Rating System for the design, construction and certification of the world's "greenest" buildings and developments. The realization of the true environmental impact of building and construction is driving the movement forward.

ES6.B Support the recommendations of the City of Fort Wayne's "Green Ribbon Commission".

Early in 2006, Mayor Graham Richard announced the formation of a "Green Ribbon Commission" to help the City develop a comprehensive energy and air quality improvement strategy for the community. The final Report, issued in September of 2006, contains a comprehensive set of recommendations, an action plan, and goals to reduce energy costs reduce energy consumption, and improve air quality. The Report covers the areas of both community energy use (residential, commercial, and transportation), as well as government usage (buildings, vehicle fleets, employee commutes and street lights). Coordination with the recommendations of Plan-it Allen! is encouraged.