

PERSPECTIVES: 2020

A Future Land Use Plan

Prepared by the Regional Planning and Coordinating Commission of Greene County

GREENE COUNTY, OHIO

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FOREWORD

Perspectives 2020: A Future Land Use Plan for Greene County, Ohio, is based on the strong foundation provided by previous plans and studies. This plan is a policy document for growth management, which sets forth desired types of physical growth within Greene County. It represents the first update of the land use plan, which attempts to coordinate the planning efforts of all the various political jurisdictions within Greene County and presents a singular statement of how the county should develop.

This plan is an addition to the original county land use plan. It builds upon the basic message of the original document and describes areas in more detail that are important in meeting the future needs of the residents of Greene County. Some of the issues that are brought to the forefront of this document are: Growth Management, Utility Extension, Agriculture Preservation, Sustainability, Stewardship, and a number of Environmental Constraints.

The Regional Planning and Coordinating Commission recognizes the changing environmental, social, and economic factors that affect land use in Greene County. Over the past decade, the urban edge of the Dayton suburbs has moved east into Greene County and has reached the established urban communities along the Greene County/Montgomery County line. Rapid growth in western Greene County has created concerns about traffic, adequacy of services, the loss of open space and community identity. To the east, citizens are concerned about the future of agriculture, land values, traffic, environmental degradations, and the spread of scattered residential home sites. The thrust of Perspectives is to retain Greene County's historical land use pattern: higher density and compact development to the west and rural, agricultural land uses to the east.

We must be persistent in protecting our most vital resources, water, air and land and we must work together in building a community infrastructure that accommodates population growth and its associated demands. We must be proactive in anticipating the tensions placed on our infrastructure, schools, housing stock, police and fire protection, other community services as well as natural resources. We must also be sensitive and aggressive in protecting the diversity that is Greene County.

To facilitate the above mentioned concerns twelve (12) - Planning Partnership Areas (PPAs) (land use areas) - have been designated within the county (see Chapter 4). The PPAs link areas of the county with common features and interests. Because of this commonality, the county and the communities within a Planning Partnership Area will be better able to coordinate and guide development for each partnership area. These partnerships will be the focus for cooperative planning between the county, townships, cities, and villages for the wise management of our common land and water resources and the achievement of widely shared values and common goals.

Chapter One Planning Framework

Introduction

In 1978 the Regional Planning and Coordinating Commission of Greene County, Ohio adopted a future land use plan for Greene County, Ohio. The Perspectives: Future Land Use Plan for Greene County, Ohio, hereafter referred to as Perspectives, planning document presented a long-range plan for the physical development of Greene County. The plan formulated goals, objectives and policies, land use space requirements, and location requirements for the development of land within the county. The Regional Planning and Coordinating Commission has now undertaken a revision/update of Perspectives. This was conducted in the spirit of the 1978 plan with the intent to review and reconsider its goals, objectives and policies. This process required deliberate consideration of the original land use plan, and required examination in light of new and revised information, studies, reports and policy documents. The following list represents topics that are the basis for many of the ideas expressed in this plan.

- Growth Management;
- Utility Extension;
- Sustainability;
- Stewardship;
- Quality of Life;
- Agricultural Preservation;
- Floodplain Management;
- Wetlands Protection;
- Little Miami River (state and national scenic river);
- Rural Residential Development; and
- Mineral Resource Management.

Perspectives, emphasized the need for future revision and amendment, as follows:

“ The land use planning process will not stop with the adoption and publication of the Perspectives plan. The plan is a willful statement of intent to be used by citizens, public officials, the Regional Planning and Coordinating Commission, and its staff...As physical, social, and economic conditions are constantly changing the plan should remain flexible through (review and updates)...in order to reflect the dynamics of our changing community.”

The Regional Planning and Coordinating Commission and its staff together with other municipal planning agencies within Greene County has followed and responded to this concept of revision and amendment of land use plans for the City of Beavercreek, 1990; City of Fairborn, 1991; and the City of Xenia and its 1996 update; Beavercreek Township, 1983 and for the Village of Cedarville, 1988; land use plans. Each of these documents will be incorporated into the land use plan update by reference together with the Village of Yellow Springs, Comprehensive Plan, 1996, and the Village of Jamestown, Downtown Revitalization Study, 1994.

Why Plan

In its broadest terms, the goal of land use planning is to further the welfare of the people by helping to create an increasingly better, more healthful, convenient, efficient, and attractive community environment in which to live, work and recreate. The physical community is a single organism, consisting of interdependent physical, social, and economic systems. The interaction of these systems must be supplemented by the application of foresight as well as planned administrative and legal coordination if balance, harmony, and order are to be insured.

Scarce resources have to be carefully allocated to provide community services, which offer the highest physical, social, and economic return to the people. Government, as an instrument of the people, has the responsibility of determining and creating with the people, the kind of community that satisfies the needs of its citizens. A sound planning process that recognizes the desires of the community is an essential prerequisite to the efficient delivery of public services.

The advantages of applying sound principles to guide future development within the county include the following:

Planning assures that adequate space in the proper location is allocated for all activities, which are expected to take place within the planning period. If implemented, the future land use plan would be the development policy for the entire county.

Planning maintains the kind of environment which the people desire, including proper spatial relationships between land uses and the protection of irreplaceable natural resources.

Planning maintains existing property values through the prevention or elimination of undesirable mixtures of land uses, recognizing that the utility of a structure is dependent upon its environment. Undesirable mixtures of land uses usually result in a decrease in property values, both in a monetary as well as an aesthetic sense.

Planning maximizes the use of public and private funds, encompassing an economic approach, which attempts to guide growth into pre-determined areas where the need for public services can be anticipated and provided in an economic manner.

The Planning Process

As shown in Figure 1.1, the planning process is a dynamic, cyclical process that operates on a continuing basis. It does not end with the production of a document. All stages of the planning process should take place and if planning is to be more than a technical process, it needs the involvement of policy makers and citizen participation. Yet the process must be flexible enough to provide for shortcuts and recycling of ideas within the process when new information becomes available or goals change.

Figure 1.1
The Planning Process

1. Problem Identification & Issue Recognition
 2. Set Initial Goals and Objectives
 3. Collect and Analyze Data
 4. Refine Issues, Goals and Objectives
 5. Develop Alternatives
 6. Analyze Impacts of Alternatives
 7. Adopt Appropriate Plan
 8. Implement Adopted Plan
 9. Monitor and Evaluate Plan
- Policy Makers & Citizen Participation during every step***

A good effective planning process enables a group to perform the following tasks in a logical conscious manner:

1. Problem Identification The group may define a concern, problem, need, or issue that is important to it.
2. Goal Setting The group may establish a set of goals and objectives relative to the concern.
3. Basic Study The collection and analysis of data. The group may research the factors behind the concern and analyze the actions.
4. Alternatives To generate various means for reaching a solution...to find optional ways to realize a definition... to suggest various strategies...to create a menu of pathways to a specific goal and objective.
5. Implementation Is a vital factor in the success of any plan, requiring the insertion of the principles of the plan into the decisionmaking of the affected parties.
6. Monitor and Evaluate the Plan As implementation begins, the group may then evaluate the accomplishments of the program.
7. Program Revision The group can then make revisions to the program and for the goals where they are deemed necessary.

The planning process attempts to guide the continual adjustment of our environment. The application of foresight and coordination to the location, design, and timing of improvements minimizes the maladjustments, defects, and deficiencies within both urban and rural environments. We can ill afford to make hasty and inadequate decisions which do not contribute to a safe, efficient, and healthful environment for the various types of land uses found within Greene County.

Concept and Scope of the Land Use Plan Update

In a free society the quality of life for everyone is largely determined by decisions made by individuals. This is particularly true regarding the use of private land, where choices made by an individual affect not only them but also their neighbors and the community as a whole.

When new uses of land begin, they usually become a permanent part of the landscape and the local environment. New land uses, especially those, which require high levels of community services, deserve community attention as they are being planned, on the theory that an ounce of wise foresight is worth a pound of cure.

A land use plan is important because it articulates the values and attitudes of the community/county as to how land should be used in the future. The main idea of the plan is to promote and support community health, safety, and general well being through balanced community development and sound resource management. More specifically it can be regarded as the development policy of the County.

The land use plan is intended to communicate to residents, citizens, property owners, local officials and developers the types of development that should be considered when development takes place in a general nature. The graphic plan does not show sufficient detail to permit strict adherence to its land use type and the associated requirements it is not intended to be a site plan). However, it can and should serve as a practical foundation for the various land use/development regulations that the Municipal Boards, Township Boards and the Board of County Commissioners may enact/modify/revise or amend. The land use plan should be continually referred to in deciding upon development issues that will arise.

In order to meet the goals, objectives and policies of the land use plan update, Greene Countians need to move beyond conventional mindsets to a more sensitive form of development - one that considers all the **local** community needs and goals as a whole. Quality of life, whether individual or public is the central, basic goal of all our activities. Each choice we make, each goal we set, is made because we think it will improve our quality of life either immediately or in the future. It is the concept of people actively participating in the creation of place.

Intent of the Land Use Plan Update

This update is an addition to the original county land use plan, Perspectives. Its message is similar to the original document. The concepts, principles and ideas of the original county land use plan are built upon with new and revised information, studies, reports and policy documents.

In its simplest terms the land use plan update tries to channel much of the county's future growth into and around the existing communities (see Chapter 2, Coordinated Land and Water Management Program, Utility Extension and Urban Growth Management), where there are already roads and utilities and where services and supplies are available, to maximize public investments. This will allow the rural portions of the county to retain a rural character and lifestyle.

The physical and economic growth that has occurred in the county since the 1978 land use plan was adopted has prompted some changes in the plan. However, in general, the development that has taken place has been consistent with the plan. A majority of these changes have been to maintain and protect the environmentally sensitive areas of the

county, to help protect the health, safety and general welfare of present and future residents of Greene County. These issues are addressed in Chapter 2, Coordinated Land and Water Management Program.

The need for such planning could not be more urgent. Over the next two decades, we have the opportunity to achieve sustained economic prosperity while enhancing our quality of life. Yet while the opportunity is ours to gain, it is also ours to lose. Unless we raise our expectations to world-class levels - and then meet them - our standards of living and quality of life may suffer in years to come as we lose ground to determined competitors around the globe. The workers of tomorrow are in our classrooms today. In the next two decades our land, water, air, infrastructure, and government services must accommodate our population, especially in our urban areas. By contrast, many rural communities face hardships of shrinking areas to farm and job losses. Unless we act decisively, the Greene County inherited in the decades ahead may fall short of our dreams.

This document presents the plan itself, including a statement of goals and objectives, location requirements for various land uses, a physical development plan, and a discussion of the various methods available to implement the plan.

The land use plan itself should not be viewed as a tool of implementation, which presents an ideal picture of physical development at a specific date in the future. The development of the county occurs as a gradual and incremental process, therefore, making it impossible to apply a set of principles that work in every situation throughout the planning period. The plan should be regarded as a guide to the future and a means to an end, not an end in itself. **The plan is a willful statement of intentions.**

Between the Plans: 1978 to 1998

Perspectives, as a growth management tool set forth desired rates and types of physical, social and economic growth, as detailed within the several input documents. It represented the first land use plan that attempted to coordinate the planning efforts of all the various political jurisdictions within Greene County and presented a singular statement of how the county should develop. As previously noted, during this planning period several significant detailed updates were accomplished for municipalities and their environs: City of Xenia 1996, City of Beavercreek 1990, City of Fairborn 1991, the Village of Cedarville 1988 and the Village of Yellow Springs 1996.

In summary, actual growth and development experienced within this planning period has been substantially consistent with the tenants of the plan. The resultant land use pattern has evolved from a series of individual and corporate decisions by many actors involved in the process of community development, guided by the plan, as amended.

The future of any community has its roots in the past. Therefore, an understanding of population dynamics is at the base of almost all major planning discussion. Clearly, as a measure of the size and density of the various groups within the county population, this basis will determine the level of demand for future facilities and services.

Table 1.1 shows the decennial population figures and corresponding changes between

successive decades for Greene County during the period 1920 to 2000 with estimates to 2020. During this 100 year period, the county experienced and will experience a population growth which, when graphically reproduced, exhibits a curve, the shape of which can be segmented into three distinct sections (Figure 1.2). Greene County experienced slow but steady growth in total population, which would be expected of an agrarian area between 1920 to 1940.

As first noted in the 1950 census, the post 1940 population of Greene County experienced a phenomenal expansion in terms of both absolute numbers and rate of growth through 1970 (Table 1.1). Thus, Greene County had a 1970 population that was more than three times the enumeration thirty years earlier, and more than double the enumeration of the twenty years earlier.

Table 1.1
GREENE COUNTY CENTENNIAL TRENDS, 1920 - 2020

Greene County Decennial Population Figures and Percentage Change Between
Successive Decades, 1920 - 2020

<u>YEAR</u>	<u>POPULATION</u>	<u>PERCENTAGE CHANGE FROM PRECEDING DECADE</u>
1920	31,221	5.0
1930	33,259	6.5
1940	35,863	7.8
1950	58,892	64.2
1960	94,642	60.7
1970	125,057	32.1
1980	129,769	3.8
1990	136,731	5.4
2000	147,866	8.2
2010	155,300	5.0
2020	163,065	5.0

SOURCE: RPCC after, Census of Population, General Population Characteristics, Ohio, Bureau of Census, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1920 – 2000.

The dramatic growth of population in Greene County between 1940 and 1970 was strongly influenced by three factors: 1) dynamic growth and development of Wright Patterson Air Force Base in Bath Township, 2) the population explosion caused by the “baby boom” following World War II, and 3) the increased reliance on the automobile which, by increasing commuting distances to places of employment, resulted in a growing tendency toward suburban residency in western Greene County. This was substantially affected through out-migration from the central city in an expanding Dayton region.

The rate of growth experienced in Greene County during the period covered by Perspectives (1978) reflected a return to the rate experienced in the pre-1940 period. Although Greene County continued to capture a significant proportion of the regional population growth, this decline in growth rate was not anticipated. It can, however, be explained by two occurrences: 1) a significant decline in the growth rate of the Dayton region, and 2) a significant reduction in natural increase or births/deaths resulting in aging of the population. Unless an unforeseen expansion in the local or regional economic base occurs, there is no reason to anticipate a return to the growth rate experienced in previous planning periods.

As suggested in Perspectives, the majority of continuing urbanization in Greene County has remained in the western portions of the County. The concept of “Controlled Trends” or Urban Service Boundaries has proven successful as land uses outside urban service boundaries remain largely agriculture (See Chapter 2, Coordinated Land and Water Management Program, Urban Policies, Urban Growth Management.) Clearly, the planned provision of public utility service such as water supply and wastewater collection was linked with the planned types and location of development which are found in the existing land use pattern. A comparison of the existing land use pattern to existing service areas highlights this reality.

Urban residential growth, including single family and multi-family housing, has continued, as anticipated, to be concentrated in the western tier of the Planning Partnership Areas (PPAs) (Bath Township/City of Fairborn, Beavercreek Township/City of Beavercreek, Sugarcreek Township/City of Bellbrook and Xenia Township/City of Xenia). A substantial growth in land use activities has been experienced in the City of Xenia during the latter portion of this planning period. The amount of land absorbed, or converted from agriculture or open space has, however, far exceeded prior estimates. This results from a continued market absorption of large lot, low density residential development. The latter portion of this planning period has seen a significant increase in the demand and development of higher density, multi-family, housing in Fairborn, Beavercreek, Bellbrook and Sugarcreek Township. As was anticipated in Perspectives, rural non-farm residential development has occurred, in a scattered fashion on the perimeter of agricultural areas within the county. Most large lots have been confined to rural residential development on the periphery of, rather than centrally located in, prime agricultural areas. Residential selectivity has played a significant role in how growth has occurred in Greene County during this planning period. Each community has developed a relatively homogeneous character resulting from a sorting process based upon a combination of individual preference and budget. This selectivity has influenced the growth rate of each community within Greene County in relation to the supply of individuals desiring each particular alternative.

The western tier of the PPAs has also experienced the bulk of the commercial/industrial expansion in consort with residential expansion, as was anticipated. The completion of Inter-State 675 greatly modified commercial expansion during this planning period by providing direct freeway access to Greene County from two major interstate highways as well as sub-regional locations. The result has been to condense rather scattered local commercial land use patterns found in and around sub-sections of the County, resulting in a more coordinated set of shopping opportunities which compete with comparable centers

in the Dayton metropolitan area. The primary nodes of development include: Westend Plaza, Xenia; “Four Corners”, the intersection of North Fairfield Road and New Germany-Trebein Road, which includes the Mall at Fairfield Commons, the Rex Centre, Beavercreek Towne Centre, Shoppes of Beavercreek, Fairfield Crossing Shopping Center, Target Center etc.; and Wilmington Pike/SR 725 in Bellbrook/Sugarcreek Township. The regional commercial development with the Mall at Fairfield Commons as the centroid of “Four Corners” exceeds three million square feet of retail and office space. The other major developments are community to limited regional in size. As was noted in the discussion of residential expansion, land absorption for community and regional commercial development far exceeded forecasted rates.

Sustainable Development: Our Mission

“...development that meets the need of the present without compromising the ability of future generations to meet their own needs.”

As we approach a new century, we will witness a continuing trend reflected in increased business and economic development, population shifts and the subsequent pressures that will be placed on our infrastructure, schools, housing stock, police and fire protection, our natural resources, and the environment. The County, as a whole, shares the impacts of growth with other local government jurisdictions within the County.

On the one hand, we want to retain a good quality of life and the character of our land and all its resources as it was in the times of our grandparents. Yet, we know that in order to meet the needs of our communities, we must anticipate and plan for a new Greene County without compromising the ability of future generations to meet their needs.

To be successful in meeting increasingly complex challenges from many directions, we must be proactive in our planning and make decisions that weigh not only short-term goals but reach out into the future and respond to Greene County that will change over time. Portions of Beavercreek City, Beavercreek Township and Sugarcreek Township are good examples of the speed with which change has stressed resources and redefined the character of these communities.

Up front, it is acknowledged that Greene County’s rural character/atmosphere has been a magnet in drawing more and more residents to Greene County. The beauty of our land and the aesthetics and ambiance associated with our communities have become the beacons that have drawn people to Greene County.

Growth is not all bad. We have all been, at some time in the past, "newcomers." If we accept this fact, then we also understand that we brought the knowledge of our previous dwelling places, our experience, our belief and expectations with us. Our collective history can also be portrayed as a weaving in which our heritage has unfolded to encompass new challenges.

We share with all Greene County residents, old and new, a realization that we must work together in addressing new requirements in forging a quality of life that is shared by all.

We must be persistent in protecting our most vital resources - clean water, healthy air, and the rich landscape within Greene County. We must work together in building a community infrastructure that can accommodate population growth and its associated demands. We must be proactive in anticipating the tensions placed on our infrastructure, schools, housing stock, police and fire protection, and natural resources. We must also be sensitive and aggressive in protecting the diversity that is Greene County.

There are four basic questions that all of us need to ask daily in evaluating and responding to the challenges that face us.

What do we want?

We want a quality of life that is healthy both physically and mentally, that endures, that protects the heart and soul of each of us as individuals and as stakeholders in the future.

How do we get it?

Attainment of abstract qualitative goals and concrete actions to meet concrete needs will require a commitment of resources and a willingness to work together for the common good.

How do we know that we have attained our goals?

Reduction in crime, clean air and water, families that are viable qualitative units, infrastructure that accommodates community needs, a process of community sharing and open communication with all citizens and willingness to work with our neighbors is what we are looking for.

How do we not attain our goals?

If we, as citizens or officials serving our communities, lose sight of our collective dreams, become so self-centered that we place ourselves above the needs of our communities (all members), if we dismiss the richness of social, cultural and ethnic diversity, and if we fail to commit our resources to the collective good of all and a quality of life that includes people and the environment, surely then we will not have a vision and mission that anticipates and plans for the future.

All of us lose track far too often of our dreams and our goals, not to mention the vision of the community in which we live. In the planning world, we become enthralled with the process, the systematic approach laid out on pages of regulations, ordinances, codes, and resolutions, setting aside the human and community values that should be a part of our decisions. In the real world, far too many people have hopped on the fast track and have strayed from a sustainable way. If as a planning organization we are true to our mission, we blend all the aspects of the physical world as one and recognize that each person, each house, each structure, and each road together with each stone, each tree, and each animal is an integral part of and a justification for who we are. Process is simply that and has no greater value than other aspects of things we do. Looking towards the end of this century, and towards a new one, is a reason for hope and the collective commitment to share in the weaving of a tapestry that represents the best we can give.

Plan Concerns and Issues

Previously completed inventories, analysis, and forecasts concerning utilities, physical resources, population, economy, and existing land uses have provided an insight into the areas of concern/issues which must be addressed in planning for the future of Greene County. These concerns/issues characterize the problems that the county could face in the future.

Population Trends

The overall population of Greene County is increasing. In 2000 the county's population was 147,896 with a few communities within the county losing population. More importantly the characteristics of the population are changing. The population is gradually aging, consistent with national trends. Between 1970 and 1990, the county population with ages 0 to 24, decreased from 51.3 percent in 1970, to 44.1 percent in 1980 to 38.9 percent of the county's total population in 1990. During the same period, the segment with ages 55 and over increased from 10.9 percent in 1970, to 15.1 percent in 1980 to 18.5 percent in 1990.

The make-up of the household has also been changing. Greene County's persons per household is consistent with national and state trends. The average household size has decreased from 3.4 persons in 1970, to 2.88 persons in 1980, to 2.70 in 1990. However, the proportion of single parent families is on the rise. In 1970, 7.6 percent of all families in Greene County were single parent families, in 1980 this number increased to 10.3 percent and in 1990 the figure was 11.8 percent.

Economic Vitality

Is often the first thing that comes to people's minds when discussions turn to community development. There is a reason for this: if the local economy is not in good health, it is difficult to think about the issues that seem less pressing; the immediate need is to make the house payment and to put food on the table.

Economic vitality takes on a bigger role here. From a land use perspective, it does not merely refer to local employment, wage levels, and product sales. If the economy is thought of as a living organism, "economic vitality" refers not only to the size of the local economy, but also to its maturity, its ability to withstand difficult conditions, and its ability to adapt to its environment.

Consumer Opportunity

Some people in a community might be wealthy individuals, but if they have no opportunity to purchase the goods and services they desire, their quality of life is diminished. All residents have consumer needs that need to be met locally. A major issue in terms of consumer opportunity is the matter of convenience. While consumers in America may not have to stand in bread lines, many, even urban populations, have to travel significant distances to shop for basic goods and services.

Quality of Life

Means different things to different individuals and communities, but a few common

elements stand out: a safe, clean and attractive city or town; challenging and well-paying employment, good schools, convenience of local goods and services, recreation opportunities and contact with nature. These are things that are difficult for any individual to provide by him or herself, and the things that money alone cannot provide. Often, they occur only when a community's citizens work on a united vision of a community, then everyone benefits.

Environment

The quality of the natural environment is one of the most obvious indicators of quality of life. A community that fits into its environment well is often ~~very~~ visually pleasing. Other environmental factors, however, can be harder to distinguish or recognize. Examples include: groundwater contamination; air pollution; land development that cuts off wildlife from migration routes; erosion on construction sites depleting the soil and polluting streams; etc. Therefore, it is important to be aware of the characteristics of the natural environment in and around the county, including the built up areas. Despite substantial success in maintaining the living environments of the county, additional work is needed. Life in the county should not only be sensitive to the environment, but respond to it.

Maintenance

The age of facilities, the changing demand for uses of facilities, and the narrowing margins of public funds available, make difficult the continuing need for proposed maintenance of streets, utilities, and public facilities.

Sustainability

The native Americans remind us: "We did not inherit the land from our ancestors; we borrow it from our children." With that in mind, to be successful in meeting increasingly complex challenges from many different directions, we must be proactive in our planning and make decisions that consider not only the short-term goals but reach out into the future.

Infrastructure

Infrastructure is the physical foundation that allows a community to function in a given location. Water treatment plants and water delivery systems allow households, businesses and industries to exist without private wells. Sanitary sewers and wastewater treatment plants (water reclamation facilities) help prevent water pollution and life threatening disease. Storm sewers and storm sewer facilities help prevent property damage by controlling floodwaters and roads allow for the movement of people and goods. These things are examples of public infrastructure that contribute to the efficiency of a community.

If public infrastructure is not used efficiently, or is over-designed or under-utilized, local costs will be high. On the other hand, if extra (reserve) capacity is not available, normal business and/or residential expansions or new business and housing starts may be delayed or become impossible without new investment. These are issues that should be examined in terms of local goals.

Transportation

Transportation issues are important because they affect not only the way your community interacts with the region, and moves people, goods, and services, but also the way it functions internally. All of us depend on transportation systems and the accessibility they provide. The important thing to remember is that transportation does not merely deal with roads and streets, but also with busses, railroads, water-based transportation, and airports and the places where and how these modes interact. Transportation associated with special needs populations is also an essential component of a community.

People-powered modes of transportation, such as walking and bicycling, are a commonly overlooked form of transportation that is central to the quality of life of a community. People-powered transportation is safe and efficient, but it depends on sidewalks and paths that allow safe and comfortable movement and that lead to places where people need to go.

Land Uses and Growth Management

The physical organization of community activities plays an important part of that community. Certain types of land uses do not work well together. Every effort should be made to direct development so that compatible land uses are next to each other. Similarly, growth itself can cause problems. Sprawl is a very costly and to some people an unsightly challenge that faces many communities. The costs of maintaining and extending infrastructure capacity and public services must be considered when evaluating the management of growth in a community.

Housing

Everyone needs a place to live, and if that dwelling is unsatisfactory, the individual suffers. In recent years, housing has become a more expensive part of the family's budget, making the affordability and availability of quality housing an important issue. Housing issues that need to be addressed include: the selection of homes available, price range, styles, the rehabilitation of deteriorating, unsafe, or vacant homes, and the location of new homes.

Recreation

Community life is not only a matter of making a living and providing for immediate physical needs. It also involves social activity, and long-term physical and mental needs like recreation. Recreation is an important part of a community because it promotes physical and mental health. Recreational facilities must be accessible to all groups including the elderly or physically disabled, and should be convenient for neighborhood children. Recreational facilities should also offer a wide range of activities that appeal to a diversity of people.

Education

Education is a central part of the quality of any community. Education not only gives residents the skills needed to get good jobs, but it also contributes directly to the quality of life. Education helps people appreciate and take advantage of opportunities around them, gives expanded perspectives of the world, and makes us better citizens. It is important to recognize, however, that education is not limited to formal education

through schools. It involves a lifelong commitment to learning, including schools, the workplace, the home, and community institutions such as churches, youth programs, and adult social groups. Schools can also serve as the heart of a community, helping to give it an identity and providing recreational and cultural opportunities.

Health and Safety

Commonly thought of in terms of crime, fire safety, and property protection, health and safety also has dimensions of “actual hazard” and of public “perceptions of hazard”. Both actual and perceived hazards are threats and deserve consideration.

Concerns and Issues Link

A challenge of the future land use plan update is to address the above-mentioned concerns/issues together with other items to improve the quality of Greene County’s living environments. Because of their interwoven relationships it is important to advance each of the concerns/issues in a balanced way. Each must progress in unison with the other. To strive towards our goals we need to look for linkages between all aspects of our community’s life.

Growth Management

Growth management provides for the common linkages between most of the concerns/issues. Growth Management is also a practical way of utilizing our limited resources to the fullest extent possible. That is why growth management is an integral part of this plan.

As a place for people to live, work, and play, Greene County has maintained a high quality of life. The natural systems, rivers, farmlands and woodlands have provided a lush setting for the twelve (12) townships, six (6) villages and four (4) cities within Greene County. The county continues to be indebted to the farsighted thinking and land planning concepts of Perspectives. Throughout the county we continue to benefit from the high values placed on agricultural lands, open space, and the character of our villages and cities. This land use plan update is an opportune time to focus on the role of land planning and the value of growth management as we consider these two questions:

What is our vision for the future of Greene County? and
Can growth management and better land use planning help us now to achieve sustainable development and pass on to future generations a more livable community?

Is there a need for growth management?

In Greene County there are urban, suburban and rural areas whose manmade environment is growing at a rapid pace while other areas of the county are losing residents or jobs and some places both. Traffic congestion exists - mostly around the commercial centers, along the main transportation corridors and within older platted streets, which were not

designed for today's transportation needs. Farmland is being turned into suburban and rural tract housing around the county taking valuable land out of production.

Some communities are losing their identity to sprawl while community centers with existing services and infrastructure are being overlooked. Jobs are being relocated and created in areas not served by public transportation or accessible to affordable housing. Natural streams and drainage courses are diverted to underground tubes. Air quality suffers from industrial and automotive emissions, light pollution masks the night skies and the constant din of traffic and human activities overpowers the natural sounds of the region. This suggests that Greene County has reached a crossroads where decisions regarding land use will irrevocably affect the relatively high quality of life, as we currently know it.

What is meant by growth management?

The basic philosophy of growth management is: preserve our access to nature and build better communities for the people who live here today and who will live here in the future. Central to the meaning of growth management is a commitment to plan for the balance between the protection of natural systems -- land, air and water -- and the development required to support growth in the residential, commercial, and industrial areas and to balance infrastructure capacity with demand. In this land use plan update, concepts of growth management represent broader concerns addressing a wide range of "quality of life" values. While there is a continuing concern for protecting the environment, especially agricultural lands, the Little Miami State and National Scenic River, wetlands, environmentally sensitive rural areas, and open space in rural and urban areas, the new programs also focus on other concerns such as keeping abreast of infrastructure needs as development occurs, making the affordability and availability of quality housing an issue, and promoting economic development where it is needed. This plan also recognizes the critical role of education, recreation, health and safety, and transportation planning.

One basic principle of growth management is keeping a clear distinction between urban and rural lands and balancing re-development, to reduce sprawl. The separation of urbanizable land from rural land shall be accomplished by the Urban Service Boundary, which identifies the area of transition between urban and rural lands.

Growth management also means a broader approach at looking at development. Development that takes place in one municipality or township often has a regional impact, including impacts on neighboring municipalities or townships. These neighboring communities can also incur considerable expense as a result of adjacent development. Under current conditions these neighboring communities, though directly affected, have very little say in the decisions being made. The lack of coordinated planning will become even more noticeable with the increased impacts on the natural systems -- land, air and water -- loss of farmland, and increased traffic volumes on our roadways. These systems do not honor township and/or municipal boundaries. We must make significant steps forward in coordinating planning and decision making regarding the natural systems and our manmade environment in the geographic entities in which they are located. For additional information see, Chapter 2, Coordinated Land and Water

Management Program, Urban Growth Management and Utility Extension.

Definitions

In order to provide a clear understanding of how goals, objectives, and policies are meant to be used in the planning process of Greene County, each will be defined and a discussion presented on its relevance to the planning process.

GOAL: Webster's defines "goal" as, "the result or achievement toward which effort is directed: aim, end". This short definition gives important clues to the nature of a goal. A goal provides a traveler with a direction, but not a specific destination. In this sense, goals are ideals and should be expressed in abstract terms. They serve as directions in which current planning, long-range planning, and policies for everyday decision-making should point. Land use goals provide a focus for the establishment of a suitable and safe environment for people, thus making them more universal and lasting than objectives or policies.

OBJECTIVE: An "objective," on the other hand, is defined as "an aim or end of action: a point to be hit or reached". It is capable of both attainment and measurement, whereas a goal provides only a general direction. Since they offer specific targets, objectives may vary as existing conditions and areas of concern change.

POLICY: A "policy" is defined as "a definite course or method of action selected from many alternatives in light of given conditions to guide and determine present and future decisions". Policies, then, are the courses of action established to reach stated goals and objectives. They provide a link between the intent of a plan and the day-to-day decisions which are necessary in the implementation of the plan.

Plan Goals

The course of action which any community, organization, or governmental body pursues and the values by which it exists are in part determined by the goals which it adopts. A necessary task in any planning program is the process of establishing a set of goals that apply to the future. It must be emphasized, however, that planning is not merely the process of determining the most efficient way to achieve certain goals. Most importantly, it is the process of visualizing a better future and going after it. The process, above all, is a rational one and it must be operated on a continual basis as previously identified.

The goals which follow are a continuation of the county-wide direction for land use planning. Numerous goals have been adopted or proposed for the entire region and individual communities which sought to develop their own plans. The intent here is to coordinate them into a broad framework pertinent to county-wide issues that permits both public and private decisions to be made in a manner that will protect the public interest.

Due to differing interests and physical circumstances within the various communities in Greene County, the following goals, objectives, and policies may need to be further defined to meet the individual needs of each community.

Goals

1. Foster inter-jurisdictional coordination on development reviews and development related issues.
2. Provide a planning process that addresses land uses issues common to the various segments (Planning Partnership Areas/political jurisdictions) of Greene County so that all segments may function as integral parts of the county in managing physical change.
3. Promote manageable, sustainable, efficient and orderly use of all areas of the County that recognize the proper relationships between land uses.
4. Strike a balance between a land use pattern that promotes a high level of public health, safety, welfare, comfort, and conveniences, and supports adequate levels of public services and facilities, while increasing or maintaining environmental quality for existing and future residents of Greene County.
5. Recognize the importance of a viable agricultural community to Greene County and promote sound land use practices, which offer protection from unnecessary encroachment.
6. Identify, preserve, protect, and expand the physical, social, economic, and aesthetic qualities that contribute to the desirable and unique character of Greene County.
7. Provide a planning process that recognizes the capability and limitations of Greene County's physical resources to accommodate man's needs, and the necessity of identifying and protecting irreplaceable resources and the functions performed by them.
8. Provide a sufficient diversity of decent, safe, and sanitary housing opportunities, variety of community activities, services, and a wide range of choices of life styles that will satisfy the various needs of existing and future residents of Greene County.
9. Foster a relationship between transportation, utility services and land use that aims toward encouraging development patterns that can be served in a cost effective, swift, efficient, and environmentally beneficial manner.
10. Expand and strengthen the economic base of Greene County and its various communities by optimum utilization of existing physical, social, and economic amenities while promoting a balanced economy that offers a variety of employment opportunities.
11. Improve the quality of essential public services and develop of wide range of community facilities located in a manner best suited to the well being of all county residents.
12. Maintain and enhance our county's quality of life and to be fundamentally fair to all our citizens and to respect their individual rights.

Chapter Two Coordinated Land & Water Management Program

Introduction

We are sailing into a new world of public policy. The applications for subdivisions in Greene County forecast increased development pressure. With each new development more and more pressure is placed on our natural and manmade environments. This tide of events has given the Regional Planning and Coordinating Commission of Greene County, the destiny of the County. This Plan, together with elected and appointed officials and the citizens of Greene County, will undoubtedly decide what this special and unique place will look like in the future.

The most important challenge to any elected officials and appointed government board, body or commission is to correctly determine its particular challenge. It has been suggested by those before us that there are some universal truths which can be applied to each new challenge. Here are some thoughts to keep in mind when making decisions and recommendations for building a quality county:

1. **The future is not something we inherit, it is something we create.** The native Americans remind us: "We did not inherit the land from our ancestors; we borrowed it from our children." Will our grandchildren out to the seventh generation (for whom the Iroquois traditionally planned) praise us or curse us?
2. **Process is as important as substance.** How we decide issues is often more important than what we decide. Too often battles over development resemble a dialogue between a fox and a hound. Planning for the future must include local people, but not to the exclusion of others having a stake in common resources. Certain places by their uniqueness and beauty are subject to a different set of rules and have different stakeholders. Those who are fortunate enough to live in such places are often resentful of outside intrusion, and that is understandable, but it does not negate the fact that beauty and uniqueness place a special advantage and a special burden on those who live within these areas.
3. **A community cannot live by bread alone but it must have bread to live.** We cannot ignore the fact that people must be able to make a living. Greene County will continue to see development. The issue isn't whether, it's where, and under what conditions. We must also understand and respect the needs of local people to make a living, but growth must be sustainable, of the proper scale, and be consistent with the character of the surroundings.
4. **Honor thy neighborhood and thy community as thyself.** We are the trustees of unique and precious part of America. You will be remembered by how you make your decisions. If your vision merely sees Greene County as "suburbs in

waiting," you shall have failed your historic challenge. That means not foreclosing, by our combined actions, the future options of our children. Each of us doing a small piece of irreversible harm will collectively ruin the resources we share.

5. **Woe unto the community that lays house upon house and field upon field, until there is no place that residents can be alone or recreate or relax.** A valued community is one that works; one that offers amenities, recreation and beauty to its citizens. A quality community is one which has anticipated its future through planning. We know that low density urban sprawl is not only unsightly, it is inefficient and consumptive of those assets a community has the fewest of: clean air, tax monies, and vacant land. If what was once a unique or historic place, becomes replaced with sameness and homogenization, it will resemble a thousand other such communities. Unique beauty brings unique responsibility and unique decision making. A quality community has a comprehensive plan that is the basis of a livable future.
6. **Beware of the boom and bust cycle.** In developing a community, we too often act in haste and repent in leisure. We overbuild one minute and find at the turn of an economic cycle we have empty buildings. We gear up to provide schools, roads, sewers, water, and public infrastructure. Then the commodity or resource or uniqueness becomes obsolete or runs out, and we are left with a hole in the ground or a ghost community. Growth should pay its own way. Impact fees (to the extent possible), special purpose contributions and performance bonding should all be a part of planning at the local level.
7. **Beware of the invisible hand that has an invisible foot.** If everyone merely seeks their own self interest no one looks to the total community. Everyone expects his neighbor to furnish the parks, open space and amenities. Soon an ideal pastoral community becomes a cluttered strip development that has destroyed what brought people there in the first place. A community has not only the right, but the obligation to influence and guide the amount, pace, type and density of impacts it receives. We have an obligation to find effective strategies that enable our communities to grow in ways that enhance rather than degrade the qualities that made them distinctive in the first place.
8. **We are our brother's keeper.** Residents of special places are stewards of "common" resources such as the 12,625 +/- acres of parks and recreational land within the county that are set aside for open space/recreation. What takes place on private lands does affect the common lands around them. When we encroach on a view, or create a source of noise pollution, or pollute our waterways and air, it impacts all of us.
9. **Without vision, community identity may perish.** Winston Churchill once said: "We shape our buildings and afterwards they shape us." Similarly, we build our communities and then they build us. If our community is an unplanned sprawling mass without aesthetics or quality, we too often are shaped the same way. If we build our communities well and on a strong

foundation, we will leave our children an adequate inheritance. If we build it on materialism and short term thinking, we could leave them a nightmare.

The following policy statements are tools to be used to help guide present and future land use decisions within Greene County.

URBAN POLICIES are strategies for the development of our living environment with emphasis placed on the existing urban areas. The public services of the existing urban areas by themselves do not create growth but they do clearly influence the location and intensity of growth.

Urban Growth Management

Utility Extension

RURAL POLICIES can be considered smart land use for preserving farmland while still allowing for growth within the rural areas of the county.

Agriculture Preservation Policy

Rural Residential Development

ENVIRONMENTAL POLICIES cover areas of the county that are important assets. Each of them help define areas of concern and points within the county that are tied to specific locations. They also serve important functions that help to maintain and improve the quality of life of Greene County residents.

Floodplain Management

Little Miami State and National Scenic River

Mineral Resource Management

Wetlands

Urban Growth Management

Statement of Purpose

It is the purpose of the Urban Growth Management to further the welfare of the people of Greene County by helping to create an increasingly better, more healthful, convenient, efficient, sustainable, and more attractive community environment in which to live, work and recreate. It is a further purpose to prepare for the orderly provision of public facilities and services to accommodate and serve as a guide for urban development on those lands within the urban service boundary and to guide the orderly and efficient conversion of land to urban uses within the urban service boundary in order to protect environmental, energy, economic and social resources.

Growth Management

One of the purposes of planning has always been to influence, manage, and direct the growth of communities. Traditionally, growth was assumed to be good and that bigger was better. Now communities recognize that growth inevitably has its costs and that growth at any cost is not acceptable. While new growth might bring new tax revenues to the community, it also brings increasing demands for services such as roads, schools, libraries, fire and police protection, and water and sewer services. The cost of these services, at times, may exceed the revenues gained through the taxes generated by the new development. Even when the new growth is not a financial concern or a problem for the governments, it may cause other kinds of problems. New development might overcrowd a school, cause increased pollution, create traffic congestion, destroy a favorite wooded area, disrupt the ecology of a wetland, or just simply disrupt a way of life that the people of the community want to preserve. As a result of the above mentioned problems and concerns, planners and community leaders came to incorporate the idea of “growth management,” which recognized that growth comes at a price and that growth should be managed so as to achieve community goals in a cost-effective manner.

Growth Management is a means of guiding new development into existing urban areas so as to make optimal use of the existing infrastructure and public services while conserving prime agricultural land, community character, and fragile environmental areas. Generally, growth management strategies call for a commitment to more compact urban areas, stating that new urban development should be located to:

1. renew and maintain existing urban areas, both cities and suburbs; and
2. develop vacant and under-utilized land within existing urban and suburban areas that are presently served by streets, water, sanitary sewer, and other public services;

These strategies seek to save energy, reduce traffic congestion, reduce air pollution, and provide more leisure time, by bringing residences and work places as close as possible. By “infilling,” or developing vacant and under-utilized land within urban areas, it seeks

to make more efficient use of existing facilities and services and to reduce public expenditures for new capital-intensive infrastructure (So, 1986, pg. 313-314).

Urban Growth Controls

Government officials, planners, and residents have come to realize that they need to utilize some type of growth management tool to preserve some of the remaining open space, control and reduce public expenditures for public services, and to stop urban sprawl, hopscotch or leapfrog development. Sprawl is:

“Uncontrolled growth, usually of a low density nature, in previously rural areas and some distance from existing development and infrastructure.”
(Moskowitz, 1993: 262)

Residential sprawl is cyclic. The characteristics that originally drew people to the urban fringe or rural atmosphere disappears as more and more people move to this area. The fringe or rural area becomes more dense and congested, thus making people look to move further away, creating more sprawl.

Urban Service Boundaries

In 1978, Perspectives used the concept of “controlled trends” as the basis for the outward expansion of suburban municipalities and the gradual development of idle land within urban areas. The concept consisted of a set of cordon lines which indicated the recommended limits of urban development and the extension of urban infrastructure to the year 2000. Today, this concept is commonly referred to as urban service boundaries.

The “controlled trend concept” was a regional concept adopted by the Miami Valley Regional Planning Commission and thus incorporated into Perspectives. In 1978, it helped in directing growth in Greene County. According to the U.S. Census, in 1970, before the “controlled trend concept” was adopted approximately 55 percent of the county’s population was located in the unincorporated areas of the county. In 1990 approximately 23 percent of the county’s population was located in the unincorporated areas of the county. This simple example shows that Greene County’s urban areas have been the growth points of the county. In particular, the county’s population growth has been greatly influenced by its location to the Dayton Metropolitan area.

By definition, urban service boundaries are: the line(s) on the land use map that is used to mark the desired separation of urbanized land from rural land and within which urban growth should be contained for a period of time specified by a growth management program. Urban service boundaries are based on population forecasts and shall include areas and densities sufficient to permit the urban growth that is projected to occur for a specific period. When determining the urban service boundaries it is important to keep in mind that all areas neither can nor should receive urban services because of physical and economic limitation or social desires.

Urban service areas on the other hand are areas that are serviceable. The urban service areas cover a larger area than the urban service boundaries because they are based on the

drainage areas affected by the associated utility without the consideration of time, social, economic, or physical constraints.

The urban service boundaries/Concentrated Infrastructure Districts (CIDs) are primarily concerned with the efficient provision of urban or governmental services - water, wastewater collection, etc. The urban service boundaries and CIDs are ones in which services are now available or may be provided physically and economically within the design planning period.

Sound planning principles require that the urban service boundaries be based on urban service capability and the potential carrying capacity of the land.

Goals

1. Encourage the development of vacant and under-utilized land within existing urban and suburban areas that are presently served by streets, water, sanitary sewer, and other public services.
2. Promote compact urban development within the identified urban service boundaries.
3. Provide efficient and cost effective infrastructure, to support growth in the designated urban service boundaries.
4. Encourage sustainable development, by meeting our present needs and aspirations without compromising the ability of future generations to meet theirs.
5. Establish a land use pattern that promotes and encourages the highest level of public health, safety, welfare, comfort and convenience.
6. Control sprawl and its negative affects.

Objectives

1. Establish and maintain urban service boundaries.
2. Protect the integrity and revitalize the livability of existing urban areas of the county.
3. Use wise land management practices in the urban service boundaries.

Policies

1. For subdivisions and rezonings that are proposed within the urban service boundary the Regional Planning and Coordinating Commission shall encourage sustainable development.
2. Encourage the growth and revitalization of existing urban areas within the county before allowing urban type development within the rural areas of the county.
3. Future urban development shall be contained within the geographical limits of the urban service boundary.

Utility Extension (Public Water and Wastewater Collection)

Statement of Purpose

The purpose of this policy is to enable growth to occur within Greene County that meets the needs of communities while maintaining public health, safety and welfare without compromising the ability of future generations to meet their needs. This will be accomplished in part by monitoring and directing the planning of public water and sanitary sewer projects, inside of the urban service areas (see Urban Growth Management Policy) while discouraging utility extension into rural portions of Greene County, thus promoting the continuation of agriculture and other rural land uses (see Agricultural Preservation and Rural Residential Development Policies). This policy document also encourages growth that is sustainable, of a proper scale and is consistent with the character of the surrounding area.

The purveyors of water and sanitary sewer services recognize the necessity of a safe and healthy community environment in which to live. These same purveyors also need to recognize that agriculture is a mainstay for many rural areas of the county. The Regional Planning and Coordinating Commission of Greene County encourages solutions that will not threaten farmland with urban sprawl and farmers with additional costs and increased development pressures.

Introduction

It is an accepted principle in planning that there is little private investment in development, without significant public investment in infrastructure (roadways, wastewater collection, potable water, etc.). Growth and/or development influences the need, capacity, location and size of infrastructure improvements and investment but the availability of public facilities also influences growth: where, what kind, and how much. In a perfect world both growth and public facilities arrive in a cognitive time frame in accordance with the Land Use Plan which suggests: where, what kind and how much. Everyone who manages growth would like to make that happen, but clearly, different actors have different perceptions of how that should be accomplished. Those who build infrastructure improvements and their associated facilities would like to have an ideal world in which all future land use patterns are known. Then it would be known where, with great accuracy, the appropriate size and location of facilities that should be developed in the future. There is, however, a complex relationship between infrastructure facilities and future growth which once understood will provide the local officials with possibly the most powerful tool at their disposal to guide future growth of their community.

Stated another way, the area in which a community extends and expands its community facilities is where growth will occur. The reason is not very complicated when we understand that a typical development needs Location, Location, Location, which is made up of four major elements: good access, wastewater collection, water and suitable zoning. Of those, access, water and wastewater collection are the most costly to provide when not readily available. Therefore, sites which possess these amenities are the ones sought for

development. Where these utilities do not exist, the front end cost to a developer may be prohibitive. Without public sanitary sewer, residential development will be on acreage tracts.

A Growth Management Tool to Use

Those who plan and/or build infrastructure improvements and their associated facilities must understand that the decisions where and when to build these facilities will at a minimum influence and most probably direct future land use patterns. As suggested before, these decisions may be far more influential than the land use plan itself. Problems can arise when people making decisions about the location, size and capacity of infrastructure facilities, ignore the community adopted land use plan. An example would be a plan that calls for the preservation of prime agricultural land to the west of the urban area. If the utility purveyor directs its utility investment toward other areas, then those investments will reinforce the plan. However, if a new sewer line is extended to or through the prime agricultural area, then development will be attracted to the area that the plan intended to maintain as agriculture.

Public facilities in and of themselves do not create growth. They do, clearly, influence the location and intensity of growth within a community, county or region. A new road will change development patterns if it significantly improves commuting accessibility to or from a part of the region.

Even where a community controls the extension of its utilities, it may deviate from its own plan. Sewer and water facilities are often operated as “enterprise departments” within the larger context of local government. An enterprise department is one that is generally self-sufficient. In that context, the department may be operated under mandates similar to that of private business. That is, do what will show a profit and do not do that which will not. Under that mandate, if a proposed development required construction of utilities outside the urban service area, the utility purveyor might consent if the net revenue is positive. Singularly for the utility purveyor’s budgeting perspective, that position may be perfectly rational. From a planning perspective, however, it may not be the best overall community decision. This line extension often will stimulate growth/development, into an area not ready for development or as too often happens, encourage leapfrog development. Even if these utility extension are developer installed, not a direct public cost, there is a long term public cost in support facilities, services and maintenance. We can avoid many of these situations if purveyor of the utilities would adhere to the community extension policy and/or plans, no matter what the source of the construction funds are. A local government following such a policy always retains the power to amend its own policy to respond to a critical need or a positive opportunity.

We have observed that the planning process, both regional and local is often detached procedurally, politically, and practically from the planning process for public utilities. As a result, local communities may plan poorly for future community needs by failing to use the effective growth shaping potential of utility extension.

Communities need a decision making tool to assist in making decisions about where and when to invest in infrastructure. We could choose to react to a developers request for

facility extension but that can lead to bad public policy. Such a request may conflict with a public policy to preserve an agricultural or environmentally sensitive area. That conflict can be direct as in the case of a proposed development or may create an indirect and less obvious conflict by proposing development adjacent to such properties. In the previous case, the public facilities that make that development possible may also facilitate development of the very land which the community wishes to protect. Further a developer may purchase relatively inexpensive land some distance from a community and then ask the community to subsidize that investment by extending public facilities to it. Such an action by the public not only facilitates leapfrog development, it also distorts the local land market. The very reason that the land was so inexpensive was that it was not readily available to public facilities.

As we have seen in the revision of the land use plan, there are many factors which influence where it makes sense, for a community to encourage new development. Those same factors should influence where it builds, encourages, or permits the construction of new infrastructure. Where development takes place and when it happens are critical issues to a community. They are the issues that are not addressed by other developmental regulations.

Standards and Development Criteria for Wastewater and Water Supply Systems

It is generally agreed that the ability to provide wastewater collection and potable water is the most important component in determining an areas ability to support growth, density/intensity. The provision for effective treatment and disposal of sewage generated and an adequate potable water supply for each building is necessary to maintain a healthful community environment, in an urban setting.

Maintaining public health, safety, and welfare is the core doctrine which causes the need for governments to set standards and to develop criteria for water supplies and wastewater collection systems. The purpose of these standards is to enable community growth without exceeding the lands and the water and/or wastewater systems capability to healthfully and safely support an area and its future growth. The general public welfare objectives are addressed in public water supply and wastewater regulations applied through federal, state and local authorities. This involvement at all government levels indicates the importance society has placed upon systems of wastewater disposal and water supply.

Greene County, the Cities of Fairborn; Xenia; and Bellbrook, the Villages of Yellow Springs; Spring Valley; Jamestown; and Bowersville together with other communities and agencies within Greene County, are involved in assuring compliance with the existing regulation for wastewater disposal and drinking water supply through ongoing inspections, permitting process(es) and testing. The treatment and distribution of water and the treatment and disposal of wastewater requires adherence to standards of practice as land is developed. The purpose of these standards is to avoid the adverse impact of ineffective wastewater treatment and water contamination.

Utility Extension a Tool to Provide for and Direct Growth

Planning for utilities (water and sanitary sewer services) in an economical manner frequently imposes what may seem to be and sometimes is hard and fast limitations on the way in which an urban or rural area can be organized physically. The extension of these facilities dictate where development takes place, when it happens, and at what intensity, all of which are critical issues to the affected community.

As discussed in the Urban Growth Management Policy, urban service areas are primarily concerned with the effective provision of urban or governmental services - water, wastewater collection, etc. The urban service area, is the area in which services are now available or may be provided physically and economically within the planning period. Therefore, utility extensions should occur within the urban service areas, directing development to areas of the county that are capable of handling the pressures associated with new development. The extension of public utilities outside of the urban service area is discouraged, except for reasons of health. In the case where public utilities are extended for health reasons, care should be taken to minimize the impacts that such an extension will have on the plan and the affected community.

Sanitary Sewer/Wastewater Systems

All communities produce both solid and liquid wastes. The largest portion, wastewater, is essentially the community's water supply after it has been used. The purpose of a sanitary sewer system is to remove this wastewater/effluent from the point of origin and transport it to a point where it can be treated and then released.

A public wastewater disposal system includes the collection and treatment of sanitary sewage and other flows. The most efficient collection system is a conventional gravity sewer system (having unpressurized lines of sufficient slope to prevent solid from depositing). Alternative systems include small diameter gravity systems, pressure and vacuum systems. Pumping stations are sometimes used when gravity systems are not feasible, either due to terrain or economics. Collection systems are connected to a treatment facility.

Wastewater treatment can include physical, chemical, biological, and radiological treatment methods. The type and degree of treatment may vary, depending on the quality of the receiving waters and the minimum federal, state, and/or local requirements. Three (3) categories of treatment are generally used:

1. Pretreatment and primary treatment - removing suspended solids and floating materials and conditioning wastewater for discharge to a secondary treatment facility.
2. Secondary treatment - removing organic matter through biological processes, such as activated sludge systems and trickling filters.
3. Tertiary treatment - eliminating pollutants not removed by conventional biological methods.

While the provision of sewage collection and treatment has long been recognized as one of the many factors influencing suburbanization, the increased awareness of health and environmental concerns have now made the provision of sewage collection and treatment a major investment requirement for development.

There are a number of forces at work pushing communities, particularly rural or suburban communities, towards investments in sewerage facilities. One of the strongest forces was the passage of the Clean Water Act (1980's) and its subsequent amendments.

The decision to sewer or not to sewer depends to a large extent upon the alternatives available within any specific community and its geographic/geological environment. In areas of Greene County where development has occurred using on-site systems in which soils and groundwater conditions can no longer support such systems, the decision to extend sewerage facilities has been mandated by EPA responding to health concerns.

Wastewater Collection Systems in Greene County

Greene County

Extension policy is handled on a case by case basis

The first County sewer district was established in 1959 as a result of orders issued by the Ohio Department of Health and the Combined Health District of Greene County. Three more sewer districts were created in 1960. The first sewers were placed in operation in two of these districts during 1961. In 1964, all four districts were consolidated into the Greater Greene Little Miami Sewer District which includes all unincorporated areas of the county plus any municipality that elected to join.

Beavercreek The Beavercreek Wastewater Treatment Plant, located on Factory Road, serves Beavercreek City and portions of Beavercreek Township. The Beavercreek plant was placed in operation in 1965 and improved in 1973, 1988 and 1998. The average daily flow from this plant in 1998 was 5.952 million gallons a day (MGD). The maximum day was 16.465 MGD. This is a secondary treatment facility having screening, grit separation, primary sedimentation, conventional fine bubble aeration, secondary sedimentation, ultraviolet disinfection, and aerobic digestion unit operations.

Sugarcreek Greene County, Sugarcreek Regional Wastewater Treatment Plant consists of two separate facilities. The Pretreatment/Pumping Plant is located on South Main Street in the City of Bellbrook. The Secondary Treatment Plant is located approximately three (3) miles downstream on State Route 725.

With the exception of the Village of Spring Valley, all wastewater collected flows through the Pretreatment/Pumping Plant in Bellbrook. This includes portions of Beavercreek Township, Sugarcreek Township, Washington Township (Montgomery County), Clear Creek Township (Warren County) and the cities of Beavercreek, Bellbrook, Centerville (Montgomery County) and Kettering (Montgomery County). The wastewater receives screening and primary sedimentation at the Pretreatment Plant, then

is pumped through a 36 inch diameter force main to the Secondary Plant. Wastewater from the Village of Spring Valley is pumped directly to the Secondary Plant.

The Secondary Plant has coarse bubble aeration, counter-current aeration, secondary sedimentation, ultraviolet disinfection and aerobic digestion unit operations. The secondary Plant also has a fine screening facility that may be used to improve effluent quality as needed. The Secondary Plant campus is also the location of a sludge dewatering and lime stabilization facility that serves all Greene County owned treatment plants.

The Facility is designed to receive a peak flow of 23 million gallons of wastewater per day (mgd) and an average flow of 4.9 mgd. The average flow during 1998 was 6.442 MGD. The maximum daily flow was 21.5 MGD. The Sugarcreek Regional Wastewater Treatment Plant consistently performs well below its mass load limit.

The Sugarcreek system was placed into operation on October 20, 1977, and improved in 1988. A further improvement is currently under way. This improvement will replace the existing Pretreatment/Pumping Plant with a new Pumping Plant located approximately one mile downstream, add flow equalization at that site, relocate primary treatment to the Secondary Plant campus, and expand aeration and secondary sedimentation unit operations. The average daily hydraulic load will increase to 9.5 MGD.

Shawnee Hills The Ohio Environmental Protection Agency (EPA) ordered the Board of County Commissioners to eliminate malfunctioning individual sewage disposal systems in the Shawnee Hills area. A general plan was prepared, incorporating public input, evaluating feasible alternatives to comply with the order. The recommended solution was primarily a conventional gravity collection system with (by necessity) a number of public and individual pumping stations. Due to the nature of nearby receiving streams, and the Ohio EPA Anti-degradation Policy, locating a treatment facility has been a major complication to delivery of the system. The plan is to convey the wastewater, by a lift station, to the existing Jamestown Wastewater Treatment Facility.

Cedarville The Cedarville Wastewater Treatment Plant was placed into operation in 1975. The current plant is an activated sludge facility with an average daily capacity of 400,000 gpd. Aeration, sedimentation and aerobic digestion unit operations occur in separate compartments of a single basin. Chlorinating/dechlorination is used for disinfection. The plant is subject to great seasonal variations in flow due to the discharge from Cedarville University and inflow/infiltration to the collection system (some of which dates back to the 1920's)

In October 1995, Greene County acquired the system. Since then, a number of collection system repairs have been made, and detailed plans for improvement of the treatment plant are near completion. The improved plant will include flow equalization and be an oxidation ditch design, followed by new sedimentation facilities and ultraviolet disinfection. The plant will have an average daily capacity of 560,000 gpd and 2.0 million gallons of equalization storage.

Village of Clifton The Village of Clifton has a package treatment facility that was put in place in 1994. It is a secondary treatment facility using extended aeration. The facilities efficiency loading capacity is 28,000 gallons per day with an average daily flow between 12,000 and 15,000 gallons a day. Approximately 100 users covering nearly 0.1 square miles of area use the facility. The Village of Clifton Wastewater Treatment Plant operates within compliance of all Ohio Environmental Protection Agency requirements for biological oxygen demand and suspended solids. Due to the geologic formations found in the Village of Clifton area the collection system is a vacuum type system. This facility was acquired by Greene County in January 1998.

City of Fairborn Government Services

Extension policy requires annexation to the City of Fairborn.

Water Reclamation Center was originally constructed in 1959 with upgrades to the plant in 1974, 1985, 1988, 1991, 1994, and in 1996. The Water Reclamation Center has a capacity of 5.5 mgd with an average daily flow of approximately 4.2 mgd. It is a secondary treatment plant utilizing activated sludge. The Water Reclamation Center functions at a 97-98 percent efficiency, for biological oxygen demand and suspended solids. Approximately 31,000 users use the facility which covers all of the City of Fairborn, approximately 12 square miles. The collection system for the City of Fairborn is a gravity/lift station system. As much of the system as possible is a gravity system but all of it is pumped (under pressure) to the Water Reclamation Center.

City of Xenia Wastewater Treatment

Extension policy requires annexation to the City of Xenia.

Glady Run Wastewater Treatment Plant currently is at approximately 86 percent of capacity. The facility's efficiency loading capacity is 2.6 mgd with an average daily flow of 2.3 mgd. The Glady Run facility was originally constructed in 1958-59 and was upgraded in 1969-70 and again in 1987-88. It is an advanced secondary treatment facility consisting of secondary clarifiers, flow equalization, final clarification and dechlorination. Approximately 13,000 users covering nearly 4.5 square miles of area use the facility. The Glady Run Wastewater Treatment Plant functions at a 96-97 percent efficiency, for biological oxygen demand and suspended solids.

The Glady Run Plant was designed to 4.0 mgd with a hydraulic capacity to 12.0 mgd. The process at the Glady Run Plant was changed to a Biological Nutrient Removal (BNR) and it was complete in 2000.

Ford Road Wastewater Treatment Plant The Xenia Wastewater Treatment Plant located on Ford Road was constructed in 1969-1970 and upgraded in 1988. It is an advanced secondary treatment facility, consisting of secondary clarifiers, flow equalization, final clarification and dechlorination, that discharges to the Little Miami River. The facilities efficiency loading capacity is 3.6 million gallons per day with an average daily flow of 2.4 million gallons a day. Approximately 13,500 users covering nearly 6.5 square miles of area use the facility. The Ford Road Wastewater Treatment Plant functions at a 97-98 percent efficiency, for biological oxygen demand and

suspended solids. In 2000, the Ford Run Plants capacity was increased to 12.0 mgd.

Village of Jamestown

Extension policy is handled on a case by case basis that usually requires annexation to the Village of Jamestown.

The village of Jamestown Wastewater Treatment Facility was originally put in service in 1935 and upgraded in 1973. It is a second treatment facility using contact stabilization with finishing ponds. The facilities efficiency loading capacity is 300,000 gallons per day with an average daily flow of 270,000 gallons a day. Approximately 750 users covering nearly 1 square miles of area use the facility. The Jamestown Wastewater Treatment Plant functions at 99 percent efficiency, for biological oxygen demand and suspended solids.

Village of Yellow Springs

Extension policy is handled on a case by case basis however all petitioners for annexation to the Village of Yellow Springs must agree to the extension of all the Village utilities.

The villages wastewater treatment plant is located on Grinnell Road just south of the Village. The wastewater treatment facility was originally constructed in 1963 and upgraded in 1988. It is designed to treat up to 1.2 million gallons of wastewater per day. Currently, approximately 500,000 gallons of wastewater is treated daily. The plant is a secondary treatment facility using extended aeration and operates within compliance of all Ohio Environmental Protection Agency requirements for biological oxygen demand and suspended solids. Approximately 4000 users within the Village's 1.7 square miles, use the facility.

Water Supply Systems

Generally water supply systems are designed according to the number and purposes of water uses required in a region, which defines the quantity and quality of the water needed. These systems typically must satisfy diverse needs:

1. potable drinking water for personal consumption and/or food processing;
2. industrial applications (manufacturing, heating, cooling); and
3. fire protection, requiring adequate pressure, volume and dependability.

In most cases, these different needs are served by a single distribution network.

The primary components of a water system are a water source, treatment facilities, transmission mains, distribution system and service connectors.

Water sources can either be surface (lake, stream, spring, etc.) or groundwater. Greene County is blessed with an abundant and quality aquifer that provides the citizens of Greene County a dependable source of water. However, this supply is not unlimited. It is essential that all citizens conserve this precious resource and that any negative impact

to our ground water supply be mitigated. Transmission mains are used to transmit raw water to treatment facilities. In Greene County, water treatment facilities may range from:

1. a disinfection facility and clearwell, to
2. systems including:
 - aeration and/or chemical oxidation
 - detention
 - fluoride adjustment
 - multi-media filtration, and
 - other exotica.

The distribution system conveys water to the customers, it also includes storage facilities and pumping stations for the maintenance of pressure.

Why Public Water Systems are Extended

Within Greene County, public water supply systems (central water supply) exist in all cities, most villages and some townships. Despite this, there are a significant number of rural areas that are supplied by individual wells. **It is a policy of the Regional Planning and Coordinating Commission of Greene County that areas of the county that have a public water supply available without public waste water collection are still considered rural.** As Greene County continues to grow, decisions must be made about providing public water to rural areas of the county. The decision to extend or create public water systems is based upon a series of factors, with the most significant being public health and fire protection.

Public water supplies are generally provided when densities increase in suburban areas to an extent that it is no longer possible to provide both on-site water supply and on-site sewage disposal, or when there is a danger of contamination of the groundwater supply. Public water supply systems are also extended when requirements for fire fighting necessitate a reliable high pressure water system.

Polluted and Scarce Water - Inadequate quantity and quality of water are two reasons why public water supplies are extended to certain areas of the county. Ironically, development may contribute to the inadequate supply and the poor quality of the groundwater supply. As trees and other vegetation are cleared, infiltration of water into the ground decreases, reducing the amount of groundwater recharge and potentially causing the water table to decline. As building surfaces replace vegetative cover, the precipitation that falls is no longer absorbed by the ground, it runs off the impervious surfaces. The runoff collects debris and pollutants as it travels to the nearest drainage swale/storm sewer and eventually to a surface water body. The collected pollutants can potentially impact the groundwater supply in a negative way.

By Petition, Residents of the county have the right to petition the purveyors of water services. In some areas, it requires a petition from the property owners of the area that would like to be serviced with local water mains. In rural areas of the county, areas that of the County that do not have public wastewater collection, water extensions can be

based on petitions by the residents who would like to be served by public water.

Annexation, For potable water to be extended to some areas of the county, annexation is required by the provider of the service. Annexation is the incorporation of a land area into an existing city or village.

Water Supply Systems in Greene County

Groundwater Resources

Groundwater resources in Greene County are vital to the sustainability of the area because of its use as the primary source for drinking water. A majority of our ground water is retrieved from the Little Miami River Buried Valley Aquifer System, which was designated by the United States Environmental Protection Agency (USEPA) as a sole-source aquifer in 1988. The aquifer system consists of geologic materials that were transported to the area by glaciers thousands of years ago. The deposits range in thickness from 0 to 450 feet and overlie bedrock valleys carved by the glaciers. The thickest and coarser-grained deposits are generally located near the center of the bedrock valley, located roughly beneath the Little Miami River, Beaver Creek, Little Beaver Creek, Ludlow Creek and Massie Creek. Within these valleys, the coarser-grained deposits (sand and gravel) are segregated into upper and lower aquifer, separated by finer-grained materials or 'confining unit'. Public water supply wells in the area generally draw water from the lower aquifer due to its capacity to produce large quantities of water.

Over the years Greene County has experienced substantial urban development within the identified urban service boundaries and considerable residential growth in the rural portions of the county. As a result, the demand for our water resources in the county has increased significantly. The Regional Planning & Coordinating Commission of Greene County endorses the creation and implementation of a countywide Water Resources Management Plan to ensure the sustainability of the water environment in Greene County.

Wellhead Protection helps safeguard community water supplies. It may be the oldest community based environmental initiative recorded in North American history as the following colonial directive attests.

“There shall be no man or woman dare to wash nay uncleanlinen, wash clothes,...nor rinse or make clean any kettle, pot, or pan or any suchlike vessel within twenty feet of the old well or new pump. Nor shall anyone aforesaid, within less tan a quarter mile of the fort, dare to do necessities of nature, since by these unmanly, slothful, and loathsome immodesties, the whole fort may be choked and poisoned.”

--Governor Gage of Virginia,
Proclamation for Jamestown, Va (1610)

Wellhead Protection refers to programs designed to maintain the quality of groundwater used as public drinking water sources, by managing the land uses around the wellfield.

The theory is that management of land use around the well, and over water moving (underground) toward the well, will help to minimize damage to subsurface water supplies by spills or improper use of chemicals.

Currently ____ public water supplies have chosen to participate in a Wellhead Protection Program, see map WPP-1 which shows both one and five year times of travel. These programs strive to meet several goals:

- Prevent contamination of ground water derived public water supplies;
- Encourage the placement of certain activities in areas less likely to contaminate public water supplies; and
- Raise public awareness of ground water resources used for public drinking water supplies.

Greene County Systems

Northwest Regional The first public water lines were installed in the Beaver Creek area in 1961, using Montgomery County as a source of supply. Another “satellite system”, using the City of Dayton source, was installed in 1969. Plans for a comprehensive community water system were first proposed in 1965, the same year that the first of a number of small scale public water systems (typically serving a single subdivision) was placed into operation. By the time that the comprehensive system (the North Beaver Creek system) was placed into operation in 1980, there were seven small scale County systems, and one privately owned water system serving parts of what became the City of Beaver Creek. Five (5) of the small scale County systems were absorbed into the North Beaver Creek system in 1980. In 1985, the County acquired the privately owned system (renaming it the South Beaver Creek system) and absorbed the remaining small scale systems into it. By 1994, the North Beaver Creek and South Beaver Creek systems had been interconnected, and were renamed the Northwest Regional water system.

There are currently three (3) wellfields currently supplying the Northwest Regional system. The first (North Beaver Creek) is located east of Beaver Valley Road on the west bank of Beaver Creek. It has six (6) wells having a total capacity of 3.0 MGD. A second wellfield (South Beaver Creek) is located just west of the intersection of Shakertown Road and U.S. 35. It has three (3) wells having a total capacity of 1.5 MGD. The third wellfield (Valley Springs) is located just south of U.S. 35 on the west bank of the Little Miami River. It has two wells having a total capacity of 4.0 MGD. Additional sources are being developed in a wellfield (Stonehill Village) located south of Hilltop Road, between Trebein Road and Fairgrounds Road. It could eventually have a total capacity of 3.6 MGD.

Water from the North Beaver Creek and Valley Springs wellfield is pumped to the North Treatment plant. When the Stonehill Village wellfield becomes operational, water from that wellfield will also be pumped to the north treatment plant. At the North plant the water is aerated and chemically oxidized, detained, filtered through rapid gravity filters, disinfected and fluoride adjusted. Average daily production at the North plant during 1998 was 2.78 MGD. The peak day production was 4.00 MGD.

Water from the South Beaver Creek wellfield is pumped to the South treatment plant. At

the South plant the water is aerated, detained, filtered through rapid gravity filters, disinfected and fluoride adjusted. Average daily production at the South plant during 1998 was 0.58 MGD. Peak day production was 1.13 MGD.

Total daily production from the two plants during 1998 was 3.36 MGD. The peak day production was 5.13 MGD. Water from these two plants is pumped to a distribution system currently serving 9834 connections (approximately 29,502 persons).

Southwest Regional The Southwest Regional system was placed into operation in February 1996. It currently has two wells, each capable of producing 0.504 MGD. The only treatment provided is disinfection. Average daily production during 1998 was 69,000 gpd. The peak day production was 0.42 MGD. Water is pumped to a distribution system currently serving 184 connections (approximately 552 persons).

Shawnee Hills The County acquired the Shawnee Hills water system from a private owner in 1990. Since then, one additional production well has been developed, two existing wells rehabilitated, a new 500,000 gallon elevated storage tank built, aerator, pressure filters, high and low service pumps replaced, a backwash pump added, and the backwash filter rehabilitated. Treatment provided includes aeration, detention, pressure filtration and disinfection. Average daily water production during 1998 was 0,176 MGD. Peak day production was 0.392 MGD. Water is pumped to a distribution system currently serving 836 connections (approximately 2508 persons).

Original plans called for finding new water sources in the Shawnee Hills area and building a new treatment facility. However, it has become more cost effective to extend water lines to Shawnee Hills and supply it with water purchased from the City of Xenia under an agreement signed in 1998.

Cedarville The Cedarville water system is the only surface water source community water system in Greene County, drawing it's water from Massies Creek and Sportsman Lake. The Cedarville system was acquired by Greene County in October 1995. Since then, a number of interim improvements have been made, including rehabilitation of the slow gravity filters, replacement of low service pumps and flow regulators, and installation of continuous chlorine and turbidity monitors so the plant could be operated on a 24 hour basis (decreasing flow rates and improving water quality). Treatment provided includes coagulation, sedimentation, filtration through slow sand filters, disinfection and fluoride adjustment. Average daily production during 1998 was 0.188 MGD. Peak production was 0.288 MGD. Water is pumped to a distribution system serving 693 connections (approximately 2079 persons).

Current plans are to extend a water line to Cedarville and supply it with water purchased from the City of Xenia under an agreement signed in 1998. The existing treatment plant would be abandoned.

Country Club Utilities This small scale water system was acquired by the County in August 1998. The system has five (5) wells, and the only treatment provided is disinfection. Average daily production during 1998 was 11,000 gpd. Peak day production was 23,000 gpd. Water is pumped to a distribution system serving 49 connections (approximately 147 persons).

Satellite Systems The County operates distribution systems supplied with water from six other water purveyors, including the cities of Bellbrook, Dayton, Fairborn and Xenia, Montgomery County and Central State University. A total of 745 connections (approximately 2235 persons) are served by these sources.

City of Fairborn Government Services

Extension policy requires annexation to the City of Fairborn.

The City of Fairborn has three separate wellfields. The wellfield that is connected to their treatment plant is called the Mad River Wellfield. The Mad River Wellfield has five (5) wells with an average depth of 90 feet. They were constructed in 1974 with additional wells being added in 1990 and 1994. They produce three and a half (3.5) million gallons of water per day and are rated for nine and a half (9.5) million gallons of water per day. These wells service the population of the City of Fairborn, approximately 31,300 persons.

The other two wellfields are back-up/contingency supplies. The North Wellfield has four (4) wells and the Central Park Wellfield has one (1). They are utilized for emergency situations and also serve as a back up to the Mad River Wellfield.

City of Xenia Waterworks

Extension policy requires annexation to the City of Xenia.

The City of Xenia has seven (7) wells at their waterworks facility and four (4) additional wells at their Clifton Road well site. These wells range in depth from 60 to 115 feet. The original City of Xenia waterworks facility was constructed in 1921 and has served as the City water supply ever since. A new eight (8) million gallon capacity water treatment plant was built in 1982.

Approximately 24,800 people are supplied potable water from this facility that pumps three and a half to four (3.5 to 4) million gallons of water a day. The wellfields are rated at ten (10) million gallons of water per day.

Spring Valley Well

Spring Valley has utilized the Little Miami River corridor for its drinking water supply since 1975. Currently they have one well that is 52 feet deep. Approximately six hundred and fifty (650) people obtain their drinking water from this wellfield that produces approximately 55 - 75 thousand gallons of water per day. Spring Valley Village has a Wellhead Protection Ordinance, that is used to protect the wellhead area and satisfy the Ohio Environmental Protection Agency's concerns for wellhead protection.

Bellbrook Water Department

The City of Bellbrook has obtained its drinking water from their well site since the mid 70's. The City has a total of eight wells, of which five are located at Sackett/Wright Park. Three of these are main wells and two are backup wells. Two from the remaining eight wells are also main wells and one as a backup. All of the wells range in depth from 35 to 50 feet. The five main wells produce approximately 2.3 million gallons of water per day and they provide water to approximately eight thousand residents living in City of Bellbrook and a portion of Sugarcreek Township. The other wells can produce approximately 800 thousand gallons per day that we can turn on if required. The total for the eight wells is approximately 3.1 million gallons per day. The well fields are located in Sugarcreek Township. Sugarcreek Township has included the well field sites and surrounding areas in a WO/WP Well Field Protection Districts.

Village of Yellow Springs

Extension policy is handled on a case by case basis however all petitioners for annexation to the Village of Yellow Springs must agree to the extension of all Village utilities.

Yellow Springs Well Fields Yellow Springs utilizes the buried valley of the Little Miami River corridor, located down river from the Glen Helen nature preserve and John Bryan State Park, for its drinking water and has five productive wells, the first of which was drilled in the 1960s. Well depths range from 81 ft. to 150 ft. Cumulatively, the wells produce approximately 480,000 gallons per day for approximately 4000 users. The well field is located entirely outside the Village limits, within Miami, and Xenia Townships in Greene County. The Village has begun the development of a Wellhead Protection Management Plan

Village of Jamestown

Extension policy is handled on a case by case basis that usually requires annexation to the Village of Jamestown.

Village of Jamestown Wellfield consists of three (3) wells with an average depth of 100 feet. The well field was developed in the late 1930's with improvements in 1964. The wells currently produce approximately 211,000 gallons of water per day that services the Village of Jamestown, with approximately 750 users. The wellfield is rated for one mgd.

Village of Bowersville

Village of Bowersville owns and operates its own water treatment and distribution system to serve the water supply needs of the Village residents. The village has two (2) wells that are approximately 150 ft. deep and can produce around 200 gpm each. The well field is located approximately one-half mile northeast of the village. Pressure is maintained throughout the distribution system by a 100,000 gallon water storage tank located within the Village.

Utility Extension and Growth Management

By adopting and implementing public policies like those in the Coordinated Land and Water Management Program, Greene County has taken steps to ensure that decisions about where and when it should invest in infrastructure are economical, feasible, in the best interest of the community and sustainable.

By adopting these policies, Greene County has provided direction on how the county will look in the future and hopefully will detour or avoid conflicts that may arise from a developers request. When utilities are extended for developmental purposes only, the public facilities that make the proposed development possible may also facilitate development of the very land that the community/county wants to protect. Further, a developer may buy relatively inexpensive land that is far from existing utilities and may request the purveyor of the utility to extend the public facilities to the site, through an approval process and/or participation. Such an action by the utility purveyor not only promotes leapfrog/sprawl development, it also modifies the land market. The very reason that the land was cheaper is probably the fact that it was located far from public utilities.

There are other reasons why a utility purveyor may provide services in some areas and not in others. The physical shape of the land, its topography, often affects serviceability. Sewer lines are cheapest to build and maintain if they flow downhill to the wastewater treatment facility. In the case of water, pressure is the critical determinant, providing water service at an elevation higher than the community often requires an investment in new pumps and/or elevated storage. Each utility service area in the county may have excess capacity in some part of its particular service area thus, allowing for development with minimal new construction and maintenance expenses (see Chapter 2, Coordinated Land & Water Management Program, Urban Growth Management Policy).

It is clear that many factors influence where it makes sense for a community to encourage new development. Those same factors should influence where utility purveyors build or permit the construction of new infrastructure (Kelly, 1993:15).

Goals

1. To foster a relationship between utility services and land use which aims toward encouraging development patterns which can be served in a cost effective, environmentally beneficial manner and which follows sound land use practices as identified in the *Perspectives Land Use Plan*
2. To provide the citizens of Greene County with adequate levels and quality of public water and sanitary sewer for existing and new development.

Objectives

1. Identify policies for utility extension that provide proper and efficient spatial relationships for all land uses.
2. All utility purveyors/communities should have a definite policy for determining the method by which service extensions are made. The policy should be a clear-cut

process by which services can be extended.

Policies

1. Areas of the county that have a public water supply available without public wastewater collection are still considered rural.
2. Utility service should be extended but limited to an “urban service area” of a size and pattern facilitating the most effective provision of urban service.
3. Implement the adopted Coordinated Land and Water Management Policies.
4. An “open end” policy in which service would be extended to remedy an existing or potentially serious health problem, wherever located, if feasible from an engineering and economic standpoint.
5. The extension of public utilities outside of the urban service area is discouraged, except for reasons of public health.
6. Gravity flow sanitary sewer systems are preferred.
7. Infrastructure improvements and associated utility extension shall be consistent with the land use plan.

Agriculture Preservation Policy

Agriculture as an Economic Sector and Land Use in Greene County

People tend to overlook the fact that agriculture is an industry. It is an industry which, not unlike steel production or auto manufacturing, involves a degree of physical danger, makes some noise and creates a certain amount of air pollution even when employing best management practices. It is an industry, however, that cannot provide plant security by locking the factory gates. Above all it is an industry that requires a lot of wide, open space for production.

Greene County has historically been an agrarian region, but proximity to the Dayton metropolitan area has led to an east-west dichotomy over the past half century. While the eastern half of the county has maintained its rural identity, the western section has been absorbed by suburban and exurban development where the population has expanded into subdivisions of ever lower densities. This process of population growth and dispersal is typically characterized by an increasing frequency of conflicts between new residents and established farming operations.

Attracted by the rural character of the country side, people who would not think of moving into the middle of an industrial area build new homes in agricultural areas. Only later do many find out that just like other industries, the agricultural industry can affect neighboring home owners. The by-products of farming have a way of spilling over property lines; and to the new rural dwellers, agriculture is an easy target for retaliation. Too often, then, good farm land gets treated, not as a distinct place where food can be produced without interference from competing land uses, but rather as 'left over space' on the map waiting to be filled in with more intensive land uses.

Since farming, as it is generally practiced today, is an essential industrial process incompatible with immediately adjacent residential uses, it is entirely appropriate to plan for agricultural preservation. Without adequate preservation policies prime farming areas will continue to be extremely vulnerable to future waves of uncontrolled low-density sprawl development. The efforts to protect this agricultural base will be founded upon an understanding of the dynamics of metro-agriculture as a land use, a business, and as a way of life.

Without this effort, surviving as a working farmer in the expanding metropolitan area will be adversely effected. In addition to nuisance complaints and vandalism, other concerns include higher taxes, higher land costs to buy additional crop land, greater difficulty in obtaining long-term land leases, increased wage scale (often due to higher housing and living costs) labor shortages (because of alternative employment opportunities), crop damage, and traffic congestion (making it difficult to use local roads to move agricultural machinery from field to field). As neighboring farmers sell out, an "impermanence syndrome" may affect those remaining on the land. Once the agricultural base declines below a certain threshold, as has been observed in Greene County, equipment dealers and

large animal veterinarians begin to relocate their businesses, adding to the cost and inconvenience of continuing to farm in that locality.

Guided by Perspectives, Greene County has been relatively successful over the past 20 years in minimizing conflicts between new residents and the farming community by keeping them physically separated. Rural residential development has been largely confined to marginal agricultural areas.

The success of the next generation of farmers in Greene County will depend, in large part, upon the support they receive from their respective community.

After considerable study, Greene County has determined that indeed, the most effective way to secure the future of local agriculture - safe guard the 'right to farm' is to support and promulgate initiatives designed to direct suburban and exurban growth as they relate to prime farming areas.

The agriculture preservation policy is detailed in the Greene County Farmland Preservation Plan which is considered a part of this future land use plan.

Land Utilization

The agriculture sector constitutes a substantial economic element within Greene County. Agriculture is also important due to the magnitude of acreage used for farming. The Ohio Department of Agriculture (Ohio Department of Agriculture 1999 Annual Report and Statistics) reports that there are 930 farms occupying 194,000 acres in Greene County. This represents approximately 72% of the total land area within Greene County. This percentage of agricultural land to total acreage in the county has been decreasing at a rate of a half percent per year (950—1000 acres).

This gradual decline in land used for agriculture can be explained by two specific circumstances. First, there has been a continuous process of urban development within the urban service boundary and encroachment on rural areas with more people seeking a home in a rural setting. Secondly, farming is being displaced by more economically feasible forms of production.

Importance of Agriculture Sector

The amount of land used for agricultural pursuits is only one indicator of the importance of the agricultural sector in the Greene County Economy. The dollar value derived from agriculture is a more useful measure of economic importance. Total receipts received for agricultural products have increased 67 percent over the eighteen year period 1974 to 1999, to \$61,428,000.00; over \$317 per acre. This represents approximately one and four tenths percent of Ohio's total receipts for agriculture.

The agricultural sector of Greene County is quite diversified with particularly heavy emphasis on hog and corn production. Other areas of agriculture interest exist in raising sheep, cattle as well as soybeans, wheat, oats and hay.

Public Purpose in Agriculture Preservation

The public purpose in preserving farms and farm land extends beyond the simple consideration of farm houses, high quality soils and rural ambiance. The Greene County preservation policy as promulgated in Perspectives, meets a variety of national, state, regional, as well as local goals, as follows:

Conserving Energy

Prime soils require less energy to farm than do other soils. And when the prime soils are maintained near their primary markets-the urban centers-energy is conserved in reducing transportation costs. Still, the principal energy saving is due to the natural characteristics of the soil-good moisture content, depth and texture, biochemical features, good drainage, adequate solar energy, protection from the winds, to list a few. Because of these natural qualities, less energy is expended in conservation practices, fertilizer and pesticide applications, development and application of irrigation systems, and operation of farm equipment. Thus, by maintaining this highly productive, self-sufficient soil, especially near urban centers, communities conserve energy that would otherwise be spent in transportation or the energy-intensive practice of upgrading and maintaining inferior soils.

Preventing Urban Sprawl

By preventing urban encroachment in rural areas, communities promote compact urban development. The energy implications of compact versus sprawl development have been well documented. So, too, have the fiscal implications. Sprawl costs money, and it costs nonrenewable resources. In saving farms and farmland, communities often prevent sprawl and promote compact urban development.

Controlling Public Costs

The public service and facility costs of farms and farmland are low. Generally, the tax returns to the community from the farms are greater than the service and facility outlays they require. Thus, in terms of tax returns versus public costs, the farms are producers, not consumers. With scattered, leap-frog development, however, the public service and facility costs far outrun the tax returns. By controlling the timing, rate, or location of development through a preservation program, communities also maintain the quality of their tax base and the control of their public costs.

Maintaining Open Space

Maintaining open space is not a primary purpose of farmland preservation however, farmland preservation programs do result in the maintenance of open space. Local preservation programs, sensitive to the lessons of suburban development in the last two decades, are capitalizing on the open-space qualities of local farmland resources. It is important to remember that maintaining open space is a by-product of Agriculture

preservation, not a reason for it.

Retaining Natural Spaces and Natural Processes

Many communities see farmland preservation as one part of a more important program to maintain natural systems and natural processes. In preserving the farmland, the communities also meet other objectives in the preservation of wetlands, small watersheds, aquifer recharge areas, flood-plain, and special wildlife habitats. While farming can damage sensitive natural areas and processes, farming can also be a wholly compatible use. Farmers are becoming sensitized to natural systems and processes as one part of their farmland preservation program.

Preserving Local Economic Base

Farming is a significant element in the local economy. Since farming is almost always an exporter of goods and an importer of income, the returns to the community are substantial. Yet the effects of the agricultural base extend throughout the community. Farms and their workers support a variety of other businesses, such as grocery stores, drugstores, hardware stores, and other retail enterprises. Farming also supports a host of farm implement dealers, feed stores, granaries, migrant workers, hired hands, food processing plants, and the like. But it is a symbiotic relationship—the farms need the support businesses, and the support businesses need the farms. If the farms disappear, the support business will also disappear. Thus, by preserving the farms, communities are also protecting the quality and character of their local agricultural economic base.

Promoting Local Self-Sufficiency

One of the central characteristics of agriculture is that it capitalizes on the quality of local resources. Unlike other foot-loose industries, such as defense industries, agriculture is rooted to soil in a specific time and a specific place. Although agriculture is sensitive to policies established in Washington and in world food markets, local agriculture is less sensitive to national policy decisions than are most industries. Because of the stability of agriculture, these communities are more self-sufficient and less dependent upon decisions made outside the community.

Preserving Rural Lifestyle

By maintaining existing farms and farmland, many communities seek to maintain their dominant rural lifestyle. Mr. Justice Douglas may have been speaking to these communities when he wrote in the majority opinion in *Boraas v. Village of Belle Terre*:

“A quiet place where yards are wide, people few, and motor vehicles restricted are legitimate guidelines in a land-use project addressed to family needs. . . . The police power is not confined to elimination of filth, stench, and unhealthy places. It is ample to lay out zones where family values, youth values, and the blessings of quiet seclusion and clean air make the area a sanctuary of people.”

Maintaining Our Agricultural Reserves

In promoting compact urban development and preserving local agricultural areas, communities also contribute to the maintenance of agricultural reserves. Without the preservation program, many farmers would be forced to turn to other more marginal lands for agricultural production. In bringing this land to agricultural production, the nation would also lose other important resources like timber or wetland areas or grazing land.

Goals

1. To recognize the essential importance of a sound agricultural community to Greene County and promote sound land use practice which offer protection from unnecessary encroachment.

Objectives

1. To identify the prime agricultural land within Greene County.
2. To distinguish between agricultural preservation and preserving rural character.
3. To establish a set of zoning and subdivision standards which will effectively protect prime agricultural land from premature and unnecessary encroachment.

Policies

1. Agricultural land uses should be encouraged in areas which possess adequate soil conditions, topographic relief, drainage, and depth to bedrock.
2. Encourage the modification of zoning techniques in agricultural zoning districts which promote agricultural preservation.
3. Encourage urban development to occur in a compact pattern within or adjacent to existing urbanized areas, and discourage isolated developments which possess low levels of public services and encroach upon agricultural land uses.
4. Encourage the development of rural residential parcels on the periphery of, rather than within, areas possessing prime agricultural land.
5. Encourage the extension of utility services prior to or at the time of development in an area in order to minimize sprawl and its detrimental economic effect on agriculture.
6. Discourage the extension of utility services into areas possessing prime agricultural land.
7. Implementation procedures such as tax relief, use and conservation easements, transfer, lease or purchase of development rights, and zoning regulations should be encouraged in order to prevent the premature subdivision of agricultural land adjacent to urban areas.
8. Encourage state enabling legislation to permit county/local designation of prime agricultural land districts with stronger incentives and regulations for preservation in agriculture.

Rural Development (residential)

Statement of Purpose

Within Greene County there is a need for a wide variety of residential home sites to provide a diversity of housing opportunities that will accommodate the existing and future residents of Greene County. In that context, it is recognized that there is a demand for residential lots of a rural and spacious nature greater than one acre in size Providing:

1. they conform with local zoning requirements;
2. are outside the identified urban service boundary;
3. an adequate potable water supply (public or on-site) is available and accessible;
4. sufficient lot area is provided for the long term use of individual on site leaching devices for wastewater disposal; and
5. additional consideration is given when proposed rural development is in areas of the county which possess prime agricultural soils and other irreplaceable natural resources, so potential negative impacts can be mitigated.

The difference between Rural Residential Development and Rural Non-Farm lots

Rural residential developments are intended to provide areas for residential use for those persons who desire rural living environments. They contain a range of lot sizes consistent with desired rural character. This development type goes through the major subdivision review process where review agencies can mitigate potential impacts; take into account natural resources and environmentally sensitive areas (Conservation Design); provide for a public review of the proposed development which will balance the public's interest in the management of community growth with the protection of individual property rights; and manage the extension of public services. Rural residential developments usually include the development of an entire parcel or several parcels.

Rural non-farm lots are also intended to provide parcels for residential use in rural living environments. However, these parcels are created with a minimal amount of review. The parcels meet the requirements of local zoning and provide adequate lot area for on-site wastewater disposal. These parcels are generally developed along existing roadways and are only a portion of a parcel.

Rural Residential Development History

Over the past twenty (20) years, the rural residential developments that have taken place in Greene County have been consistent with Perspective: A Future Land Use Plan for Greene County. These developments have been scattered throughout the western half of the county and have absorbed much of the marginal agricultural lands within a reasonable commute time to employment and commerce. There have been 43 53 rural residential developments within Greene County from 1975 to 2000, with approximately 75 percent of those occurring in the three (3) most westerly townships of the county:

Bath, Beavercreek and Sugarcreek. Approximately 1235 single family residential lots, utilizing 3750 +/- acres have been developed, with an average lot size of 3.03 acres per lot (gross density). It is reasonable to assume, that additional areas suitable for rural residential developments will be needed in the future. This will increase the development pressures on some farming areas of the county that are located within a reasonable commute time from employment and commerce opportunities.

Our fundamental challenge is that we must build on our early successes and take more comprehensive and decisive steps in the future, to meet this challenge of directing rural residential development, by requiring future rural residential development to be consistent with the character of the surrounding area, and that it is of a proper scale for the site. Clearly, land use conflicts involving suburbs, rural residential housing and agriculture won't be resolved if left to themselves.

Rural Residential Siting Criteria

The location of rural residential developments within the county should be considered on an individual, case-by-case basis. Specifically, each case should consider the physical capability of the site to accommodate the proposed density and intensity while considering the existing patterns of the surrounding land uses. Rural residential development should be located in areas that are not centrally located within the identified farmland protection areas to act as a buffer between farmland and denser residential areas. The intrusion of rural residential development into areas possessing prime agricultural soils and an agricultural character can be considered a direct conflict with the county-wide goal of preserving prime farmland (see the Greene County Farmland Preservation Plan), therefore, hastening the conversion of farmlands to non-farm uses. Rural residential development building sites, together with all residential development building sites, should not be permitted within any area where building sites are subject to flooding, within the 100 year regulatory flood plain (see Flood Plain Management Policy).

Due to the non-agricultural orientation of most rural residential developments, the residents require locations with accessibility to employment centers and shopping facilities via an adequate road network. In order to maintain the efficiency of such a road network, strip-type rural residential development, that requires driveway access to existing roadways, should be discouraged. Clustering of rural residential sites, with limited curb cuts to the thoroughfare – new platted roadways designed and built to the appropriate standards, should be encouraged.

With on-site well and wastewater disposal

The lot size of new rural residential developments should range between one and five acres per dwelling unit. The site specific density of each individual development should be guided by the capability of the site to accommodate an on-site water supply and on-site wastewater disposal. A soil evaluation for septic tanks and a well test to evaluate the availability of groundwater, should be completed prior to the approval of any rural residential development in order to insure public health and safety. In cases where public

water is not available or projected within the planning period, the average density of proposed developments should not exceed one (1) dwelling unit per three (3) acres (gross density).

With public water & on-site wastewater disposal

The lot size of new rural residential developments with a public water supply should range between one and five acres per dwelling unit. Since public water is available, the density of each individual development should be guided by the capability of the site to accommodate on-site wastewater disposal and to maintain the rural character of the area. A soil evaluation for leach fields, should be completed prior to the approval of any rural residential development in order to insure the public health and safety. In cases where public water is available or will be provided, the average density of proposed developments should not exceed one dwelling unit per two and a half (2.5) acres (gross density).

Rural non-farm residential lots

Residential land use is the second largest land use in Greene County after agriculture. The dominant housing type in the rural portion of the unincorporated areas is a single family detached house on large lots - rural lots. The result of this trend is that more land (farmland) is being used to accommodate residential growth outside of the urban service boundary.

In the rural areas of the townships home sites have been occurring mainly as rural non-farm lots scattered sporadically over the townships along existing roads. If this trend continues more farmland will be used for non-farm purposes.

The purpose of this policy is to establish clear guidelines for the creation of rural non-farm residential lots to further the efforts of farmland preservation within Greene County. There is a need for Greene County to develop a rational rural non-farm residential lot policy to protect the current agricultural areas of the county.

The agriculture category is an extensive area on the Perspectives: A Future Land Use Plan map. These areas generally contain farmland, priority farmland or farmland of importance. Also, some of the land in the agriculture category is used for farmsteads and very low density residential uses (rural residential development and rural non-farm residential lots). A strategy of this policy document is to prevent the conversion of farmland to non-agricultural uses. However, it is recognized that some land in these areas is not well-suited for agriculture because of soil productivity, topography, vegetation, wetness, man-made barriers, etc., and, therefore, could be more suitable for other purposes. It is also recognized that many farmers and agricultural land owners may wish to create a lot or erect a dwelling unit for a child, dependent, or relative on a portion of their land which is indicated as agricultural.

Rural non-farm residential lot development criteria

With respect to these types of situations and where adequate evidence is provided, it is the policy of the Regional Planning and Coordinating Commission that individual residential home sites on rural lots are appropriate after it has been determined that the property is adequately suited for the intended use; that the soils are suitable for wastewater disposal; an adequate water supply is available or can be developed for the intended use; that the use will not impair the drainage of surface or sub-surface water; that access will not create dangerous traffic conditions or congestion; and that the use will not interfere with normal agricultural practices on adjoining lands.

Rural agri-business lot development criteria

This category also provides for limited agribusiness, farm support services, and other related uses that are dependent upon, or closely allied to, modern agricultural practices. Greene County recognizes that prime farmland can be best utilized as agricultural land when a full range of agribusiness and farm services in the immediate area supports it. Any proposed uses of this nature would be evaluated by the same criteria listed in the preceding paragraph.

Rural Character

Within rural communities, a distinction must be made between the preservation of farmland and that of rural character. Farmland preservation requires that agriculture continue as a viable economic activity (see the Greene County Farmland Preservation Plan) whereas, rural character is the appearance of open areas and/or characteristic of a country setting. It is unfortunate that agriculture, as an industry, has a painful union with randomly placed rural non-farm housing. It seems reasonable, however, to think that both suburban growth and our search for rural living can be accommodated while making possible an efficient agricultural industry.

Rural residential development is viewed as a way to allow for residential development to occur while maintaining the rural character of the country side. It is understood that the idea/concept of rural character is different for everyone and the definition of rural character is an important beginning. For the purpose of this policy, rural character is defined as: areas with a mixture of farms, woodlands, varying topography, undeveloped open space, clean water ways, wildlife and the absence of suburban amenities such as street lights and sidewalks.

In rural residential development, the layout within the development is a critical factor. Although a given property can theoretically be developed at greater densities without considering physical and environmental conditions, a distinction must be made between “carrying capacity,” - the maximum amount that can be supported by a given environment and an “appropriate planning capacity”. **The mere fact that a tract can be developed at a given density does not mean that it should be.** Regardless of the methodology to establish rural densities, there is a consensus that permissible rural densities should remain relatively low.

Goals

1. Recognize a need/desire to establish rural/spacious residential building sites that provides for a high level of public health, safety, welfare, and convenience.
2. To recognize and promote sound land use practices, rural residential development, that offer viable agricultural communities protection from unnecessary encroachments.

Objectives

1. To identify proper and efficient spatial relationships between rural residential developments and other land uses.
2. To provide a diversity of residential building sites within the county.
3. To preserve the rural character in Greene County.
4. To identify the appropriate density of rural residential development in relation to land capability, existing adjacent land uses, availability of public utilities and adherence to other development policies.

Policies

1. Rural residential development shall be regulated by the availability of adequate on-site well supply(ies) or public water, soil conditions relative to on-site waste water disposal, and the preservation of prime agricultural soils and other irreplaceable natural resources.
2. Rural residential development should occur where public sanitary sewer is not expected to occur for an extended period of time into the future.
3. Strip-type rural residential development shall be discouraged and clustering shall be encouraged.
4. A zoning classification should be provided for rural residential development within the unincorporated areas of Greene County.

Floodplain Management

Statement of Purpose

The purpose of this policy is to prevent losses associated with flooding by protecting the floodplain ecosystem and deter development that will individually or cumulatively have an adverse effect on the health, safety and general welfare of present and future residents of Greene County and the citizens of adjoining/adjacent drainage areas.

The preservation and maintenance of floodplains and their associated water and land ecosystems in their natural condition represent important natural functions and values that provide both opportunities and limitations for certain uses and activities. It is the intent of this Commission to protect the citizens of Greene County and minimize public and private property damage by controlling development which will, when acting alone or in combination with other development, cause flood losses and create additional burden to public services, public infrastructure and other utilities, and to the health and safety services.

What is a Floodplain?

The regulatory floodplain is made-up of the floodway and the flood fringe (see figure 1). It is the area adjoining a river, stream, watercourse or lake that is inundated by the regulatory-flood. The area subject to flooding (regulatory floodplain) shall be:

1. as determined by the U.S. Army Corps. of Engineers most recent data, designating the area subject to a 100 year flood, 100 year floodplain - there is a one percent chance of annual occurrence; and/or
2. as shown on Federal Emergency Management Act (FEMA) the Flood Boundary and Floodway Map, usually called the Floodway Map; and/or
3. areas possessing alluvial-type soils along existing streams according to information provided by the Ohio Department of Natural Resources, Division of Land and Soil and the U.S. Department of Agriculture, Soil Conservation Service; and/or
4. as areas designated as “Flood Hazard Areas” by the Miami Conservancy District based on the observed flood of January, 1959 plus allowance for a larger flood which can be reasonably expected.

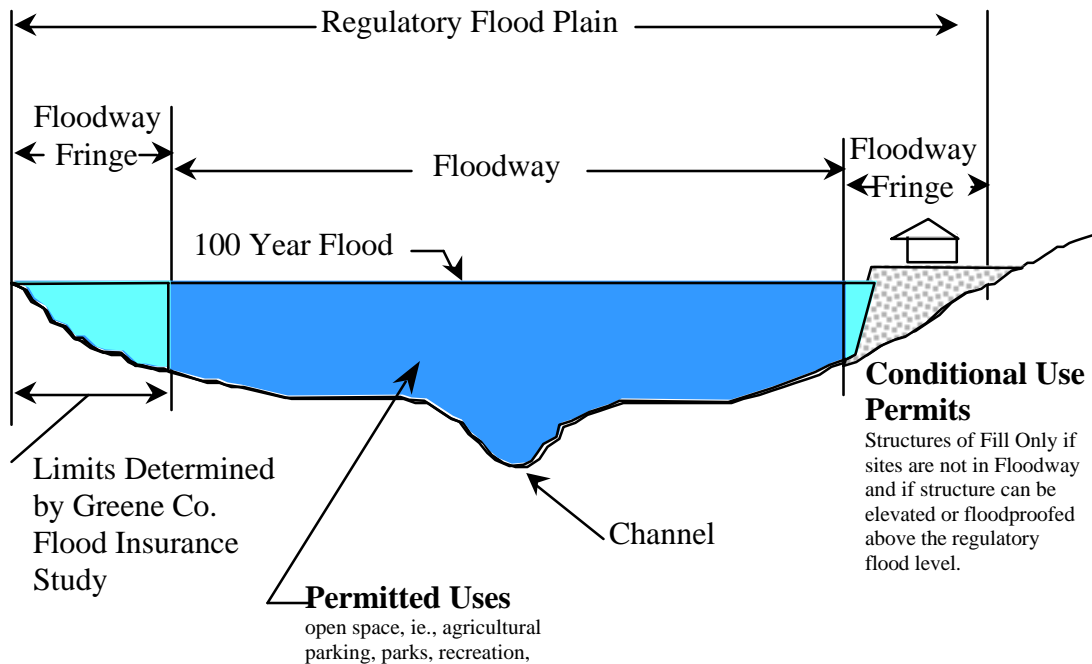
The floodway is the unobstructed portion of the floodplain consisting of the channel of the water body and those portions of the floodplain adjoining the channel that are capable of conveying and discharging the flood water while keeping it within designated heights and velocities. The floodway is intended to carry the deep and fast moving water.

The flood fringe is the portion of the regulatory floodplain beyond the limits of the floodway. Floodwaters in this area are usually shallow and slow moving.

Floodplains are the “sometimes channel” of the water body. The channel may not use the entire floodplain all the time, however, it will eventually reclaim its unused portion of the

Figure 2.2

REGULATORY FLOOD PLAIN



floodplain. If the floodplain has been encroached upon by development, the water body's action can cause disastrous effects. The relative unpredictability of flooding causes a problem in itself. This may lull some to think that it is "SAFE" to erect structures within the floodplain since it has not flooded in years.

Benefits of Floodplain Management

All water bodies are dynamic systems that undergo changes as a result of precipitation. Flooding, erosion and sedimentation are parts of the physical and biological processes of the floodplain. Flooding is a natural process that is valuable to humans. It serves a beneficial function by slowing the velocity of the water flow and increases soil fertility. The floodplain retains the water until it can be either released downstream, evaporated into the atmosphere or absorbed by the ground. Flooding is a process that becomes hazardous only if development is allowed and is undertaken within the floodplain.

While most categories of floodplain management strategies are orientated towards dealing with existing problems, our main focus is on the future. Trying to keep the problem from getting worse by ensuring that future development in the floodplain does

not increase flood damages and by maintaining the floodplain system capacity.

Natural Benefits of Floodplains

Floodplain effects on water resources

Floodplains are nature's flood and erosion control network. They reduce flood velocities, flood peaks and reduce the erosion potential of the water body. They also stabilize soils, provide a broad area for the water body to spread out and temporarily store floodwaters and accommodate the water body's ability to meander.

Floodplains and their associated ecosystems enhance and maintain water quality by reducing sediment loads carried by the water body, filter nutrients and impurities out of the flood water flow, and process organic and chemical waste. Another important aspect of floodplains is their ability to moderate water temperature and protect the physical, biological, and chemical integrity of the water body.

Floodplains help to maintain groundwater supply by storing stormwater which allows for infiltration into the ground particularly at aquifer recharge areas.

Floodplains and their biological resources

Plants that are associated with floodplains are a significant reason why floodplains are as valuable as they are. Besides improving the quality of the water, floodplains maintain a high biological productivity of floodplain and wetland vegetation, maintain habitat for natural forests, provide areas for natural food sources and crops for human consumption, and they provide areas which are used to maintain the genetic diversity of the floodplain plant species.

Fish and wildlife also benefit from the floodplain ecosystem. The floodplain provides fish and wildlife habitat, thus maintaining genetic diversity, it maintains important breeding and feeding grounds for various wildlife species, creates and enhances waterfowl habitat, and protects habitat that is critical for rare and endangered species.

Cultural benefits of floodplains

The floodplains ability to stabilize soils and enhance the quality of floodplain soils by capturing nutrients carried by the water body makes these areas productive for the harvest of natural and agricultural products. Floodplains create and enhance agricultural lands, by reducing erosion, stabilizing soils and adding nutrients to the once flooded soils. Additionally, they provide areas for the cultivation of fish and shellfish, protect and enhance the cultivation of forest trees, and provide habitat for fur bearing animals.

Recreational opportunities are also provided by the floodplain. Some of these opportunities include:

1. areas for active recreational uses;
2. areas for passive recreational activities;

3. provide open space for the adjoining communities and the region; and
4. provide aesthetic resources.

The scientific and educational community also benefits from floodplains. Floodplains provide opportunities for ecological studies, scientific studies and outdoor educational opportunities. Often sites of historical and/or archaeological significance are located in floodplains and can provide important clues to our past.

Goals

1. Protect the citizens of Greene County against flooding
2. Identify and protect the floodplains physical assets.
3. Balance the rights of private property owners to use their land while assuring protection against flooding.
4. Minimize public and private property damage caused by flooding that creates additional burden to public services, public infrastructure and other utilities, and to the health and safety services.
5. Protect the natural floodwater storage capacity of Greene County's floodplains by restricting uses which are dangerous to health, safety, and property in times of or cause increases in flooding heights and velocities.
6. Protect watercourses, their tributaries, floodplains, and adjoining woodlands and wetlands for their values as water retention and water recharge areas.
7. Provide for the protection, preservation, proper maintenance and use water bodies and their floodplains in order to preserve and conserve the quality, clarity, and free flowing conditions of Greene County waters, to protect fish and wildlife and their habitat, to prevent erosion of waterbody banks, maintain cool water temperatures, lessen the impact of siltation on water bodies and preserve and protect valuable resources in the interest of present and future generations.

Objectives

1. Identify the floodplains of Greene County
2. Keep the floodplains free of non-compatible uses and retain compatible land uses, such as agriculture and open space.
3. Provide existing and future residents access to a diversity of desirable wildlife and vegetation species within the county
- 4 Review and analyze current land use plans and development regulations for all incorporated and unincorporated areas of Greene County and recommend modifications where protection of the floodplain is not adequate.

Policies

1. Regulate development, uses and physical alterations (such as filling , dredging, etc.) that will adversely affect the floodplains natural functions and/or increase flooding levels and velocities within the floodplain.
2. Encourage land uses that are compatible with floodplain such as agricultural and open space.

3. Provide assistance to local governments to aid in their efforts to protect the floodplain.
4. For subdivisions and rezonings that are proposed which are within the regulated floodplain the RPCC review shall include the following agencies and organizations: ODNR Division of Natural Areas and Preserves; U.S. Army Corp. of Engineers; Greene County Historical Society; Little Miami Inc., Beaver creek Wetlands, Greene County Parks and other interested agencies.
- 5 Encourage inter-jurisdictional cooperation in dealing with floodplain/stormwater runoff issues that will individually or cumulatively have an adverse effect on the health, safety and general welfare of present and future residents of Greene County and the citizens of adjoining/adjacent drainage basins/watersheds.

Little Miami River Management

Scenic River Program History and Purpose

The Ohio Department of Natural Resources (ODNR) assumed the responsibility for the establishment of a Scenic Rivers Program for the state with the passage of Senate Bill 345 by the 107th General Assembly on February 28, 1968. The purpose of establishing the Scenic Rivers Program was to assist in the protection and preservation of the few remaining natural rivers of the state. Their main concern was the protection and improvement of aquatic species and the maintenance of streamside forested corridors. In 1972 the Ohio Scenic Rivers Act was amended to provide for “wild” and “recreational” classifications, in addition to the original “scenic” classification. These classifications are intended to differentiate between rivers which are presently in various degrees of natural conditions.

The Ohio Scenic River Program, focused on preserving natural stream systems for the benefit of our present and future generations. The designation of the Little Miami River as Ohio’s first Scenic River (1969) and its recognition as a National Scenic River (1973), one of only 75 rivers in the U.S. designated by the federal government as a National Wild and Scenic River, serves to emphasize the awareness that we must act decisively, today, to protect our national environment for the future.

The underlying philosophy behind Ohio’s Scenic River Program is that of preservation. However, we must face the fact that recreational use of Ohio’s streams and rivers is on the increase. It is therefore the policy of the Ohio Scenic Rivers Program that appropriate recreational uses of the Scenic Rivers should be accommodated but guided in such a manner as not to infringe on the rights of the private property owner or result in the overuse of this national resource.

Authority

Authority for the establishment and management of the Little Miami Scenic River is derived from both the Ohio Scenic Rivers legislation, Ohio Rev. Code Ann. § 1517.14 to 1517.18 (Baldwin 1995) and the National Wild and Scenic Rivers Act. The National Wild and Scenic Rivers Act states in Section 10(a),

“Each component of the national wild and scenic rivers system shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. **In such administration, primary emphasis shall be given to protecting its aesthetics, scenic, historic, archaeological, and scientific features.**”

Guidelines for implementing the National Wild and Scenic Rivers Act were published in the September 7, 1982, issue of the Federal Register. These guidelines state,

This section is interpreted as stating a non-degradation and enhancement policy for all designated river areas, regardless of classification. Each component will be managed to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact or degrade those values. ... Land uses and developments on private lands within the river area which were in existence when the river was designated may be permitted to continue. New land uses must be evaluated for their compatibility with the purposes of this Act.

The guidelines further state that managing agencies will implement the following management principles to the fullest extent possible:

1. Carrying capacity shall be considered in preparing and implementing the management plan for the river;
2. Public use will be regulated and distributed where necessary to protect and enhance the resource values of the river area;
3. The managing agency may provide basic facilities. In scenic and recreational river areas, toilets, shelters, picnic tables and trash receptacles are appropriate;
4. Major facilities such as developed campgrounds, visitor centers, and administrative headquarters will be located outside the river area whenever feasible;
5. Resource management practices will be limited to those which are necessary for protection, conservation, rehabilitation, or enhancement of the river area resources;
6. Water quality will be maintained to meet federal and state standards. The managing agency will work toward abatement of activities within the river area which are degrading water quality; and
7. When conflicts exist between the provisions of the Wild and Scenic River Act and other acts applicable within the corridor, the more restrictive provisions that protect the corridor values shall apply.

Statement of Purpose

It is in the public's interest to protect the Little Miami Scenic River against development that will adversely affect its National and State designation as a "Scenic River."

It is the intent of this commission, as stewards of our land, to preserve and protect the Little Miami Scenic River for the benefit of present and future generations. We endorse the Little Miami Scenic River's designation as a State Protected River and as a component of the National Wild and Scenic River System and will continue to protect the lands associated with the river by our land use, zoning and subdivision review decisions.

Little Miami River Information Summary

The Little Miami River as a whole is the most biologically diverse river in Ohio. In a 1983 study, conducted by the Ohio Environmental Protection Agency (OEPA), 436 types of aquatic organisms, including six (6) Ohio endangered, two (2) threatened and eight (8) special interest species, were identified in the river, including; 87 fish species (three

species of fish are classified as endangered in Ohio) and 349 different types of macroinvertebrates.

The Little Miami River is 105.5 miles long and has 133 named streams draining into it. The OEPA has designated it an “Exceptional Warmwater Habitat” (EWH) and is the longest Exceptional Warmwater Habitat stream in Ohio.

The Little Miami River drainage area is approximately 1,757 square miles and encompasses seven counties; Clark, Greene, Montgomery, Warren, Clinton, Clermont, and Hamilton. The river itself meanders through Clark, Greene, Warren, Clermont, and Hamilton Counties, then into the Ohio River.

The river corridor supports five state parks - John Bryan, Caesars Creek Lake, East Fork Lake, Stonelick Lake, and Cowan Lake - plus numerous state, local and private parks and natural areas.

Little Miami River in Greene County

Within Greene County, the Little Miami River is approximately 28.9 miles long and has 21 streams draining into it.

Natural Areas

John Bryan State Park is the most scenic park in western Ohio. The park contains a remarkable limestone gorge cut by the Little Miami River. A portion of the gorge is designated as a national natural landmark.

Much of the history of John Bryan State Park is “written in the rocks” of the Little Miami River gorge. Entering the area at Clifton, at 980 feet above sea level, the Little Miami River drops 130 feet through layers upon layers of bedrock. Each layer has a story to tell of times when the area was covered by warm shallow seas or was a part of a muddy river delta or was scoured by tons of slow moving glacial ice. Each layer has its own characteristics as well. Some of the shale layers are easily worn away by the forces of erosion, causing some undercutting in the cliff face. The more erosion-resistant dolomite or limestone rocks above are weakened by this undercutting and large “slump blocks” fall away, creating unusual rock formations including Steamboat Rock. Springs feeding small waterfalls and cascades are common.

The glaciers not only affected the land forms, they also had an effect on the vegetation found here. As the last glacier retreated and the climate warmed, the cool shaded recesses of the gorge valley provided a suitable habitat for several Canadian plant species: Canada yew, redberry elder, mountain maple, arborvitae and even a few hemlocks.

More than 100 different tree species and scrubs have been identified in the park. More than 340 species of wildflowers grow wild here including: Snow trillium, Virginia bluebells, bellworts, wild ginger, Dutchman’s breeches, Jack-in-the-pulpit and wild columbines. The dominate trees are oaks and maples, but large numbers of sycamores

and cottonwoods can be found along the river. Wildlife is also abundant in the park. For instance, more than 90 different varieties of birds live in or visit the park area during the year. (ODNR, Division of Parks and Recreation)

Clifton Gorge State Natural Preserve is a unique place. Its 255 acres are home to over 460 species of plants and the animal communities that depend on them. Here you can see spectacular examples of the geologic forces that shaped Ohio and traces of the works by which our ancestors hoped to tame them. (ODNR, Division of Natural Areas and Preserves)

Glen Helen Nature Preserve A private nature preserve owned and operated by Antioch University. “the Glen” consists of 1000 acres of woods, waterways, prairies and fields. Laced with over 20 miles of hiking trails, there is also a Trailside Museum, the Glen Helen Building and the Raptor Center, a sanctuary for wounded birds of prey.

Glen Thompson Reserve is a 60 acre reserved owned by ODNR. It features a 24 acre section of wetland marsh meadow with a variety of wild flora and fauna. It also provides an access point for canoeists and fishermen to the Little Miami River, managed by Greene County Park District.

Morris Bean Reserve is a 30.2 acre unimproved reserve located adjacent to Little Miami Scenic Trail, the Glen Helen Nature Preserve, and the Jacoby Launch.

Fairground Road Preserve provides another access point for canoeists to the Little Miami River. It is a 32.5 acre preserve owned by the State of Ohio and managed by Greene County Park District.

Muklenkamp Property Little Miami Inc., acquired this eight plus acre tract at the end of Orchard Lane in 1998. Greene County Park District is to be the managing agent.

The Narrows Reserve is a natural area, for the preservation, study and enjoyment of the Little Miami River valley’s natural features. It consists of 162 acres purchased by the Ohio Department of Natural Resources; Division of Natural Areas and Preserves’ scenic rivers program. Facilities include 3.5 miles of hiking trails, canoe launch, restrooms, water fountains, and the river research and interpretive nature center, managed by Greene County Park District.

Spring Valley Wildlife Area is a part of a State Wildlife Area that consists of 3,060 acres, of which 621.5 acres are located in Greene County. This wildlife area is designated as a hunting, fishing and conservation area. It is also owned by the State of Ohio.

Other areas include: Clifton River Road Reserve; and Ralph and Pearl Funk Nature Sanctuary.

Endangered, Threatened & Special Interest Communities

The Little Miami River corridor in Greene County contains four (4) state endangered species and one (1) federal endangered species, together with, nine (9) state threatened species, seven (7) potentially threatened species, one (1) Federal category 2 and some special interest populations.

Historic Sites and Places

Water-powered Mills An abundant supply of water did much to encourage settlement in Greene County because water provided the energy harnessed by mills to make flour, clothing and paper and to cut wood for buildings. Water power even supplied electricity for a short time.

Dozens of grist mills, cotton-woolen mills, saw mills and paper mills dotted Greene County in the 1800s making the items that settlers needed to live in a civilized manner.

The first recorded mill was built in a settlement near the present site of Alpha by Owen Davis in about 1798 or 1799. A few years later he moved his operation to the Clifton Gorge region, where he built a saw mill and grist mill. Other mills were built along the Little Miami River near Clifton, making the town a bustling trade center. (Hulsey, Lynn 1985)

Through out the years approximately 20 water powered mills have operated along the Little Miami River. Today only two exist and they are:

Clifton Mill the existing mill was built in 1869, and is the third mill to occupy the site. It has five floors. French quarry stone was brought to the U. S. in ships as ballast. Twenty-five to thirty of the stones were fitted together to make a millstone of the desired size. From 1908 to 1937 the water powered turbine that ran the mills machinery was never turned off. It provided electricity for Cedarville, Clifton and Yellow Springs, charged a flat rate of one dollar a month for homes and two dollars a month for farms and businesses. The mill sat unused for a few years until 1962, when Robert Heller restored it and put it in full operation. It was purchased in 1988 by Anthony Satariano, Sr. who owns and lives in the tavern.

Grinnell Mill (inactive) was first constructed in 1812 or 1813 by Robert and Andrew Moody. After burning in 1830 it was rebuilt. It is located outside of John Bryan State Park and is owned by Antioch College.

Old Stone SR 343 Bridge This 120+ year old stone bridge carried SR 343 over a tributary of the Little Miami River in Clifton Gorge. The bridge borders John Bryan State Park and was declared unsafe in April of 1971. In the early 70's the bridge was rehabilitated which permitted the retention of the exterior appearance of the bridge, so that after a year's work, when the bridge was reopened to traffic, it looked much as it did prior to restoration.

Impacts of Utilities on the Little Miami River

The Little Miami River corridor and its tributaries are heavily relied upon as a source of community water supplies and as an outlet for wastewater treatment facilities. The City of Fairborn's Water Reclamation facility is the only wastewater treatment plant in Greene County that does not directly or indirectly outlet into the Little Miami River. For description of utilities see Chapter 2, Coordinated Land & Water Management Program, Utility Extension.

Potential Future Development

The degradation of the Little Miami River does not need to be the legacy of future development. As stewards of the county, it is our responsibility to ensure that development within the county conforms to the highest standards possible, to protect the health, safety and general welfare of the present and future residents of Greene County and the citizens of the entire Little Miami River drainage basin.

Through the Subdivision Regulations for Greene County, Ohio, the Regional Planning and Coordinating Commission of Greene County has the opportunity to protect the Little Miami River. The subdivision review process assures a coordinated review of all county involved agencies, township involved agencies, utilities, emergency personnel, etc. for all subdivisions in unincorporated areas, by involving other agencies and organizations, such as the Ohio Department of Natural Resources, Division of Natural Areas and Preserves and the Little Miami Inc. (a non-profit organization that has been preserving the Little Miami River since 1967) in the subdivision review process. We can, as early as possible, mitigate potential negative impact of development on the Little Miami River before the developer has expended substantial resources on their development. Over the years, Greene County agencies, townships, the Ohio Department of Natural Resources and Little Miami Inc. have been successful in purchasing property and/or acquiring easements along the Little Miami River. Regional Planning and Coordinating Commission of Greene County has supported this effort through the administration of the Subdivision Regulations. It is our intent to continue this cooperative and coordinated review of subdivisions in Greene County so as to benefit all citizens of Greene County.

The Regional Planning and Coordinating Commission of Greene County also has the opportunity to protect the Little Miami River through the zoning amendment review process. In this process any parcel which is proposed for a re-zoning goes before the RPCC at which time recommendations can be made to protect the Little Miami River.

Goals

1. Protect the Little Miami River and the Little Miami River drainage basin's physical assets.
2. Protect the rights of private property owners while assuring maintenance of the highest environmental quality for the benefit of all citizens.
3. Preserve and enhance the Little Miami River's natural presence and function to the maximum extent possible.

4. Minimize negative impacts to the natural riverine ecosystem.
5. Expand the public's awareness of the values of the Little Miami River corridor.
6. Preserve and enhance the corridor's values that support its designation as a State Protected River and as a component of the National Wild and Scenic Rivers System.

Objectives

1. Promote the maintenance and establishment of a forested and non-forested buffer area in the Little Miami River corridor to protect its natural values and vistas.
2. Protect the essential aspects of the Little Miami River ecosystem, which are water quality, plant and wildlife communities, river flow, and the physical and functional integrity of the river's form, bed and banks.
3. Promote the use of wise land management practices in the Little Miami River corridor.
4. Preserve the free flowing character of the Little Miami River.
5. Increase public awareness and protect the sites of historic and archaeological significance within the Little Miami River corridor.

Policies

1. Within the forested and non-forested buffer area encourage the maintenance of natural cover.
2. For subdivisions and rezonings that are proposed which are adjacent to the Little Miami River the RPCC review shall include the following agencies and organizations: Little Miami Inc.; Beaver Creek Wetlands; ODNR Division of Natural Areas and Preserves; U.S. Army Corp. of Engineers; Greene County Historical Society; Greene County Parks; and other interested agencies.
3. Encourage access to the river through designated state and county access points.
4. Encourage and support educational activities that promote the Little Miami Rivers designation as a State Protected River and as a component of the National Wild and Scenic Rivers System.

Mineral Resource Management

The Planning Commission understands that the decision to allow for the extraction of our mineral resources will have an impact on the community and on the county as a whole. It is the intent of this plan and more specifically this policy document to ensuring that these decisions are made in the best interest of our residents with the best available information. Mineral resource management must support a mix of people and economic activity while being sensitive to the property owner's property rights and the concerns of ~~its~~ their neighbors. This use of the land like any other land use within the plan carries no more or less weight than any other land use within this plan. Each use must be determined on its own merits following the same set of criteria established in this document. The overriding issue is that wise natural resource management dictates that the benefits of resource extraction activities be weighed against impacts on safety, quality of life, and the environment.

Statement of Purpose

The purposes of the Mineral Resource Management Policy are to promote the health, safety, and welfare of the residents of Greene County through the protection of mineral and aggregate resources. This policy is also intended to protect the quality and quantity of the ground and surface waters, to control erosion, to provide for the reclamation and rehabilitation of mineral extraction sites so that future uses shall be compatible with the surrounding neighborhood, and to minimize any adverse impact of such operations on adjacent and nearby properties.

The policy is designed to:

1. Recognize mineral and aggregate resource extraction as a land use influenced largely by the location of the natural resource and the location of the market;
2. Provide guidance for the extraction designation within a community, while at the same time minimizing potential adverse effects on the public and property surrounding the extraction site; and
3. Recognize mineral extraction as a temporary use dependent, to a large degree, upon market conditions & resource size and that reclamation & the future use of the land for other activities must be considered.

Mineral Resource Management

Human beings have constantly exploited nature's resource base, including mineral resources, to support their ever increasing needs. Management of natural resources and stewardship of non-renewable mineral resources must be balanced. Over the years Greene County's mineral resources have proven to be an important contributor to the economic growth of the County. Exploration, mining and mineral-based manufacturing have contributed to the economic well-being of the County. At the same time, as Greene County continues to develop, mineral extraction must be accomplished in a way that minimizes potential negative impacts for existing and future County residents. Careful consideration must be given to the location, amount and type of land that is permanently affected by long and short-term mineral extraction. Consideration must be given in order

to balance the potential for short-term economic advantage of mineral extraction and the long-term economic contributions made by conserving the land for uses such as farming (see Agriculture Preservation Policy), housing and business interests that provide continued sources of revenue.

Mineral extraction is one way in which building materials can be acquired for human needs. Recycling and renewable resources are currently being developed and are also now available to architects, engineers and contractors. Like most industries, commercial and civic development, mining and processing of minerals produce environmental disturbances. Public concerns over environmental effects of economic development have required all industries to change old practices to methods that are more environmentally sound. Resource industries must adapt to new standards and regulatory demands for responsible development and reclamation of natural resource areas and the integration of environmental concerns with economic planning.

The exploration and development of Greene County's mineral resources must be conducted in an environmentally sustainable manner. Exploration, mining, blasting, processing and reclamation must be conducted in a way that compromises neither the quality of life standards of current residents nor the options available to future generations. This requires resource availability, efficient use of resources, increased recycling, and sound environmental planning.

Importance of Mineral Resources

Minerals are indispensable to our current approach to construction because they are effective and relatively inexpensive. Mineral-based products are currently used in virtually every aspect of our daily lives. Through history, the human ability to function as hunter, farmer, explorer, scientist, and artisan has relied on the use of minerals. Experience tells us that society will continue to rely on mineral resources as long as minerals are the most cost-effective solution to the problems faced by our dynamic society. Constant improvements in methods for discovering, mining, and processing minerals have provided society with a substantial variety of indispensable materials.

Mineral exploration, production, and related manufacturing activities currently provide benefits to Greene county's economy. The mineral extraction industry employs some persons directly, and more are employed indirectly producing and hauling goods and services for the industry. Economic activities such as mining of minerals used in the construction industry contribute to the diversity of the County's economy. In addition, taxes derived from these activities produce a source of revenue for government authorities. However, unless the property is restored to a useable condition, the depleted land is no longer a good source of revenue, as its tax dollars are substantially diminished. That is why it is important that a reclamation plan which will allow the property to be utilized as provided in the land use plan and the underlying zoning district be provided prior to allowing the mineral extraction process to begin.

All stakeholders should actively support further integration of earth science and mining topics into educational programs within the community so there is the opportunity to be well informed, good neighbors. As with all uses of the land if a site of historical and/or

archaeological significance is located within an area to be utilized by a mineral and aggregate resources company all precautions should be taken to preserve these important clues to our past. At a minimum archeological sites, historic sites, and unique historical structures should be protected to the extent possible for their educational and cultural values to the area, region and State.

Sustainable Resource Use

One of the themes of this update is sustainability. Carrying this concept forward, as it relates to mineral resources, is not easy because mineral resources are non-renewable (they cannot regenerate within meaningful human time frames). The definition of "sustainability" is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This simple definition has some suggested underlying principles:

1. Respect for ecological integrity;
2. Efficient use of natural, manufactured, and community resources;
3. Promotion of equity;
4. Active participation of stakeholders; and
5. Environmental stewardship by all levels of decision-makers;

These principles of sustainability must be modified in order to have their criteria applied to sustainable mineral resource use. In theory, a sustainable output rate for non-renewable resources is that which maintains the size and the stock relative to demand. In practice, this means that depletion rates should be low enough to ensure a high probability of an orderly transition to the discovery, development, and widespread acceptance of substitutes. Sustainable output rates can be increased by discovering and exploiting new reserves (increasing the stock); recycling extracted resources (replenishing the stock); and hastening the development of substitutes (increasing the amount available for current consumption by reducing future demands).

Mineral Resources General Location Summary

It is important to identify the potential locations of significant mineral deposits of economic interest so that local and county land use managers and the citizens of the county can fairly apportion future mining locations. Planning for the future of these areas must consider the quality of life of the populous currently living in or near any one of the mineral-rich areas identified below.

Within the county, mineral resource deposits are located and extracted within the following communities: Bath Township; Beavercreek Township; Cedarville Township; Jefferson Township; Spring Valley Township; Xenia Township; and the City of Fairborn. Other potential mineral resource areas of Greene County have been identified in [A Physical Study for Greene County, Ohio](#) (page 44, map 3).

Potential Future Development

To achieve the economic potential of the mineral industry and the protection of individual property owners' rights, each of the primary stakeholders -- government, industry, community and other non-government interests -- must accept certain responsibilities. Government's role is to provide clear policies and regulatory frameworks that provide the mineral industry with the conditions and identified locations for environmentally responsible operations while, at the same time, they recognize and administer the will of the people to make decisions in the best interest of the community in order to pass along to the next generation an economically sound and environmentally healthy community. The industry must work to be recognized as a responsible corporate and environmental citizen of the community and develop marketing strategies, new products and production methods that permit it to be competitive in the global marketplace. Communities and other non-government interests have the responsibility to become informed about natural resource exploitation and management issues and contribute to the decision-making process that addresses a wide range of objectives and interests. Government, industry and the public must recognize and respect the differences in interest and objectives between the parties in planning for mineral development at the regional and local levels. Identification and resolution of legitimate concerns are the responsibility of all stakeholders.

The degradation of our land need not be the legacy of mineral resource development. As stewards of the County, it is our responsibility to ensure that development within the County conforms to the highest standards possible, to protect the health, safety, general welfare, morals, and quality of life of the present and future residents of Greene County.

Through the local zoning process and the application process with the Ohio Department of Natural Resources, Division of Mining and Reclamation, all involved and interested parties have the opportunity to participate in the mineral resource industries proposals.

Although the Chief of the Division of Reclamation must, pursuant to R.C. § 1514.02, grant a permit authorizing a surface mining operation to an operator meeting the regulatory requirements of R.C. § 1514, the issuance of such a permit does not override a township's application of its zoning resolution to regulate such a mining operation.

038 Op. Att'y. Gen., 8 (1995).

Through this process and meetings with local authorities and residents, all stakeholders can, as early as possible, voice concerns and mutually agree on proposals intended to mitigate actual and perceived negative impacts of mineral resource development within the surrounding communities. Mineral resource development shall not be encouraged if legitimate safety or environmental concerns of the community or complete compliance with local zoning ordinances cannot be satisfactorily addressed.

Mineral Extraction, Potential Criteria

When considering a request for the opening or operation of a mineral extraction site, local authorities should consider the following:

1. There is a proposed reclamation plan which will allow the property to be utilized as provided in the land use plan and the underlying zoning district.
2. Access and traffic.
3. Adjoining land uses
4. Screening, landscaping and visual appearance.
5. Signage.
6. Hours and days of operation.
7. Air, water and noise quality.
8. Fish and wildlife protection.
9. Setbacks.
10. Reclaimed topography.
11. Safety and security.
12. Phasing program.
13. Reclamation schedule.
14. Together with all items identified in Chapter 3, Development Objectives and Chapter 4, Land Use Compatibility/Suitability Analysis.

When approving an application for a mineral extraction operation, the post-mining use shall conform to the land use plan and the underlying zoning district. To lessen the potential impacts of the mineral extraction process, regulating the size of the open operation area and requiring reclamation on an incremental basis could be effective.

Goals

1. All development decisions should consider the conservation and wise use of mineral resources.
2. Protect the rights of private property owners while assuring maintenance of the highest environmental quality.

Objectives

1. Limit and protect mineral resources extraction to ensure their availability to future generations.
2. Promote recycling of mineral-based construction materials.
3. Minimize conflict between the mining industry and other land uses.
4. Mandate proper reclamation techniques to ensure future use of mined lands.
5. Establish a set of zoning standards which will effectively limit and protect mineral resource areas that are currently being mined in the County.

Policies

1. Educate local officials and citizens about the location of important mineral

- resources that may have economic significance to the region and take them into consideration in arriving at future development plans.
2. Mineral extraction operations should be recognized as an interim use of the land. Long- term land use patterns must be developed to allow for future alternate uses of the mine site for the benefit of the community.
 3. Allow well-controlled expansion of existing operations when consistent with adjacent land uses, long-range comprehensive plans and/or current zoning.
 4. Assist local governments in developing appropriate mining regulations addressing the items mentioned in Mineral Extraction, Potential Criteria for Approval.
 5. Prior to the opening of new mining sites, the operator must complied with established policies implemented by local zoning resolutions.

Wetlands Policy

Statement of Purpose

It is in the public's interest to protect against development that will adversely affect important county/municipal planning and development goals. Development, which is not in harmony with the character of the area in which it is located, can destroy important physical, ecological, social, recreational, aesthetic, and economic assets/qualities necessary to promote the health, safety and general welfare of present and future residents and the unique character of Greene County.

The preservation and maintenance of wetlands in an undisturbed and natural condition will protect the wetlands' functions of: water purification and aeration; sedimentation control; flood water storage; and public and private water supply enhancement. Wetlands are also areas of significant plant, bird, fish, amphibian and mammal habitat, areas of species diversity, unique recreation, open space, and educational resources.

It is the intent of this policy is to protect the citizens of Greene County by providing for the protection, maintenance and use of its wetlands by permitting and encouraging a coordinated land and water management program together with the retention of open space land uses which will locate structures and site improvements so as not to divert or obstruct the natural flow of waters or disturb the wetlands and the functions they perform.

What is a Wetland?

The U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act, regulates activities within waters of the United States, including wetlands. The ACOE defines wetlands as:

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, bogs, marshes, and similar area (Federal Register, Vol. 42, p. 37128).

According to the ACOE criteria, wetlands are defined by three (3) parameters:

1. the land supports predominantly hydrophytes ; (hydric plants)
2. the substrate is predominantly undrained hydric soils; and
3. the substrate is saturated with water or covered by shallow water at some time during the growing season (time is the issue).

The ACOE requires that under normal circumstances all three of these parameters must exist for an area to be defined as wetlands.

Quite simply, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal

communities in the soil and on its surface. Different kinds of wetlands are identified by the characteristic types of plants that grow there and water depth. The Ohio Department of Natural Resources, Division of Wildlife have identified the following wetlands as the most common types of wetlands in Ohio.

Wet Woods Wet woods are dominated by trees taller than 15 feet. Tree species such as green ash, swamp white oak, pin oak, hackberry, red maple, and silver maple are prevalent. Soils are usually saturated or ponded with less than three inches of water.

Scrub/Shrub Wetlands These wetlands are dominated by shrubs such as silky, gray and red-osier dogwood, buttonbush, common alder, willow, and elderberry, and hardwood trees less than 15 feet tall.

Wet Meadows, have water depths of less than six inches for an extended period of time during the growing season. Vegetation consists primarily of grasses and sedges. Forbs such as blue vervain, swamp milkweed, Joe-Pye-weed, jewelweed, and boneset can also be found. Annuals such as beggar's-tick, barnyard grass, and smartweed commonly pioneer disturbed areas and mud flats.

Shallow Water Marsh This type of wetland has a water depth between six inches and two feet for an extended period during the growing season. Some open water is usually mixed with vegetation such as cattail, bulrush, arrowhead, bur reed, and water plantain.

Deep Water Marsh A deep water marsh has an estimated water depth greater than two feet for an extended period during the growing season (but is not a pond or lake). The area is primarily open water, sparsely vegetated with floating and submergent plants such as water lily, lotus, and pond weed (Ohio Department of Natural Resources, Division of Wildlife).

National/State Concerns

It is estimated that 200 million acres of wetlands existed in the lower 48 states when Europeans first settled this country. Today more than half of the original 200 million acres have been destroyed (American Wetlands). Wetlands in Ohio, originally covered approximately 5 million acres; today the Ohio Department of Natural Resources estimates that approximately 300,000 acres remain. That is a loss of more than 90 percent of Ohio's original wetlands (Ohio Department of Natural Resources, Division of Wildlife).

Greene County Wetlands

In Greene County, it is estimated that approximately 57,000 acres of wetlands once existed, now only approximately 2,600 acres remain (according to the National Wetlands Inventory maps). That is less than one (1) percent of the land surface of Greene County. As mentioned above, Greene County wetlands represent only a small portion of the kinds of wetlands found throughout the United States; many of which are associated with large rivers, lakes, and coastal waters. However, all wetlands are important and the remaining

wetlands of Greene County are especially valuable, since so many have been lost.

Knowing what wetlands are and what they can do will help us understand why it is essential to preserve and protect them.

In order to understand the importance of wetlands, how they serve as part of our life support system, one has to understand the role of wetlands in human activities and in the balance of nature. Wetlands provide important habitat for plants, birds, mammals, fish amphibians, and insects (over one-third of Ohio's wildlife depends upon wetlands for their survival). They also promote the recharge of groundwater, dissipate floodwaters, stabilize streambanks, improve water quality by filtering sediments and pollution from runoff and reduce the affects of erosion.

The diversity of wetlands

The border or area where two or more different types of vegetation abut each other is usually not a clearly marked line, but an area of overlap, stretching from a few feet to hundreds of feet. The "EDGE", transitional, or intervening area, contains a blend of two or more vegetation types. A wetland edge has a complex variety of plant life that leads to a great diversity of wildlife and vegetative species.

In Greene County wetlands are generally fens⁴ and other groundwater driven types in the western part of the county and vernal pools/ponds⁵ in the wooded areas of the eastern part of the county. The vernal pools probably dry up in the late summer due to the shallow soils over bed rock.

Wetlands themselves are very important edges because they often lie between open water and dry, upland sites. This variety makes wetlands among the richest wildlife habitats in the world. The diversity of habitat often provides a variety of food sources and alternate food sources in times of scarcity or drought and helps to maintain wildlife through severe conditions.

The productivity of wetlands

The nutrients accumulated by wetlands enhance the growth of all kinds of wetland plants. Because runoff water moves slowly through wetlands, these nutrients are held for extended periods, making them available to the different wetland plant species.

The plants, in turn, provide habitat (food, shelter, nesting and breeding areas) for all sorts of game and non-game birds and animals as well as the wet habitat needed for song birds, water fowl, aquatic insects, amphibians, reptiles, and fish.

How do wetlands affect surface water?

After a rain, whether it is light or heavy, the water that reaches the ground percolates (works down) into the soil, evaporates back into the atmosphere, or runs across the land surface. Wetlands slow the rate of flow of the surface water. This slowing may increase

the rate at which percolation takes place. It reduces the destructive forces of running water giving wetlands a role in both erosion and flood control.

The role of wetlands in erosion control

Water running over the land can be very destructive as tributaries⁶ join together to form streams. This concentration of water increases velocity and can begin to dislodge shore line soils even in relatively flat areas. Muddy, rushing water has greater erosive force than clean water and can erode more deeply into stream beds. Erosion is a problem that compounds itself. The faster water flows, the more soil it can carry. If there is a large proportion of water-borne soil particles, a tributary, creek, stream and/or river can be very destructive.

The vegetation of wetlands plays a role in reducing the destructive effects of rushing water. The types of vegetation which are found in wetlands are usually very dense, allowing the flow of runoff to decrease. While the stream or waterbody retains their ability to carry soils, minerals, and organic particles, a wetland can remove these items from the runoff before the water reaches the stream which keeps the waterbody relatively free of soils, minerals, and organic particles. Thus, enhancing the quality of the watershed water bodies.

The role of wetlands in flood control

As water moves through or over a wetland, its movement is slowed by the wetland soils and vegetation. Wetlands can also store large volumes of water, which they release gradually over a period of time. This slow release and storage capacity of wetlands plays a very important role in controlling flood waters.

The role of wetlands in purifying drinking water

The water you drink comes to you in one of two ways: from reservoirs and lakes (surface) or from wells (groundwater).

Wetlands are often in direct or indirect contact with both of these sources. As wetlands slow the movement of surface water, they permit increased amounts of water to percolate into the ground. They also have the ability to purify water by removing undesirable sediments and chemicals from the stormwater runoff of the watershed before the water enters the stream. Wetlands have been shown to be excellent recyclers of waste products from water, including sediment with absorbed pesticides or other toxins.

The role of wetlands in pollution control

Wetlands can hold and slowly release water born man-made pollution as well as sediment and nutrients. The wetland vegetation filters out sediments, organic matter, and chemicals while microorganisms break down some organic matter and utilize dissolved nutrients.

Studies have shown that wetlands in parts of the United States can even serve as treatment facilities for domestic waste, over 300 communities rely on man-made wetlands to treat wastewater (ULI Sources, 1995).

The role of wetlands in the economy

Without wetlands, many communities public and private water supplies would not have the quality of water that they have and the added cost of purification could be considerable. The role wetlands play in flood control saves lives and property, making their economic value very real.

The role of wetlands for wildlife habitat

Wetlands in Greene County are home to many species including migratory song birds, raptors, waterfowl, shore birds, fur bearing mammals, reptiles, fish and amphibians. Most birds and mammals are dependent on wetlands in one way or another and at one time or another. Amphibians, frogs and salamanders may spend part of the year in the forest hiding under logs and other debris, but must return to water to lay eggs and to the deep mud of wetlands to survive the winter.

Nearly 32 percent of Ohio's endangered and threatened species are either permanent residents of wetlands, need wetlands for part of their life cycles wetlands (Ohio Department of Natural Resources, Division of Wildlife), or migrate through wetlands. Yet wetlands occupy less than 10 percent of the land surface in Ohio.

The role of wetlands in fish production

Many fish species of Greene County are dependent not only on the lakes, rivers and streams, but on the wetlands associated with them. Some species of fish use wetlands directly; they spawn in the shallows of deep water marshes. Others spawn in the flooded areas of emergent marshes. Since wetlands have an ameliorating effect on water temperature, turbidity, dissolved nutrients, and the amount of seasonal flow, they directly affect the habitat characteristics of the adjacent lakes, rivers and streams.

The role of wetlands on recreation

Early settlers often thought of bogs and wetlands as dark and forbidding places and sometimes, they seem that way. But, a visit to a bird sanctuary, a wetlands, a walk along a boardwalk into a wetland, or a canoe trip into the edges of a marsh will convince you otherwise. However, recreation in a wetland is not limited to nature studies. In the winter, when one might do the least damage to the wetlands, you can travel over the broad expanse of the frozen surfaces on foot, skis, and/or snowshoes. As one moves from the shade of the wooded areas to open patches, you can enjoy a wide variety of vistas. In the summer, the careful visitor can approach the edge of the wetlands to photograph the rarities found within.

Bird watching is big business in the United States. An estimated 50 million people are

drawn to wetlands each year to observe and photograph birds (American Wetlands).

Hunters and fisherman are also dependent on wetlands for their recreation. Migratory birds and waterfowl use wetlands for food, shelter, breeding and wintering grounds and they also support an annual commercial fur and hide harvest of \$300 - \$400 million. It is also estimated that half of all recreational fishing stock - depends on wetlands for food and habitat during a part of their life cycle (American Wetlands).

The role of wetlands in education

Over the last four centuries naturalists, conservationists, landscape painters, photographers, and writers have expressed appreciation for the value of American wetlands and their studies, artwork and literature. This group of people and many more have helped to educate the American public about wetlands.

Wetlands are also used as natural classrooms for the study of life cycles, pollution prevention, natural area restoration, ecosystems, food chains and sustainability to name a few. They are also used by researchers for genetic stock, the production of pharmaceutical drugs, natural products and natural systems management.

Goals

1. Protect the citizens of Greene County by providing for the preservation of wetlands and the functions performed by them.
2. Identify and protect the wetlands physical assets to the county.
3. Increase the quantity and quality of the wetlands resource base.

Objectives

1. Identify and classify the wetlands of Greene County
2. No net loss of wetlands.
3. Provide existing and future residents access to a diversity of desirable wildlife and vegetation species within the county.

Policies

1. Regulation of development adjacent to wetlands should be based on a site-by-site evaluation of the wetland's size, plant cover, proximity to open water, proximity to the buried river valley, proximity to existing development and value to wildlife. For any proposed development where there is a wetland that meets the applicable federal standards in regards to size and definition the developer is required to obtain approval from the U.S. Army Corps of Engineers, Louisville, KY Office and/or the Ohio EPA or ODNR, as appropriate, before the Regional Planning and Coordinating Committee of Greene County, Ohio grants final approval.
2. Development adjacent to wetlands, should not interfere with drainage patterns. The free exchange of water through the wetland should be maintained.
3. Encourage development adjacent to wetlands that is compatible with the

- preservation of the natural vegetation of the wetlands.
4. Provide assistance to local governments to aid in their efforts to protect wetlands.
 5. Protection of wetlands should be based on a watershed wide analysis and should take into consideration the hydrology needed to maintain the existing wetlands of Greene County.
 6. For subdivisions and rezonings that are proposed which are adjacent to the identified wetlands the RPCC review shall include the following agencies and organizations: Beaver Creek Wetlands Association; ODNR Division of Natural Areas and Preserves; U.S. Army Corp. of Engineers; Greene County Parks and other interested agencies.

Chapter 3 Land Use Location Requirements & Development Objectives

LAND USE LOCATION REQUIREMENTS

Introduction

In many respects Perspectives 2020: A Future Land Use Plan for Greene County, Ohio reflects some of the wisdom shown by the early settlers of the region. The plan is designed to encourage new development in the county to take place where it is compatible with its surroundings and the natural character of the land. The plan also seeks to ensure that new development will occur with minimum adverse affects while allowing ample opportunity for growth to occur both now and in the future.

The land use plan is a tool used to communicate how a defined area is envisioned in that planning period. Generally, a planning period is between 20-25 years. Therefore, land use plans require a universal language in order to allow for the effective communication of land development concepts, usually in the form of generalized land use categories. Ten (10) general land use categories will be used in the plan for Greene County:

1. Open Space, Conservation, and Recreation;
2. Agriculture;
3. Rural Residential;
4. Low Density Urban Residential;
5. Medium Density Urban Residential;
6. High Density Urban Residential;
7. Commercial (neighborhood, community, and regional);
8. Industrial;
9. Public and Institutional; and
10. Mineral Resource Management.

This chapter will define the ten (10) generalized land use categories and discuss their respective location requirements as it relates to the future vision of Greene County. The location requirements are based in part on the continuation of desirable existing land uses and patterns of development that prevail within the county. These development and siting guidelines are designed to encourage new development to be consistent with its surroundings and to be sustainable. The location requirements provide tools - to create a valued community/county that works; one that offers employment, housing, recreation, commerce opportunities and amenities to its citizens.

Open Space, Conservation & Recreation Requirements

Objectives

1. Utilizing the Geographic Information System, identify areas of the county most appropriate for recreation and open space uses.
2. Identify effective implementation measures to acquire and reserve sites well in advance of, as well as after, development.
3. Promote the reservation and acquisition of land particularly adapted to recreational and open space development.
4. Provide an open space and recreation system which recognizes the potential of flood plains, historical areas, scenic rivers, tree cover, and unique natural physical features.

The Open Space, Conservation, and Recreation category of the Land Use Plan is intended to represent active recreation sites, passive recreation/open space, and environmentally critical areas. Environmentally critical areas include areas identified within A Physical Study for Greene County, Ohio:

1. steep slopes;
2. unique geologic features;
3. very poor soils;
4. shallow depth to bedrock
5. valley-train aquifer(s);
6. unique flora and fauna; and/or
7. poor air circulation;

together with other areas of concern as identified in Chapter 2, Coordinated Land and Water Management Program, Environmental Policies.

Two basic types of location requirements will be discussed: those of the activity-oriented uses and those use related to the physical character of the land.

Active-Oriented Uses

The activity-oriented uses represented by the Open Space, Conservation, and Recreation category include uses such as parks, athletic fields, play areas, aquatic facilities, roller/ice rinks, bowling, riding stables and trails, golf courses, recreation centers, youth camps, camping and picnicking areas, Little Miami Scenic River launches, bikeways/multi-purpose trails, etc. Presenting a specific comprehensive set of location requirements for these types of land uses is difficult. The concept of what constitutes active-oriented leisure activity to the people of Greene County and the Dayton Metropolitan Area is constantly in a state of flux, especially as rising incomes continue to place an increasing number of leisure activities within the means of a family. This plan will not dwell on specific activities and adequate locations for each as this task has been previously accomplished in the Master Plan for Parks and Open Space in Greene County, Ohio as well as individualized community recreation plans. The Master Plan has been included

as an input document reference and a part of this update.

Uses Related to the Physical Character of the Land

The Master Plan for Parks and Open Space in Greene County, Ohio and A Physical Study for Greene County, Ohio, are intended to supplement this update and will emphasize the areas within the county which are prime for conservation and recreation with respect to the natural features of the land. Open space and conservation should be advocated for flood plains and those environmentally critical areas as identified above. Compatible land uses in these areas could include agriculture, parks, tree cover/woodlands, nature preserves, and extensive land-consuming recreational activities.

Policies

1. Recreational areas should be classified and developed according to their regional, community, or neighborhood character.
2. Tourist-oriented and regional recreational sites shall be supported as an expansion of the county economic base. Such sites should possess adequate accessibility to major transportation facilities and appropriate residential markets outside of the county without creating traffic congestion within any portion of the county.
3. Public recreational development should be encouraged along the Little Miami River, if it enhances the river's scenic designation, forming a unifying element for open space within the county.
4. Encourage the use of a variety of open space implementation measures such as conservation and use easements; purchase of development rights; open space, flood plain, agricultural, and hillside zoning; mandatory dedication in subdivision regulations; tax incentives; and outright acquisition, to maintain open space in Greene County.
5. Encourage open space uses in areas of the county that are aquifer recharge areas and in those areas possessing irreplaceable natural resources, steep slopes, high quality or unique tree stands, poor drainage, and valuable wildlife habitat(s).
6. Land with a low capability of support other uses in developing or developed areas should be considered for possible open space/recreational use. However, that should not be the top criteria in providing open space/recreational areas.
7. Open space surrounding existing communities should be preserved in order to prevent sprawl and give an individual recognizable identity to each community.
8. Recreational and open space uses should be encouraged as joint land uses with other public lands such as schools, airports and their associated approach zones, hospitals, cultural facilities etc - whenever feasible or practical.
9. Encourage zoning and subdivision regulations which provide incentives to preserve existing tree cover and unique natural features of a site.
10. Encourage the recreational development of abandoned railroad rights-of-way (rails to trails).
11. The potential reclamation of mineral extraction operations and sanitary

landfills into open space/recreational uses should be encouraged when such action would complement the goals of the land use plan.

Agriculture Requirements

See Chapter 2, Coordinated Land and Water Management Policy, Rural Policies, Agriculture Preservation Policy, and the Greene County Farmland Preservation Plan (2000).

Objective

1. Utilizing the Geographic Information System, identify the prime agricultural land within Greene County.

As shown in Table 3 in A Physical Study for Greene County, Ohio, (December, 1976, page 76 & 77) most soils in the county possess only slight limitations for the cultivation of crops. Only in areas where severe slope, erosion hazards, wetness, and/or shallow depth to bedrock occur do limitations for cultivation make agriculture an inefficient use of land. A significant land use problem occurring within Greene County results from the fact that most soils which possess only slight limitations for agriculture are often well-suited for development. Criteria that has been established to protect prime farmlands from the pressures of development are in the Agricultural Preservation Policy Chapter 2, Coordinated Land and Water Management Program, Rural Policies.

Designated agricultural areas in land use plan update are located outside of areas expected to receive urban development or public utility services within the planning period. Agriculture, of course, would be recommended and encouraged as an interim use in areas planned for development until the required utility services are provided. Agricultural land uses can also serve as buffers for urban development, forming an open space or greenbelt area around communities. A greenbelt functions as a buffer zone, giving each community its own individual identity while discouraging premature development which may occur prior to the extension of utilities. Through such methods, sprawl may be kept to a minimum.

Policies

1. See Chapter 2, Coordinated Land & Water Management Program, Rural Policies, Agricultural Preservation Policy
2. See Greene County Farmland Preservation Plan (2000).

Rural Residential Requirements

See Chapter 2, Coordinated Land and Water Management Policy, Rural Policies, Rural Residential Development.

Objectives

1. See Chapter 2, Coordinated Land and Water Management Program, Rural Policies, Rural Residential Development.

Rural residential developments can be expected to occur within some areas currently used for agricultural purpose. Almost all of these areas will be outside of the Urban Service Areas. Recently, there has been a trend, where rural residential development has occurred where public water distribution systems are available, with this public utility (water) a modest increase in densities can be allowed.

The location of rural residential developments within the county should be considered on an individual, case-by-case basis. Specifically, each case should consider the physical capability of the site to accommodate the proposed density and the existing patterns of the surrounding land uses. Rural residential development should be located in areas that are not productive or outside the outer edge of active prime agricultural lands, to act as a buffer between the agricultural lands and denser residential development and should not be centrally located within an active agricultural area. The intrusion of rural residential development into areas possessing prime agricultural soils and an agricultural character can be considered a direct conflict with the county-wide goal of preserving prime agricultural land (see Chapter 2, Coordinated Land & Water Management Program, Agricultural Preservation Policy) therefore, hastening the conversion of agricultural lands into non-agricultural uses. Rural residential development building sites, together with all residential development building sites, should not be permitted within any area where building sites are subject to periodic flooding and/or within the regulatory flood plain (see Chapter 2, Coordinated Land & Water Management Program, Flood Plain Management Policy).

Due to the non-agricultural orientation of most rural residential developments, the residents require locations with accessibility to employment centers and shopping facilities via an adequate road network. In order to maintain the efficiency of such a road network, strip-type development/low density sprawl of rural residents, that require driveway access to existing roadways, should be discouraged. Clustering of these uses on one side of the thoroughfare as shown in Figure 3.2, with limited curb cuts to the thoroughfare, or along lesser-traveled local roads with adequate capacity should be encouraged.

With on-site well and wastewater disposal

The lot size of new rural residential developments should range between one and five acres per dwelling unit (see Table 3.1). However, since utility services may not be expected outside of the projected urban area, the density of each individual development should be guided by the overall capability of the entire site to accommodate on-site water supply and wastewater disposal for an extended period of time. A soil evaluation for septic tanks and a well test to evaluate the availability of groundwater, should be completed by the Greene County Combined Health District prior to the approval of any rural residential development in order to insure the public health and safety. In cases where no utility services are projected within the planning period, the average density of proposed developments should not exceed one (1) dwelling unit per three (3) acres (gross density) with the smallest lot not being less than one (1) acre.

With public water and on-site wastewater disposal

The lot size of new rural residential developments with a public water supply should range between one and five acres per dwelling unit. Since public water is available, the density of each individual development should be guided by the capability of the site to accommodate on-site wastewater disposal and to maintain the rural character of the area. A soil evaluation for septic tanks and leach fields, should be completed by the Greene County Combined Health District prior to the approval of any rural residential development in order to insure the public health and safety. In cases where public water is available or will be provided, the average density of proposed developments should not exceed one dwelling unit per two and a half (2.5) acres (gross density) with the smallest lot not being less than one (1) acre.

An option for rural residential development could be the cluster/open space concept as shown in Figure 3.3. Cluster development is a design technique that concentrates building on a part of the site to allow the remaining land to be used for recreation, common open space, and preservation of environmentally sensitive features. Clustering permits a rural atmosphere to be preserved for both the residents of the development and the surrounding community. Open space areas can be preserved:

1. alongside public roadways bordering the development, so that views from the roads are largely ones of open space, rather than ones of conventional acreage house lots lining the road; and/or
2. along rivers, streams, and creeks and their associated flood plains and wetlands, to protect the natural functions of these water bodies; and/or
3. to protect agricultural land by clustering development of agricultural land in the forested/wooded areas of the farm or on the marginal farming areas of the site. Thus allowing agricultural practices to continue in the open spaces; and/or
4. to protect woodlands by locating development in fields or along open areas, etc.

Cluster development can be used for a wide variety of open space preservation priorities. These priorities can vary according to the type of resources that are valued most highly by an individual community.

Cluster development also has benefits for the developer. By clustering the development, the cost of infrastructure improvements, clearing and grubbing the site, and environmental mitigation's are generally decreased.

Policies

1. See Chapter 2, Coordinated Land and Water Management Program, Rural Policies, Rural Residential Development.

Urban Residential Requirements

Objectives

1. Identify areas within the county which are appropriate for urban residential development within the defined urban growth areas.

2. Identify the appropriate density of urban residential development in relation to: surrounding adjacent densities and land uses; capability of existing and proposed utilities; capability of the existing/affected thoroughfares; consistency with community goals; adequacy of community services and the natural character of the site.
3. Protect the integrity and stability of existing residential areas from encroachment by incompatible land uses and identify the proper spatial relationship between various residential land uses.
4. Encourage the creation of unified neighborhoods throughout the community.
5. Provide a choice of housing types suitable to surrounding land uses.
6. Encourage renewal and stabilization activities in older neighborhoods where it is determined that residential uses are still appropriate.

For the purpose of the Future Land Use Plan, urban residential development has been divided into three density types: Low Density, Medium Density, and High Density. Residential uses include single family; multi-family (two, three and four family dwellings); condominiums; townhouses; and apartments. Gross density, which accounts for all of the land within the development, will be used to define the residential densities described in this section.

The acceptable range of densities for a general location can be provided by Perspectives 2020: A Future Land Use Plan Update for Greene County, Ohio and as outlined on Table 3.1 Recommended Gross Density, Type of Dwelling Unit, and Utility Standards for Various Types of Residential Development in Greene County, Ohio.

The density to be administered to a specific site will be determined by:

1. the density range provided by urban density classification (Table 3.1);
2. surrounding adjacent densities and land use(s);
3. capacity of existing and proposed utilities;
4. capacity of the existing/affected thoroughfares;
5. consistent with community goals; and
6. characteristics of the site:
 - topography,
 - natural buffers
 - flood plains,
 - wetlands,
 - unique geologic features
 - unique/threatened/endangered plant and animal species,
 - groundwater sensitivity, etc.

The above list of criteria will help guide the decision making process to determine the appropriate density of a specific parcel on a case by case basis.

Low Density

Low Density Urban Residential development should occur at densities greater than one and less than three dwelling units per acre. The dominant dwelling type should be the single-family unit with occasional two-family development at appropriate locations.

Cluster development which maintain an overall density of 1+ to <3 dwelling units per acre is encouraged. Both public water supply and sanitary sewer must be available to the site.

Table 3.1

Recommended Gross Density, Type of Dwelling Unit, and Utility Standard for Various Types of Residential Development in the Unincorporated Areas of Greene County.

	<u>GROSS DENSITY</u>	<u>UTILITY SERVICES</u>	<u>DOMINANT TYPE OF DWELLING UNITS</u>
RURAL RESIDENTIAL DEVELOPMENT	1-5 acres per dwelling unit with average lot size of three (3) acres	On-site well and soil conditions necessary for on-site wastewater disposal	Single Family (detached)
RURAL RESIDENTIAL DEVELOPMENT with public water	1-5 acres per dwelling unit with average lot size of 2.5 acres	Public water supply is required and soil conditions necessary for on-site wastewater disposal	Single Family (detached)
LOW DENSITY URBAN	greater than 1 and less than 3 dwelling units per acre	Public water supply and sanitary sewer are required	Single family (detached) Two family
MEDIUM DENSITY URBAN	3-<6 dwelling units per acre	Public water supply and sanitary sewer are required	Single family and two family. Multiple family at the greater densities of This range.
HIGH DENSITY	6+ dwelling units per acre	Public water supply and sanitary sewer are required	Zero lot line single family, two family and multiple family

Source: Regional Planning and Coordinating Commission of Greene County, Ohio.

Medium Density

Medium Density Urban Residential development describes areas allowing from three to six dwelling units per acre. The dominant dwelling type should be the single-family unit and two-family, with multi-family development at the greater densities of this range. Cluster developments which maintain an overall density of 3 to <6 dwelling units per acre are encouraged. Public water supply and sanitary sewer service shall be required for areas designated as Medium Density Urban Residential.

High Density

The High Density Urban Residential category designates areas which should develop at densities greater than six dwelling units per acre. The dominant dwelling types should be two-family and multiple-family structures, however, single family zero lot line structures are acceptable. Both public water supply and sanitary sewer service shall be required for areas designated as High Density Urban Residential.

General Requirements

Urban residential development should be located on sites offering a diversity of both man-made and natural physical features. Public utility services must be provided for urban residential areas prior to development or as a function of the development. These services should possess adequate capacity, flow, and pressure for the type and density of the potential urban residential development.

Urban residential land uses should be adequately buffered from incompatible land uses such as industry, commercial centers, agricultural areas, or other potentially incompatible activities. Incompatibility should be determined by:

1. differences in the intensity of each use;
2. the physical relationships among each use; and
3. the external effects generated by each use.

Urban residential areas of substantially different densities should also be adequately buffered by open space or transitional urban residential uses of an intermediate density.

Urban residential development should preserve or create a completely unified neighborhood, having safe, convenient access to school(s), churches, park sites, and other community activity centers and encourage pedestrian and bike access. Small local shopping facilities oriented to the every day needs of the neighborhood residents may be encouraged at appropriate locations.

Urban residential development should be located in close proximity to major thoroughfares or transit facilities providing direct access to employment, shopping and recreation centers. Urban residential areas should be bounded, but not penetrated by major thoroughfares in order to preserve a unified neighborhood and to provide a interconnection of neighborhoods. The design for traffic circulation in residential developments should provide adequate ingress and egress to neighborhoods without encouraging through traffic.

Policies

1. Urban residential development shall be prohibited in areas subject to flooding.
2. Urban residential densities should be compatible with the natural capability of the site to accommodate such development. Soil conditions, geological features, drainage characteristics, and topography should be evaluated as to their effects on density.

3. Urban residential growth will be contained and directed into areas where both public water supply and sanitary sewer service can be provided prior to, or as a function, of the development.
4. The location of new urban residential developments should be encouraged to occur in a compact pattern rather than strip or sprawl type development.
5. The negative effects of residential sprawl should be minimized through infilling of vacant land.
6. Urban residential developments should be located in close proximity to major thoroughfares, but should not be penetrated by them.
7. Multiple-family developments should be encouraged in areas adequately served by public water supply and sanitary sewer facilities and those sections of the county possessing excellent accessibility, including pedestrian access, to primary thoroughfares, recreational areas, employment centers, shopping facilities, educational facilities, and other community facilities.
8. Residential land uses should be properly buffered from incompatible land uses. Higher density residential developments could be used as buffers between commercial/office and low density residential land uses. Adequate buffers should also be provided between residential areas of significantly different densities and from existing pollutions.
9. Zoning regulations which provide opportunities for innovation in the design of residential environments shall be encouraged.
10. Density increases in older residential neighborhoods should be properly controlled through zoning regulations to insure that adequate community facilities and services can be provided in order to prevent rapid deterioration.
11. The conservation, rehabilitation, or renewal of existing residential areas shall be encouraged when necessary to maintain a sound residential environment. If a sound residential environment cannot be maintained, then a transition to other suitable uses should be encouraged.
12. Non-residential land uses should be encouraged within residential neighborhoods only when they provide necessary convenience activities which does not require a service area greater than that of the neighborhood.
13. The need for low and moderate income housing should be recognized through a policy of providing a number of developments throughout the county and its sub-parts rather than a policy advocating large concentrations of such housing types.

Commercial Requirements

Objectives

1. Identify the most appropriate locations for commercial development within the county.
2. Identify the most appropriate types of commercial land uses for various commercial areas.
3. Identify proper and efficient spatial relationships between commercial areas and other land uses.

4. Encourage the creation of a coordinated set of commercial centers which are competitive within the region.

A well-balanced system of planned commercial sites is an integral element in the development of a community. The establishment of such a system is dependent upon certain location requirements respecting both the general needs of commercial development and the specific needs of various types of commercial establishments as shown in Table 3.2 and 3.3.

For this land use plan commercial uses include retail stores/centers; hotels and motels; restaurants, cafeteria and/or bars; banks; office buildings; automotive sales, service and storage; warehouses; theaters; service facilities and structures; etc.

Commercial developments should be located in fairly level or gently sloping areas which can be graded without excessive costs and environmental impact. Sloping sites often mean greater design requirements and development costs. Commercial land uses should not be located within the regulatory flood plain or in any area subject to periodic flooding. Sites possessing poor drainage, shallow depth to bedrock, and/or soils with poor load-bearing capacity should also be avoided since they carry increased development costs. Public water supply and sanitary sewer service must be available to commercial sites prior to development or as a function of development since commercial development often stimulates additional commercial activity and higher densities of residential development.

Commercial development should occur at strategic locations along the transportation network which provide direct access to and from their respective trade areas. Proper care must be exerted in the spacing of such developments to insure the economic health and avoid detrimental overlap of the function of each center. Over saturation, scatterization, and strip development which often lead to abandoned commercial structures and a decline in property values, should be avoided. Instead, commercial activities should be encouraged to form concentrated clusters near peak flow areas along the major thoroughfare network rather than developing into linear or strip patterns.

Clustering of commercial uses should, whenever possible, be confined to one side of the traffic artery, especially when the street possesses a large volume of traffic. Commercial developments are often considered appropriate at freeway interchanges because of the accessibility and visibility of these locations. However, great care must be taken to prevent the positioning of commercial uses which may hinder the proper functioning of interchanges by generating heavy traffic and increasing turning movements.

Commercial developments are generally classified into one of three major functional categories: neighborhood, community, or regional. Each type of center possesses a unique set of location requirements with respect to trade area, accessibility, and their relationship to surrounding land uses.

Table 3.2

Recommended General Planning Criteria for Commercaill Centers

	Neighborhood Center	Community Center	Regional Center
Major Function	Sales of convenience goods and services	Some functions of the Neighborhood Centers plus sales of shopping goods (wearing apparel, appliances, etc.)	Some functions of Community Center plus sales of general merchandise, apparel furniture, etc.
Leading Tenants	Supermarket and drugstore	Variety store and small department store	One or more, major full line department stores
Location	Intersection of collector Streets and/or secondary Roads	Intersection of major road and/or expressways	Intersection of expressways and/or freeways
Radius of service Area	1.5 miles	3-5 miles	8-12 miles
Minimum Population to Support Center	3,000 – 40,000	40,000 – 150,000	150,000+
Site Area (Gross Land Area)	4 – 8 acres	10 – 30 acres	40 – 100 acres
Desirable Maximum Size of Center as Percent of Total Area Served	1.25% (1 acre/1,000 population)	1.00% (0.75 acres/1,000 population)	0.50% (0.67 acres/1,000 population)
Range of Gross Floor Area	30,000 – 100,000 square feet	100,000 – 300,000 square feet	300,000+ square feet
Number of Stores and Shops	5 - 20	15 - 40	40 – 80
Parking Requirements	*Parking ratio: 4 to 1 200 – 600 spaces	1,000 – 3,000 spaces	4,000 spaces +

* Parking area is four times gross floor area of building, 400 square feet per parking space

Source: Dechiara, Joseph, and Koppelman, Lee; Urban Planning and Design Criteria; Van Nostrand Reinhold Company; Cincinnati, 1975, and adopted from Urban Land Institute, 1985

Table 3.3
Effects of Distance and Density on Characteristics of Shopping Centers

	NEIGHBORHOOD CENTER	COMMUNITY CENTER	REGIONAL CENTER
Fringe Development (contiguous to and an extension of an established urban area)	Characteristics and space requirements unaffected.	Not required for populations of less than 20,000 unless distance from existing center is sufficient (over 1.5 miles) to warrant the construction of a new community center in anticipation of continuing fringe growth.	Not normally required.
Semi-Independent Outlying Dev. (noncontiguous dev. some distance from an urban area but able to be served with public utilities through major extension of utilities available in central city)	Characteristics and space requirements unaffected.	Center required capable of serving at least 35,000 persons with service radius of 1.5-2 miles. Second center considered when population exceeds 40,000.	District center should be considered if total population potential for the area surrounding the development exceeds 101,000 persons. Second center considered for pop. of 200,000 and over.
Independent Outlying Dev. (outlying dev. With own public utilities and some economic base, but within the regional pattern of a large central city)	Characteristics and space requirements unaffected.	Center required in practically every case. Standard requirements apply.	Shopping center, district wide sub-regional, should be considered for dev. with population potential of over 50,000 persons.
Rural Residential	Larger than standard center: greater service radius, more parking spaces required.	Standard size and space requirements; smaller % of total area, greater service radius (2-3 miles).	Not required
Low Density Urban	Considerably larger than standard centers, but to a lesser degree than the case above.	Standard size and space requirements; greater service radius (2-3 miles).	Marginal conditions for establishment of district center; dependent upon adjacent land use.
Med. Density Urban	Standard requirements.	Standard requirements.	Standard Requirements.
High Density Urban	Larger than standard center (4-5 percent of total area); less than standard parking required. In this density neighborhood centers display characteristics of community centers.	Function of community center served by large neighborhood centers.	District centers larger than the standard Center; serves pop. of 200,000 – 300,000 with radius of 2-3 miles. Standard Parking requirements.

Source: Dechiara, Joseph, and Koppelman, Lee; Urban Planning and Design Criteria; Van Nostrand Reinhold Company; Cincinnati; 1975, pg. 428

Neighborhood Commercial Center

The neighborhood commercial center provides convenience-type retail and service establishments for the daily needs of its specific residential trade area. It is usually oriented around a grocery/supermarket as the principal tenant and is located within walking or a short driving distance from its market area. Neighborhood commercial centers should be located in a clustered arrangement at the edge of a residential neighborhood, preferably at the intersection of two major streets or at the intersection of a major street and a collector street. Traffic activity should not infringe upon surrounding residential areas. The neighborhood commercial centers function is often performed by the community commercial centers in our auto oriented society.

Community Commercial Center

The community commercial center provides a greater depth of merchandise and comparative shopping opportunities than the neighborhood commercial center. It is usually oriented around a junior department store, big box, or variety store in addition to the supermarket. Convenience facilities offered in the neighborhood center may also be provided. Community commercial centers should be located at or near the intersection of two or more major highways which provide access to the market area.

Some of the community commercial centers that have been developed in Greene County during the last planning period:

- | | |
|----------------------------|---|
| <u>City of Fairborn</u> | - South side of Colonel Glenn Highway, West of North |
| <u>City of Beavercreek</u> | - South side of U.S. Route 35, West of North Fairfield Road |
| | - Area around the intersection of Dayton-Xenia Road and |
| | - North side of Colonel Glenn Highway, east of Zink Road |
| | - Area on Indian Ripple Road between East Stroop Road and |
| | - Area along on Indian Ripple Road, West of Grange Hall |
| <u>Xenia City</u> | - North side of U.S. Route 35 Business, East of Progress |
| | - North Side of U.S. Route 35 Business, between S. Church |
| <u>Sugarcreek Township</u> | - East side of Wilmington Pike between I-675 and State |

Regional Commercial Center

The regional commercial center provides a full depth and variety of merchandise, oriented around one or more full-time department stores. Its market area normally includes a large segment of the metropolitan area. Therefore, a location at the intersection of two or more major thoroughfares with direct connections to limited-access thoroughfares is required. Locations directly on limited-access thoroughfares are not recommended because of traffic congestion problems created at interchanges.

As was anticipated in the 1978 plan iteration north Beavercreek City has become a regional commercial center. To be a little more precise, the area south of Interstate 675 along North Fairfield Road and the North Fairfield Road intersection with New Germany

Trebein Road. Currently this area has approximately three million square feet of retail space consisting of The Mall at Fairfield Commons, and several plazas including: Beavercreek Towne Centre; Fairfield Crossing; Beavercreek Shopping Centre; Rex Center; Target, and Kempton Square. It is now anticipated that this area will fill the demand for regional commercial centers for the next planning period.

Other Commercial Development

Certain financial and professional services do not require locations within planned shopping centers. Many times these uses are best located within a central business district or in clusters adjacent to the planned center. Highway or tourist-oriented commercial development consists of automobile and truck service stations, motels, restaurants, commercial recreation, and similar establishments whose business is dependent upon the motoring public. The practice of permitting these types of uses to occur in long, narrow strips along major thoroughfares should, however, be avoided. Instead, these uses should be grouped into compact well-planned areas along major highways with controlled points of access.

The existing traditional central business districts of the cities and villages within Greene County have met with a varying degrees of success, decline and deterioration. The successful central business districts, mostly within the villages, have taken advantage of community character and have found specialty markets to attract customers. On the other hand decline in some central business districts can be attributable, in part, to the dependence of many Greene Countians on the regional shopping facilities in eastern Greene County, Dayton and Montgomery County. Over the years we have seen how detrimental new commercial areas are to the existing older central business districts. This trend needs to be stopped to bring back the viability of the traditional central business district.

The locational aspects of many existing central business districts within the county suggest their development into appropriate neighborhood or community centers containing financial and professional services, depending upon the size and regional function of the community.

Policies

1. Encourage the growth and revitalization of existing commercial areas within the county which possess transportation and market advantages through appropriate redevelopment, rehabilitation, or preservation techniques.
2. Encourage the development of planned commercial centers through appropriate implementation techniques such as planned unit development provisions in zoning and subdivision regulations, reservation of adequate land for expansion of prime sites, limitations on curb cuts, sign control, landscaping, common off-street parking areas, common service areas, pedestrian/vehicle separation and pedestrian access.
3. Unplanned scattering of commercial land uses and the development of commercial strips should be discouraged because they are detrimental to

- the establishment of a balanced system of planned commercial centers, and lead to increased public costs.
4. Functional classification of commercial land uses should be encouraged in local zoning regulations, recognizing the complementary relationships between certain commercial land uses and the need to develop various types of commercial centers at strategic locations throughout the county. The development of a workable system of central business districts, neighborhood commercial centers, regional commercial centers, highway-oriented commercial centers, and professional/office centers requires strict controls to prevent encroachment by incompatible uses.
 5. Designated commercial centers should possess identifiable physical boundaries in relation to residential land uses. Where no physical boundary can be identified, higher density residential uses may be used as buffers.
 6. Commercial developments should be recommended only in areas where both public water supply and sanitary sewer service can be provided prior to development.
 7. Commercial developments should be located and designed according to the natural capability of the land to accommodate such development. Soil conditions, geological features, drainage characteristics, and topography should be evaluated prior to the development of such areas.
 8. Recognizing the possible economic losses and safety hazards which may result, commercial developments should not be permitted within flood hazard areas.
 9. Rezoning of any land adjacent to major thoroughfares for commercial purposes should be granted only on the basis of need, a clear and definite change in the surrounding environment, and the impact such rezoning would have on the effectiveness of the land use plan.
 10. Commercial land uses should be located at or near strategic intersections on the transportation network with limited curb cuts to the existing roadway. Commercial traffic should not be directed into residential areas.
 11. The reservation of strategic sites within or adjacent to residential neighborhoods for neighborhood or community commercial uses should be encouraged.
 12. Large lot sizes and minimum road frontage requirements should be required in commercial zoning districts to encourage cooperative development ventures and provide more efficient use of the land.
 13. Over zoning for commercial land uses should be discouraged because of its potential for creating scattered and strip commercial land use patterns, as well as over saturation of the market.

Industrial Requirements

Objectives

1. Identify the most appropriate areas within the county for industrial development.
2. Identify the types of industry which are complementary to the physical,

- human, and economic resources of Greene County.
3. Encourage the expansion and improvement of existing industry within the county.
 4. Reserve the most appropriate sites for industrial expansion within the county and prevent their encroachment by incompatible land uses.
 5. Promote the establishment of well-planned industrial areas which possess proper and efficient spatial relationships to other land uses.
 6. To establish an attractive climate for industry through the provision of high quality education systems, attractive environmental surroundings, cultural and recreational opportunities, and high quality leadership.

Industrial land uses often include research and office-type developments as well as general manufacturing operations, industrial parks, and warehousing. These uses lend themselves to the development of industrial employment centers which possess similar location requirements.

Lands to be considered for industrial uses should be reasonably level with slopes of six percent or less and capable of being graded at reasonable cost. The area should be well drained, possess soils capable of bearing heavy loads, and outside of the regulatory flood plain or areas subject to periodic flooding. Industrial areas should possess adequate acreage for division into large individual industrial type lots which are capable of accommodating modern horizontal facilities with off-street parking areas, loading areas, and landscaping. Adequate acreage for future expansion should also be available.

Industrial development requires public utilities such as electric power, water supply, gas, and wastewater disposal. The availability and capacity of such utilities determines the type and extent of industrial activity than can be supported by any given site.

Industrial areas should be located within easy commuting time of the labor force and possess excellent access to the many methods of transportation required to ship materials and products. Sites should be available at or near the intersection of major highways so that it is not necessary for trucks and employees to travel through residential or commercial areas. Direct connections to the interstate highway system and regional system of freeways is most desirable. Sites close to airports are desirable for many industries which utilize air freight and require a great deal of travel by executives.

Adequate physical separation between industrial and other land uses, especially residential, should be attained whenever possible. Highways or natural physical features should be used as buffers. Buffers also restrict the encroachment on designated industrial areas by residential, commercial, or other non-compatible land uses. Office and research parks can be held to a lesser standard than that of a true industrial use.

Policies

1. Industrial land uses should be located and designed only in accordance with the natural capability of the site to accommodate such development.
2. Industrial structures should not be permitted to locate in areas where known flood hazards exist.
3. Industrial development should be encouraged in areas possessing adequate

- public water supply and sanitary sewer service, high capacity utilities, and direct connections to transportation corridors. Types of industrial uses appropriate for each site should be matched with the available level of such services.
4. Industrial areas should be adequately protected from incompatible land uses by sufficient physical features and ample land areas should be reserved for future expansion.
 5. Over-zoning of land for industrial uses should be discouraged, especially those areas which are inappropriate or in excess of projected needs.
 6. Proper control of nuisance factors such as noise, vibration, air pollution, and water pollution should be encouraged in relation to the possible detrimental effect they would have on surrounding areas and their occupants.
 7. Encourage the development of zoning regulations which recognize the different needs and compatibility's of various types of industrial land uses.
 8. The development of industrial areas should adequately provide for internal traffic circulation and other operational needs. Each industrial establishment should fully provide for its individual needs of employee parking, storage, loading, etc.
 9. Industrial areas should be located in close proximity to major transportation arteries without causing additional traffic in residential areas.
 10. All open spaces on industrial lots should be adequately graded and drained. Storage, parking and loading areas should be enclosed or landscaped.

Public and Institutional Requirements

The public and institutional category includes land uses such as colleges, universities, schools - kindergarten through twelfth (K-12) grades, seminaries, churches, places of worship, public or governmental libraries, hospitals & medical centers, museums, governmental services, military installations, governmental institutions, cemeteries, utilities and/or uses of similar character.

Location requirements for each type of public and institutional land uses should be determined by the specific function of these unique land use. All new and proposed expansions of public and institutional land uses should be considered only after special studies have been conducted relative to their specific needs. Some of the major existing public and institutional sites in Greene County consist of:

1. Wright - Patterson Air Force Base, Northwest corner of the county;
2. Antioch University, Village of Yellow Springs;
3. Cedarville University, Village of Cedarville;
4. Central State University, Wilberforce;
5. Wilberforce University, Wilberforce; and
6. Wright State University, City of Fairborn.

Mineral Resource Management Requirements

Objectives

1. To protect mineral resources and ensure their availability to future generations.
2. To promote best use of productive and valuable sand, gravel and other mineral resources.
3. To minimize conflicts between the mining industry and other land uses.
4. To promote proper reclamation techniques to ensure future use of mined lands.

Greene County's approach to mineral resource management is to plan and preserve, regulate and reclaim. The long term benefit of this approach is to protect mineral resources for future generations, provide economic development, and ensure reclamation to a desirable subsequent use (see Chapter 2, Coordinated Land & Water Management Program, Mineral Resource Management).

The mineral resource management category of the land use plan is a designation of lands within Greene County that are:

1. lands with approvals or currently being excavated/mined for their mineral resources (these lands are shown on the land use map as an outline);
2. parcels which are owned by a quarry/mining operation (are shown in appendix ___)

In this land use classification it is recognized that this use is a use of the land but not the ultimate use. This interim use could last generations. Once the minerals are removed and the land is reclaimed and other uses of the site can take place.

Other potential mineral resource areas of Greene County have been identified in A Physical Study for Greene County, Ohio (page 44, map 3).

Policies

1. Avoid activities which would preclude present or future use of important mineral resources that may have economic significance to the region.
2. Mineral extraction operations should be recognized as an interim use of the land and that a long term land use pattern should be developed to consider their transitional nature.
3. Require land reclamation plans prior to extraction and require adequate buffer zones and landscaping between mining operations and potentially incompatible land uses.
4. Allow well-controlled expansion of existing operations when consistent with adjacent land uses.

Planned Unit Development

The above mentioned land use categories are encouraged to develop using the planned unit development concept. The planned unit development concept is a way of encouraging flexibility, ingenuity, and imagination on the part of the owners, engineers, architects, site planners, and developers in the planning and design of the land area. It is a way of conserving land through a more efficient way of allocating lots, multi-family dwelling units, common ground, non-residential structures/uses, greater efficiency in providing public and utility services, and securing benefits from new techniques in community development. This concept allows for the maximum variation in design, densities per acre, and development patterns that can be used to preserve and utilize the man-made and natural features of the site.

Planned unit developments should be located on sites offering a diversity of both man-made and natural physical features worth preserving. For planned unit developments with proposed residential densities of one (1) unit per acre and greater, public utility services must be provided prior to or as part of the development. A planned unit development should be required not to impose an undue burden on public services and facilities such as fire and police protection, the school system, water and sewer services, and the transportation network. The site shall be accessible from public roads that are adequate to carry the existing traffic plus the potential traffic from the development. Streets and driveways on the site must be adequate to serve the residents/occupants of the planned unit development. Arrangement of structures, parking areas, sidewalks, lighting, and associated facilities shall be compatible with the surrounding land uses.

Specific densities within the land use classification should be established at the preliminary review stage based on:

1. the gross density range provided by urban density classification (Table 3.1);
2. surrounding adjacent densities and land use(s);
3. capacity of existing and proposed utilities;
4. capacity of the existing/affected thoroughfares;
5. consistent with community goals; and
6. characteristics of the site:
 - topography,
 - flood plains,
 - wetlands,
 - unique geologic features,
 - unique/threatened/endangered plant and animal species,
 - groundwater sensitivity, etc.

Development Objectives

Introduction

The principle question facing those responsible for land-use decisions is clearly, how shall we organize for sustainable development in order to control and coordinate the process of development so as to protect what we value most in our community. We must consider environmental, cultural and aesthetic characteristics of the land while meeting the essential needs of our changing population for new housing, roads, shopping centers, business, parks, and industrial facilities.

Land itself is a finite resource that must be used with wisdom. It is therefore critical to understand the interdependence between economic development and the environment. Through this understanding we strive to achieve sustainable development which meets the needs of the present without compromising the ability of future generations to meet their needs. The following development objectives have been established as tools to help define development options within the county. **The guiding principle behind the development objectives is that some land is better suited for development than other, because of variations in the natural as well as the man made environment.**

GOVERNMENT CONSIDERATIONS:

Service and Finance:

OBJECTIVE: Fully explore and assure the ability of government to provide governmental services and facilities required for the proposed project.

GENERAL GUIDELINE: Phase development activities to a level equal to that of the financial capability of the various levels of government to provide the governmental services and facilities that will be generated by the development, such as transportation systems, schools, health care, sewage and solid waste disposal systems, water supply systems, and fire and police protection; require that as nearly as possible, the balance between the cost of public services required to adequately serve the development as compared with the anticipated tax and other revenues to be generated by the development are favorable at each level of government or taxing jurisdiction affected by the project; and include in development plans provisions to maintain or improve existing services and alleviate any potential adverse impact upon the ability of the government to provide services and facilities.

Regulations:

OBJECTIVE: Conform development activities to all applicable governmental rules and regulations.

GENERAL GUIDELINE: Comply with all applicable ordinances, rules and regulations of all governmental agencies with responsibilities for such activities, including those of township, city, county, and state agencies

ADJOINING AND NEARBY LAND USES:

Surrounding Land Uses, General:

OBJECTIVE: Minimize the incompatibility of new development with the character of adjoining and nearby land uses.

GENERAL GUIDELINE: Take into account the existing and potential land uses in the vicinity of the project site in determining what new land use activities are suitable for the project site; avoid new intensive development in open space and agricultural areas; and avoid altering existing residential and other land use patterns that are recommended in this plan.

STREETS AND ROADS:

OBJECTIVE: Design and construct roads and streets to provide safe and convenient access without causing undue adverse impacts on public and natural resources.

GENERAL GUIDELINE: Conform street and road alignments with existing topography and vegetation; avoid steep slopes, abrupt curves and excessive cuts and fill; provide adequate road surfacing and road bed drainage; preserve existing drainage patterns; and design streets and roads so as to minimize the impacts of construction and maintenance practices and design to insure human scale and that pedestrian/bike amenities are included.

ACCESS MANAGEMENT:

OBJECTIVE: To maintain the safe, efficient use of a highway while providing necessary and appropriate access to adjacent land.

GENERAL GUIDELINE: Comply with all applicable local standards. When looking at access to a site consider: the current and proposed function of the highway; present and projected traffic volumes; the character of the lands adjacent to the highway; the land use plan and local zoning; adopted transportation plans; and the availability of reasonable alternative access from local streets rather than from highways - when appropriate.

DRIVEWAYS:

OBJECTIVE: To allow motorists to enter and exit a site safely and easily.

GENERAL GUIDELINE: Comply with all applicable local standards. Driveway standards should be tied to the posted speed limit, functional classification of the roadway and distance between existing and proposed driveways/curb cuts. Driveway access to arterial and collector roads should be discouraged unless no other access to the site is provided. Driveways should not be permitted within the functional area of an intersection.

SEWAGE DISPOSAL:

OBJECTIVE: Select, design, and locate sewage disposal systems to provide adequate treatment of effluent and to avoid contamination of surface or groundwater.

GENERAL GUIDELINE: Comply with all State and local health standards, and employ

proven design criteria for sewage disposal systems in proper working order.

WATER SUPPLY:

OBJECTIVE: Locate, design and construct water supply systems so as to provide an adequate supply of potable water without adversely affecting existing water usage patterns or creating adverse effects with regard to aquifers and subsurface drainage patterns.

GENERAL GUIDELINE: Comply with all State and local standards with regard to the design, location, construction and maintenance of water supply systems.

STORM DRAINAGE:

Storm Drainage, General

OBJECTIVE: Design, locate, and construct storm drainage systems so as to maintain existing drainage patterns in a natural state and to minimize adverse effects, in accordance with all applicable government rules and regulations.

GENERAL GUIDELINE: Provide adequate drainage for building sites and roads; avoid altering drainage patterns to the extent possible; utilize natural drainage ways for handling stormwater runoff; and preserve all natural surface water retention areas such as wetlands, marshes, and flood plains; and minimize runoff by such other methods as preserving vegetative cover and avoiding the creation of unnecessary or extensive impervious surfaces.

Field Tile

OBJECTIVE: Locate and maintain existing field tiles so as to efficiently accomplish project objectives while preserving the field tiles function.

GENERAL GUIDELINE: Minimize alterations to the existing field tile; if field tile is encountered during the development of a site, the developer shall repair or replace the tile, so it functions as designed.

SOLID WASTE DISPOSAL:

OBJECTIVE: Provide for the storage, collection, transportation and disposal of solid waste in a manner which will minimize air, water, and visual pollution and in a manner which will not create hazards to the health and welfare of people.

GENERAL GUIDELINE: Comply with all applicable State and local standards and the Greene County Solid Waste Plan, for the disposal areas and recycling facilities; and adequately screened disposal areas.

PUBLIC UTILITIES AND COMMUNITY RESOURCES:

OBJECTIVE: Assure the adequacy of such public utility services and community resources as shall be necessary or within fiscal constraints of the jurisdiction.

GENERAL GUIDELINE: Avoid excessive demands on the capabilities of public utilities such as water, sewer, electricity and communication services; and avoid the necessity for major uncompensated increases in community services and activities such as recreational facilities, educational facilities, social, cultural and health services, and transportation facilities.

UTILITIES LOCATION & DESIGN:

OBJECTIVE: Locate, design, construct, and maintain utilities so as to efficiently accomplish project objectives and preserve public and natural resources.

GENERAL GUIDELINE: Locate utilities underground if feasible and in such a way that alignments are compatible with existing topography and vegetation; minimize visual impacts on surrounding areas by maintaining and preserving as much vegetative cover as possible; and minimize maintenance practices such as herbicide spraying which could have adverse environmental impacts on terrestrial and aquatic ecosystems.

WIRELESS TELECOMMUNICATION FACILITIES:

OBJECTIVE: Preserve the character and appearance of the county while simultaneously allowing adequate wireless facilities to be developed.

GENERAL GUIDELINE: Minimize the total number and height of towers throughout the county; locate towers so that they do not have negative impacts, such as, but not limited to, attractive nuisance, noise and falling objects, on the general safety, welfare and quality of life of the county; require tower sharing (co-location) of wireless telecommunication facilities where possible; require wireless telecommunication providers to configure them so as to minimize and mitigate the adverse visual impacts of the towers and facilities.

SIGNS:

OBJECTIVE: Avoid signage that detracts from aesthetic and scenic qualities.

GENERAL GUIDELINE: Comply with all applicable local standards. Limit signs to the extent necessary to adequately inform the public concerning the activities to which they relate; utilize signs which are appropriate to the character of the area in which they are located; avoid using signs of excessive size that are insufficiently set back from travel corridors, and/or signs containing moving parts or flashing lights. Off-site signage should be discouraged.

SITING AND CONSTRUCTION OF BUILDINGS:

OBJECTIVE: Design, site and construct buildings to best serve their intended functions and to minimize impact on public and natural resources.

GENERAL GUIDELINE: Blend buildings with existing topography and their surrounding environs; avoid steep slopes; minimize grade alterations; and avoid complex and costly engineering solutions of site problems with potentially excessive environmental impacts.

AIR QUALITY:

OBJECTIVE: Maintain or enhance existing air quality

GENERAL GUIDELINE: Adhere to applicable governmental air quality standards; provide adequate air pollution abatement devices; and reduce dust levels caused by construction activities.

NOISE LEVELS:

OBJECTIVE: Limit additions to noise levels.

GENERAL GUIDELINE: Adhere at a minimum to applicable governmental noise level standards; utilize noise abatement equipment; and maintain natural buffers such as existing topographic relief and vegetation to aid in noise reduction.

MINERAL RESOURCES:

OBJECTIVE: Conserve existing known mineral resources.

GENERAL GUIDELINES: Avoid activities which would preclude present or the future use of important mineral resources that may be of economic significance to the region.

ARCHEOLOGICAL AND/OR HISTORIC SITES:

OBJECTIVE: Protect archeological sites, historic sites, and unique historical structures for their educational and cultural values to the area, region and State.

GENERAL GUIDELINE: Preserve and restore archeological sites, historic sites, and unique historic structures to the extent warranted by their respective significance; avoid land uses and development on adjoining and nearby lands which would be incompatible with the significance of such sites and structures.

AESTHETICS:

Aesthetics, General:

OBJECTIVE: Preserve and enhance the existing aesthetic qualities of the project site from the potential impacts of the project, where possible.

GENERAL GUIDELINE: Utilize existing vegetation and topographical features, and employ careful siting methods so as to minimize the visual impact of all development activities.

Scenic Vistas:

OBJECTIVE: Maintain the scenic qualities of views.

GENERAL GUIDELINE: Avoid the visibility of buildings and other development and land use alterations from scenic vistas by employment of vegetative screening, existing topography, and careful siting methods.

Travel Corridors:

OBJECTIVE: Preserve the scenic qualities of views from public rights-of-way, trails and

from boat and canoe routes.

GENERAL GUIDELINES: Employ vegetative screening, existing topography, and careful siting methods to minimize the visual impact of buildings and other development and land use alterations.

SPECIAL INTEREST AREAS:

OBJECTIVE: Preserve special interest areas such as unique natural features and their surrounding environments.

GENERAL GUIDELINE: Avoid physical and aesthetic alteration and impairment of the natural condition of unique physical features such as gorges, waterfalls and interesting geological formations; provide for their continuing protection; utilize these special interest areas as assets to development.

SOILS:

Soils, General:

OBJECTIVE: Prevent accelerated soil erosion.

GENERAL GUIDELINE: Respect existing natural features such as slope, soil texture, and structure; minimize removal of vegetative cover; rapidly revegetate cleared areas; limit cuts and fills; and employ such erosion control devices and measures as are necessary to promptly stabilize slopes and surfaces and to control stormwater runoff.

Agricultural Soils:

OBJECTIVE: Conserve viable agriculture soils.

GENERAL GUIDELINE: Avoid non-farm activities on prime agricultural soils, as defined by the U.S. Department of Agriculture, that are presently in agricultural service which would diminish or preclude continuing use thereof for agricultural purposes.

TOPOGRAPHY:

OBJECTIVE: Minimize topographic alterations.

GENERAL GUIDELINE: Minimize large scale excavation, cuts and fills and site grading by taking advantage of existing topographic features; and avoid development activities on steep slopes where costly development problems and environmental damage could result.

GROUND WATER:

OBJECTIVE: Preserve quality and quantity, infiltration rates, and levels of ground water.

GENERAL GUIDELINE: Comply at a minimum with applicable governmental water pollutant discharge restrictions; particularly avoid discharges of effluent potentially degrading to ground water quality in proximity to major aquifers and aquifer recharge areas; and avoid impairment of aquifer recharge areas which could result from covering them with impervious surfaces.

SURFACE WATERS:

Water Quality and Eutrophication:

OBJECTIVE: Maintain or enhance existing physical, chemical, and biological water quality characteristics and prevent any undue acceleration of existing rates of eutrophication (excessive nutrient enrichment of aquatic systems) on bodies of water.

GENERAL GUIDELINE: Maintain wide buffer strips of natural vegetation bordering water bodies; minimize channel disturbance and alterations; preserve shoreline vegetation; minimize hydrologic changes which would result from damming or impounding; avoid introduction of nutrients from the use of fertilizers and from sewage effluent; and avoid introduction of toxic materials to water bodies.

Surface Drainage:

OBJECTIVE: Retain existing surface water drainage and stormwater runoff patterns and existing flow characteristics while complying with the current applicable runoff control and sediment abatement standards.

GENERAL GUIDELINE: Minimize alterations to existing drainage patterns and drainage courses; preserve drainage ways in their natural state; and provide, where necessary, natural ponding areas and other measures designed to provide natural retention of stormwater runoff if development creates an increase in stormwater runoff.

Floodplains:

OBJECTIVE: Maintain the storage capacity of floodplains and their existing ability to convey water downstream; and avoid activities in floodplains which will result in dangers to life, safety and property if subjected to flooding.

GENERAL GUIDELINE: Avoid the placement of buildings intended for human habitation, commercial use and industrial use within floodplains; avoid the use of fill to create elevated sites within the regulatory floodplain.

WETLANDS:

OBJECTIVE: Preserve the hydrologic, wildlife, vegetational, aesthetic, educational, open space and recreational values of wetlands.

GENERAL GUIDELINE: Avoid development in marshes, bogs, swamps, wetlands, and periodically inundated lands or on lands immediately adjacent thereto if such development could result in environmental damage to the marsh, bog, swamp, wetlands, or periodically inundated land.

SHORELINES:

OBJECTIVE: Maintain or enhance the existing physical, biological and aesthetic characteristics of the shoreline of all lakes, ponds, rivers, and streams.

GENERAL GUIDELINE: Comply at a minimum with applicable governmental shoreline restrictions, minimize construction or development of any kind near or on the shorelines; avoid physical modifications of the shorelines themselves; minimize the removal of vegetation along shorelines; locate buildings so as to be partially screened from the

shorelines by natural vegetation; maximize the preservation of stretches of shoreline in a natural, unchanged and undeveloped state.

SCENIC RIVERS:

OBJECTIVE: Protect or enhance the natural qualities of any river designated as a State and/or National scenic river.

GENERAL GUIDELINE: Maintain adequate buffer zones and existing vegetation along designated scenic rivers; which should be determined on a case by case basis, potential criteria include; 100 year flood plain, topography, wetlands, vegetative cover, canopy cover, etc. minimize alterations to such rivers and their banks and preserve the free flowing character of such rivers.

AQUATIC COMMUNITIES:

OBJECTIVE: Protect the existing natural aquatic plant and animal communities and preserve rare and endangered aquatic plant and animal species.

GENERAL GUIDELINE: Preserve key spawning areas, nursery grounds, food sources and food source areas; preserve habitats of rare and endangered plant and animal species; maintain adjacent vegetated areas generally as habitats and buffer zones; minimize shoreline alterations such as beach construction and emplacement of docks, rafts, and boat launching facilities; and avoid introduction of toxic materials and nutrients to water bodies.

TERRESTRIAL VEGETATION AND WILDLIFE:

Vegetation, General:

OBJECTIVE: Preserve or quickly restore terrestrial vegetation.

GENERAL GUIDELINE: Minimize clearing of vegetation in light of development objective; avoid clearing vegetation where damage will result to the remaining vegetation from such factors as wind, erosion, and frost; and protect remaining vegetation during the construction period.

Wildlife, General:

OBJECTIVE: Maximize the preservation of terrestrial wildlife species.

GENERAL GUIDELINES: Preserve key wildlife habitat, such as deer wintering yards, nesting areas, productive feeding areas, and important vegetation transition areas; and maintain wildlife diversity to the extent possible in view of project objectives by maintaining a diversity of habitat.

Rare and Endangered Plants and Wildlife Species:

OBJECTIVE: Preserve rare, endangered and potentially threatened plants and wildlife species, as identified by the Ohio Department of Natural Resources.

GENERAL GUIDELINE: Locate development and other intensive human activities so as to protect the location and habitats of rare and endangered plants and wildlife species and

allow for the continuing propagation of these species.

OPEN SPACE:

Open Space General:

OBJECTIVE: Maintain the open space character of the project site, adjacent land, and surrounding areas.

GENERAL GUIDELINE: Preserve vegetative screening and existing topography and employ clustering and careful siting methods where appropriate to minimize the impact of development activities and land use alterations on open space; and preserve undeveloped areas as large as possible in view of project objectives.

Outdoor Recreation:

OBJECTIVE: Maintain the quality and availability of land for outdoor and open space recreational purposes.

GENERAL GUIDELINE: Provide sufficient open space areas on the project site for outdoor recreational use by those persons who will use the proposed project, taking into account the existing recreational resources available in the area; and locate buildings and other developments so as not to interfere with those areas to be used as hiking, bicycling, and cross-country skiing trails, and horse trails, playgrounds, picnic areas, campgrounds, parks, beaches, and similar uses.

Chapter Four The Future Land Use Plan

Introduction

Many of the things that we value most - like family, a safe and pleasant living environment, and the opportunity for personal growth - are guiding factors for making decisions in our lives. They can also be linked to the strengths of our communities. We tend to overlook the fact that many of the things that make life enjoyable, and that we share as a community, are the same things that make our communities an attractive place to live, work, and play.

To accomplish the goals, objectives and policies of the land use plan that have been established by the Regional Planning and Coordinating Commission, each factor and component of the plan needs to be undertaken together because of their interwoven relationships. To advance the quality of our communities and the county as a whole in a balanced way, all issues and concerns need to progress in unison with the others:

Economic Development	Consumer Opportunity
Health & Safety	Social Amenities
Transportation	Arts & Culture
Infrastructure/Utilities	Parks & Recreation
Public Services	Community Life
Land Use	Community Character
Housing	Natural Resources
Education	Environmental Protection
Population	

The future land use plan is intended to be general in nature. The graphic plan (maps) are simple drawings showing the location of land uses through out the county. It envisions the County's land use into the future and more importantly it provides a policy framework to manage growth and development. It is the welding of information from: previous basic studies, plans, reports and inventories: the goals, objectives, an policies for future development; and the location requirements of various types of land uses into a workable arrangement of land uses which can be used as a guide for future development. The welding process is normally one which encounters many regional, county-wide, and local compromises en-route to a workable alternative.

Land Use Compatibility/Suitability Analysis

The principal question facing those responsible for land-use decisions is clearly, how shall we organize for sustainable development in order to control and coordinate the process of development so as to protect what we value most in our community. We must consider environmental, cultural and aesthetic characteristics of the land while meeting the essential needs of our changing population for new housing, roads, shopping centers, business, parks, and industrial facilities.

Land itself is a resource that must be used with wisdom. Therefore it is important to understand the interdependence between the natural and built environment. Through this

understanding, we strive to achieve sustainable development which meets the needs of current residents without compromising the ability of future generations to meet their needs. Land use compatibility analysis is a tool to understanding the links between the natural features of the land capability and the suitability of development options.

Land compatibility/suitability analysis is a way of analyzing natural feature (resources) information along with man made features to evaluate an area's tolerance for various land uses. Resource data such as soil, topography, ground cover, visual aspects, energy aspects, special features and floodplain are collected and their interrelationships assessed to determine the type of development for which an area is best suited. These features are then integrated with man made features such as public utilities, transportation facilities, current zoning and adjacent land use compatibility to identify the most suitable land use alternatives. The guiding principle behind land use capability analysis is that some land is better suited for development than other, because of variations in the natural as well as man made environment.

In conducting land use compatibility/suitability analysis, the following natural and man made features are inventoried:

Topography	Special Features
Soils	Availability of Public Utilities
Flood Plain	Access
Ground Cover	Current Zoning
Visual Aspects	Adjacent Land Use Compatibility
Energy Aspects	

Natural Features

The success of any development requires that the existing natural features of the site be considered. As such, an understanding of the existing natural features will provide direction in the selection of land use alternatives.

Topography

Topography is the "lay of the land," the degree and variation of slopes which characterize the site. A varied topography (a combination of steep and moderately and gently sloping land) usually makes for an attractive site and is typical of many areas of Greene County. At the same time, the amount and pattern of steeply sloped land limits the degree to which new development can occur at a reasonable cost with minimal environmental damage.

Building development is strongly affected by the slope of the land. The costs of adjusting structural or foundation systems, providing measures to prevent erosion, locating proper septic systems, and constructing roads increase as the steepness of the slope increases. In addition, there are often costs associated with "consuming" the more attractive areas of a site with buildings, as opposed to leaving them open for recreational use or merely to us as open space. Topographic features like ridges, hilltops, and valley areas contribute to

the overall form of a site; mitigating constructing in such areas saves money and helps to maintain the marketability of the overall site.

Topography can be an amenity of development by providing for variation in terrain to maximize solar orientation, to develop walk-out basement units, and separate different development types or uses. Slopes that are too steep for development can be used to add character to open space through strategic placement of trails and overlooks.

Soils

Soils are important to humans because, to some degree, all of their activities relate to the soils in one way or another. Whether we are building roads and houses, reforesting the land or using the land as pasture, success or failure depends in part upon the soils on which they are located. In addition, knowledge of an area's soil characteristics is vital information for any land use planning effort. The suitability of land to support any development is related to the lands soil characteristics as soils are the basic building blocks upon which development takes place. Each type of soil possesses specific characteristics which may place constraints on development alternatives.

Floodplain

Floodplains and their associated ecosystems are nature's flood and erosion control network. They reduce flood velocities, enhance and maintain water quality, and help to maintain groundwater through aquifer recharge. Plants that are associated with floodplains are a significant reason why floodplains are as valuable as they are. Besides improving the quality of the water, floodplains maintain a high biological productivity, and wetland vegetation (wildlife habitat). They also reduce erosion, stabilize soils and add nutrients to the once flooded soils thus providing areas for natural food sources and crops for human consumption. By protecting floodplains and/or by guiding development away from floodplains we are protecting the citizens of Greene County and minimizing public and private property damage by controlling development which will, when acting alone or in combination with other development, cause flood losses and create additional burden to public services, public infrastructure and other utilities, and to the health and safety services.

Ground Cover

Wooded lots, hedgerows, and mature trees add beauty and variety to development. They enhance aesthetic quality by:

- Creating a sense of closure and privacy
- Providing shade and cooling
- Serving as windbreaks
- Softening the visual impacts of manmade elements
- Providing for erosion control, and
- Creating benefits for wildlife

Existing hedgerows/tree stands can be used to separate different residential development or different uses within the area. The presence of environmentally sensitive lands or

natural features can be transformed into community assets (open space, wildlife habitat and to perform their natural functions). These assets can be incorporated into the development adding value to the home sites or the development.

Visual Aspects

Visual aspects include the basic views, features, and characteristics within the site which make it attractive for development in the first place. Usually composed of a variety of elements, including views along or out from a shoreline, an existing rustic barn, an interesting or dramatic rock outcropping, ridge or cliff, or an isolated stand of trees, the appearance of a site is often a subtle but important aspect to consider.

From a community standpoint, larger sites or contiguous smaller sites (especially those adjacent to major public roads) may represent a significant portion of the character of the city, town or village. Providing a setting for development which maintains or even improves the appearance of individual sites enhance the future ability of a community to capitalize on its inherent attractiveness and still increase its tax base. While ignoring the attractiveness of a site may result in an apparently simpler review procedure and even short-term economic gain, the long-term economic and character impact on a community should be considered. In most cases, the basic attributes of a site can be saved without infringing on the right to develop the property.

Energy Aspects

As a site resource, energy is that set of characteristics which provides an opportunity to locate site buildings and other elements in a way to minimize private and public heating and maintenance costs.

Since most new development involves public utilities, the proper pattern and design of development can minimize long term public energy consumption. Private energy supplies such as oil and gas can also be conserved. Savings in energy can take two forms: 1) Minimal clearing and construction - to save the energy required in the production and installation of facilities; 2) Proper design to minimize continuing energy consumption.

Special Features

In some areas, there are features which are attractive not only from a visual standpoint, but are unique or important in terms of regional history and culture, the breeding or feeding of wildlife, accommodating rare plants, or providing prime agricultural potential.

These natural and man made features distinguish Greene County from other regions of the state. They are the sources of the region's cultural, educational, and recreational character. Check local and state surveys for historic areas, structures and archaeological sites on or adjacent to the site. A site and/or building may be important for strictly local reasons, but in any case such resources are often an attractive landmark.

Man Made Features

Man made features of the site are as important as the natural features. They provide a starting point for new roadways, public water, wastewater collection, and other utilities. Other important features to a development could include proximity to: schools, parks, shopping, employment, recreational opportunities and adjacent use compatibility.

Water and Sewer

One of the main challenges in accommodating development is providing adequate potable water and wastewater collection. Because of soil limitations in many parts of the county, larger acreage home sites are often needed to accommodate individual on-site sewage disposal systems and septic tank absorption fields. Public water and wastewater collection systems allow for development to occur at urban densities. Urban density type development minimizing sprawling development patterns that require lengthy automobile commutes, and undermine efforts to conserve energy, reduce air pollution, and contain traffic congestion.

Public utility installation guides new development into areas designated for development, to make optimal use of the infrastructure and public services while conserving prime agricultural land and sensitive environmental areas.

Access

Since automobiles became commonplace, woven into our way of life, streets have been the unifying force in the layout of subdivisions and other developments. Existing streets provide a starting point for new streets. In laying out a street system it is important to keep in mind all circulation and movement system. Street layout determines the physical structure of the development and the location of individual lots.

Everyone benefits from street improvements that are functional, durable and cost-effective. When streets are laid out with the community in mind, they provide a functional network to get people from their residences to work, shopping and recreational opportunities in a logical manner, while providing adequate capacity to do so for many years to come. In some cases the carrying capacity of the roadway is the limiting factor to potential development.

Current Zoning

Zoning has been a traditional method of land use control and will continue to be a valuable source of control in the future. It is also noted that the rural areas of the county have Township zoning. This reflects the different needs for the different areas of the county. Each Township within Greene County has the ability to change their current zoning and zoning is recognized to be an evolving process. Specific zoning is often affected by the economic conditions at the time as well as the existing development in the area; the development and expansion of infrastructure, including roads, sanitary sewer and public water; and as such has local supervision.

Another intent of zoning is to put land to use as it is best suited in the context of overall community development. Of course, determining the best use for land is not always easy and can change over time. Zoning is significant because it protects property values by assuring that incompatible uses will be separated.

Adjacent Land Uses

The existing adjacent land uses around a site set general guidelines for what should be developed in a particular site. It is important that new development does not negatively affect existing adjacent uses and that the character of the community be carried throughout the new development. This look at existing and future adjacent land uses does not stop at a political boundary. When making land use decisions the consideration of neighboring communities is also an important part of the big picture. For surrounding adjacent land uses see map SCALU-1 (appendix ____).

By utilizing all of the above listed elements it is possible to determine what is suitable to be developed in a specific area/site. By addressing the compatibility of the area/site we have laid the foundation for others to build and elaborate on.

Conceptual Land Use Strategy

Perspectives - is intended to preserve Greene County's unique sense of place - a blend of urban areas, small villages, cultural amenities, agricultural lands, historic sites and scenic natural areas. As the County moves into the 21st century, the combination of employment opportunities, quality neighborhoods, and natural beauty will continue to attract new residents and business interests. In preparation for this growth, the Regional Planning and Coordinating Commission of Greene County undertook the task of updating the County's land use plan. The plan calls for a proper balance between natural resource protection and community development. The land use plan identifies twelve (12) distinct Planning Partnership Areas (PPAs), each of which involve a specific Township/Municipality planning area. The Planning Partnership Areas will be the focus for cooperative planning between Greene County, cities, villages, and the unincorporated areas of the county for the wise management of our common land and water resources and the achievement of widely shared values and common goals.

Designed to strive for balanced growth in Greene County, the land use plan is the alternative to uncoordinated development which results in sprawl. The success of the Plan rests in the hands of the people responsible for implementing the identified goals, objectives and policies of the plan.

The twelve PPAs delineated in the Conceptual Land Use Strategy require individual approaches to resource management. The planning approach for each area is defined by specific elements of the plan relating to the overall county perspectives. The elements of this plan provide a blue print for the county to ensure quality management of our land resources and reinforces the premises of the Conceptual Land Use Strategies as described in this section.

Bath Township/City of Fairborn Planning Partnership Area

This Planning Partnership Area (PPA) is comprised of predominately municipal and developed areas, mostly in the central and western portion. To the north is Clark County, to the west is Montgomery County, to the south is the City of Beavercreek, Beavercreek Township and Xenia Township, and to the east is Xenia and Miami Townships. Home to over 40,933 residents, the PPA encompasses around 11 percent of the county's 424.79 square miles.

One evident feature of the built environment of this PPA is the magnitude of the different uses. The City of Fairborn holds the largest area of medium and high density residential uses in Greene County. Wright Patterson Air Force Base is the largest institutional land holding in the county and it is also the largest flood control facility in the county. Wright State University is one of the largest institution of higher education in Greene County. This PPA also has the greatest area devoted to mineral extraction. Each of the above mentioned land uses will be discusses in greater detail below.

In the western portion of this PPA is Wright-Patterson Air Force Base, a full service community within itself. The base extends from the northern boundary to the southern boundary and extending into Beavercreek Township, generally on the east side of the Mad River. It occupies approximately 20 percent of this PPA and about 2 percent of the total land area of the county. However, Wright-Patterson Air Force Base zone of influence goes well beyond its physical boundary. Is height zoning district, Air Institution Compatible Use Zone (AICUZ), noise impact and safety hazard areas extend into the following Greene County Communities: Bath Township, City of Fairborn, Miami Township, Village of Yellow Springs, Xenia Township, Beavercreek Township, and the City of Beavercreek.

Not only is Wright-Patterson Air Force Base the largest institutional land holding in the county it is also the largest flood control facility in the county. Huffman Dam is one of five dams of the Miami Conservancy District. Huffman Dam serves as flood control for the Mad River.

Wright-Patterson Air Force Base is also a large area of open space in the midst of the developed area in and around the Air Force Base. The natural areas of the base are home to endangered, threatened, potentially threatened and special interest plants, mammals and reptiles. The open spaces within Wright-Patterson Air Force Base also provides for recreational and relaxation opportunities which are significant benefits to the physical and mental health of the people who work for and who are stationed at the base.

Another important open space corridor of this PPA is the Beaver Creek and its associated floodplains and wetlands (see Chapter 2, Coordinated Land & Water Management Program, Environmental Policies). The Beaver Creek runs north to south as it parallels Interstate 675 on its west side north of Dayton-Yellow Springs Road and on its east side south of Dayton-Yellow Springs Road. The most significant wetlands in this corridor is the Valle Greene wetlands. It is over 40 acres in size and consists of both wet meadows

and fens with over 200 species of plants. As with any environmentally sensitive area, care must be taken when development takes place within the watershed of the Beaver Creek.

The dominant housing type in the unincorporated area is the single family detached house on a large lot, rural residential development. Both the number and size of homes being constructed has increased in the township. At the same time, there is a continuing trend of smaller family sizes. The result is that more land is being used to accommodate fewer people. It is a goal of this PPA, to encourage and provide a variety of housing opportunities for different age groups, family size, and incomes. Housing in this PPA and all of Greene County should be provided in a manner that creates a sense of community, rather than contributes to conventional suburban sprawl. With the proliferation of rural residential development in the eastern part of the township, the public sanitary sewer extension in the Hebble Creek watershed, and the mineral resource holdings of the area - agriculture as a way of life, may be in jeopardy. However, agriculture will still continue to make substantial economic and land use impacts to this PPA during the planning period.

Within Bath Township there is a hub of urban density residential housing, located on the north and south side of Old Yellow Springs Road between Colonel Glen Highway and Henry Street. The subdivisions of this urban density hub are: Terry Acres; Hamilton Plat; and Shady Grove. This piece of the township within the developed urban setting of this PPA shine as an example of where urban residential development should be located - in close proximity to major thoroughfares - providing direct access to employment, shopping and recreation facilities and within the urban service area.

Mineral resources have played an important part of this PPA heritage (see Chapter 2, Coordinated Land & Water Management Program, Mineral Resource Management). Over the years the mining industry has provided important contributions to its economic growth and social development. Exploration, mining and mineral-based manufacturing contribute to the economic well-being of this PPA and the county, today and will continue to do so into the future.

Within Bath Township and the City of Fairborn, the mineral resource deposits are generally located along the north, south and west sides State Route 235, which extends into Xenia Township. These mineral resources holdings are so extensive that the Southwestern Portland Cement Company use to run its own rail line from its quarries to their processing plant which is located on the south side of State Route 235/Xenia Drive west of Interstate 675 in the City of Fairborn.

The City of Fairborn, contains the largest concentration of medium and high density residential housing in Greene County. Land uses within the city includes mature residential neighborhoods at a density of 5 to 15 units per acre. These medium and high density residential neighborhoods are broken up by neighborhood commercial centers located along some of the major travel corridors (Kauffman Avenue, Main Street, Broad Street, Central Avenue and Dayton-Yellow Springs Road.)

Economic and social changes have affected the physical development of the city which is

evidenced by the wide variety of land uses and distinct differences in neighborhood and community character. These changes in part have occurred because of the rapidly advancing technologies and global competition that are changing the work place. One result is a shift in employment sectors from traditional manufacturing to service industries. This shift is evident within the city by the commercial & office developments occurring along the south side of Colonel Glen Highway just south of Wright State University and the distribution centers located on the south side of Dayton-Yellow Springs Road just east of Interstate 675.

As the types of industries and businesses in the Dayton metropolitan area have changed in response to changing markets and technologies, their relationship to adjacent neighborhoods and commercial districts has also changed. Changes in social patterns such as employment, family size and makeup, desired housing size, and average travel distances to work and shopping have affected commercial areas, existing neighborhoods as well as influenced the type and location of new development. As can be seen by the diversity of land use types and densities in the City of Fairborn, one of its strengths has been its ability to meet the changing economic and social needs of its residents and of the time.

A major institutional land use within the City of Fairborn is Wright State University. It is one of the largest institutes of higher education in Greene County. The campus is approximately 645 acres in size and is located on the north side of Colonel Glen Highway, south of Kauffman Avenue, with State Route 844 to the east and Zink Road to the west. The University is a comprehensive fully accredited public university dedicated to being a catalyst for educational excellence in the Miami Valley, meeting the need for an educated citizenry dedicated to lifelong learning and service.

The land use plan emphasizes and supports the importance of utility extension to the municipal and unincorporated areas activities, within the urban service boundaries (see Chapter 2, Coordinated Land & Water Management Program, Urban Growth Management and Utility Extension policies) The elements of the plan set a course of action that will maintain and enhance the City of Fairborn. These elements relate not only to the city, but to the character and well-being of all Greene County.

As can be seen by reviewing the City of Fairborn Land Use Plan, the city has planned for its future. This land use plan, the goals and objectives of the City of Fairborn Land Use Plan encourages the city to take advantage of the substantial infrastructure investments that have already been made by the city showing its commitment to the future. Large and small tracts of undeveloped land exist within the City of Fairborn with access to existing transportation systems as well as public utilities and services. These undeveloped tracts are future opportunities for new job creating businesses and residential neighborhoods. They can easily blend in with existing land uses, and make efficient use of existing infrastructure. Infill development should reflect the historic patterns of the city and may range from community commercial centers to well planned residential neighborhoods. Land uses that create new jobs serve to encourage neighborhood upkeep and rehabilitation. In supporting the City of Fairborn, this plan incorporates the City of Fairborn Land Use Plan as a supplement to this document. Planning in Bath Township and the City of Fairborn will focus on improving the quality

of the built environment while maintaining it's human scale. All land uses within the community contribute to its character. By recognizing and protecting all the land uses that contribute to the community's identity and by setting an agenda for the future, Perspectives, seeks to make sure that this PPA continue to be an integral part of Greene County.

Beavercreek Township/City of Beavercreek Planning Partnership Area

Beavercreek Township consists of the City of Beavercreek and its developed areas in the western half, approximately 16,900 acres, with countryside residential, agricultural, and rural areas in its eastern half, around 13,760 acres in size, encompassing roughly 11% of the county's 271,866 acres. The township is home to approximately 41,043 residents. The township had close to ~~26%~~ 28% of the county's population.

The City of Beavercreek, contains the largest concentration of housing and commercial development in Greene County, representing substantial infrastructure investment.

Economic and social changes that have affected the physical development of the city are evidenced by the wide variety of land uses and distinct differences in neighborhood and community character. This variety ranges from an historic community known as Alpha to a regional commercial hub - the Fairfield Commons area at the intersection of New Germany-Trebein Road and North Fairfield Road.

As the types of industries and businesses in the Dayton metropolitan area have changed in response to changing markets and technologies, their relationship to adjacent neighborhoods and commercial districts has also changed. Changes in social patterns such as employment, family size and makeup, desired housing size, and average travel distances to work and shopping have affected commercial areas, existing neighborhoods as well as influenced the type and location of new development. Historically a community's strength has been its ability to meet the changing economic and social needs of its residents. The diverse and distinctive character of the City of Beavercreek reflects its desirability as places to live, work, shop and recreate.

During this planning period the majority of new development in Greene County will occur within the western three townships and cities because of the substantial existing infrastructure, and its proximity to the Dayton metropolitan area. This plan emphasizes and supports the importance of utility extension to the municipal and unincorporated areas activities. (see Chapter 2, Coordinated Land & Water Management Program, Urban Policies) The elements of the plan set a course of action that will maintain and enhance the City of Beavercreek. These elements relate not only to the city, but to the character and well-being of all Greene County.

As can be seen by reviewing the City of Beavercreek, Ohio, Land Use Plan, the city recognizes the potential and planned for infill development within the city. The land use plan update supports infill development within the municipal boundary that takes advantage of the substantial infrastructure investments that have already been made.

Common sense dictates that tax dollars be spent in utilizing existing infrastructure rather than unnecessarily duplicating it into the countryside to the east. Large and small tracts of undeveloped land still exist within the City of Beavercreek with access to existing transportation systems as well as public utilities and services. These opportunities for new job creating businesses and residential neighborhoods can easily blend with existing land uses, and make efficient use of existing infrastructure. Infill development should reflect the historic patterns of the city and may range from community commercial centers to well planned residential neighborhoods. Land uses that create new jobs serve to encourage neighborhood upkeep and rehabilitation.

In supporting the City of Beavercreek, this land use plan incorporates the City of Beavercreek Land Use Plan as a supplement. The plan will also serve to contain suburban sprawl. One side effect of suburban sprawl is the loss of individual community identity. In much of suburbia, the only way to tell where one community ends and another begins is by reading the “Welcome to...” signs. In order to retain the individual community character of the City of Beavercreek, the transition between the City and the neighboring communities must present visual evidence that this is where the city stops and the other community begins.

The unincorporated area of Beavercreek Township has a unique countryside character - blending of rural and low density urban residential development, commercial, industrial, mineral extraction, open space, and farmland. It is a transition area from the more intensely developed City of Beavercreek to the west and the farms and villages located in the eastern portion of the county. As a transition area, Beavercreek Township represents a microcosm of Greene County itself, on the border between the Dayton metropolitan area to the west and a vast agricultural basin to the east.

As mentioned above the unincorporated areas of Beavercreek Township contain a blend of land uses: agriculture, residential, open space, and limited areas of commercial services and industrial uses including mineral extraction. Open space is a prominent feature of the township. The floodplains of the Little Miami State and National Scenic River, the Beaver Creek and the Little Beaver Creek account for a majority of the open space. The public and private open space within the township provides environmental protection, recreational opportunities, visual beauty, educational possibilities, and countless other benefits. Agriculture is also a significant land use in the township, with approximately 60 percent of the township being zoned for agriculture.

Current residential land use in the township consists of single family lots on one to four acres and greater and rural residential developments where public water and/or wastewater collection are not available. The majority of these residences were constructed with private wells and individual septic systems. This development is based on soil conditions, surrounding densities and natural features. This type of residential development has a demonstrated market in Greene County.

Recently there has been a surge of low density urban residential developments where both public water and wastewater collection are available. These single family residential developments are located adjacent to similar density developments within the City of Beavercreek.

In the township it is vital to prevent suburban sprawl. Suburban sprawl, the spread of residential and commercial development into rural areas is considered a serious urban and environmental issue in the Dayton metropolitan area. The continued expansion of suburban development in the region will increase development pressures in the township.

The land use plan focuses on preserving the unique countryside character and the natural resources of the township. Open space preservation, providing “breathing space,” environmental protection, recreational areas, visual beauty, educational opportunities, and other community benefits are high priorities. Protection of open space will directly benefit the water quality of the Little Miami River Drainage Basin. This drainage basin is important because it makes up part of the Buried Valley Aquifer which supplies much of the central and western areas of Greene County with drinking water. Water resources - creeks, lakes, wetlands, floodplains - are prominent natural features in the township and they should be enhanced as well as protected from pollution and encroachment.

As the township develops, it will be important to coordinate transportation planning with the County and City of Beavercreek land use plans. New developments should plan for pedestrian and bicycle friendly trails. Balancing the need for additional transportation capacity with land use will help to maintain the countryside character of the township.

The residents and the elected officials of this PPA must wisely manage it. The future is not set in stone. This Plan will help shape the urban and rural development patterns in this PPA. More specifically this Plan is intended to reflect 3 factors that will guide decision-making:

1. Need to conserve and enhance sensitive biological resources, protect viable agricultural land, and conserve rural lands.
2. Need to protect public investment in infrastructure.
3. Need to balance land use with availability of services and provide alternatives to auto-dependent uses.

Caesarscreek Township Planning Partnership Area

Caesarscreek Township is a rural area which has been blessed with tilled fields, open space, and scenic vistas of woods, lakes, and natural habitats. These components make up the rural character that is Caesarscreek. The rural character has been perpetuated in the last planning period. Non-farm residences have, however occurred in random locations within the planning area.

Caesarscreek Township recognizes that agricultural pursuits provide a sustainable economic base for the township. It is the intent of the township to recognize the long term physical, social and economic needs of the agricultural community in order to maintain and protect those areas which possess an existing agricultural character and high quality agricultural soils from unnecessary encroachment by non-agricultural land uses. Clearly, uses which limit agricultural effectiveness through encroachment on land

resources and/or incompatibility of land uses will not further this vision.

Throughout the past planning period, the Township has been successful in maintaining this stated goal while accepting rural non-farm residences.

There are some areas of the township which are not suitable for new development. These include wetlands and flood plains of the Anderson Fork and Caesar Creek. Also included are areas with steep slopes, and areas near important historic sites.

There is currently a small commercial area in the township located at the intersection of Spring Valley-Paintersville Road and U.S. Route 68. This area is too small to identify as a distinct commercial district, however, does provide convenience needs. No industrial development is expected to occur within the township in this planning period. The township house located on the north side of Spring Valley Paintersville Road and the AT&T Long Lines facility on the north side of Spring Valley Paintersville Road just west of New Hope Road are the only two public/institutional land uses in the township. No expansion of these land uses is anticipated.

The flood plains of the Anderson Fork and Painters Creek in the south and Caesarscreek in the north constitute areas shown as open space, conservation and recreation within the township.

Perspectives, envisions the majority of Caesarscreek Township being used for agricultural purposes and scattered rural residential housing along existing public roads. The township as a whole will maintain its agricultural economic base and rural ambiance reflecting very modest growth which normally approaches one percent (1%) of the total county population.

Cedarville Township/Village of Cedarville Planning Partnership Area

Cedarville Village and Township is blessed with a vibrant sense of community, highlighted by the town center and opera house, historic homes, and Cedarville University, surrounded by tilled fields and open space. These components together reflect not only the past but also the future of Cedarville.

It has been and continues to be a goal of Cedarville Township to safeguard the physical, social, and economic aspects of the long-standing agricultural land use. It is the intent of the Township, therefore, to provide for farming activities above other interests. By so doing will help to ensure that incompatible non-farm uses within the township will not adversely affected the agricultural community.

Physical growth within Cedarville Village, to a great extent, reflects the significant expansion of Cedarville University. The physical and population growth on campus has not been mirrored in a substantial expansion of housing opportunities within the Village. As this growth continues, expansion of the residential land use may be anticipated. It is noted that a controlled rate of growth is necessary to preserve the existing sense of

community. Another element important to the Village of Cedarville's future is the development of a Community Vision/Action Plan that lays out a blueprint for the future.

Cedarville Township is dominated by agricultural usage of the land. It is predicted that this use will continue into the next planning period.

Due to the lack of public wastewater collection and/or water lines in the township, the only anticipated residential-type development in Cedarville Township is rural residential housing (see Chapter 2, Coordinated Land & Water Management Program, Rural Residential Development). With the need for an additional water source for Cedarville Village a water main has been constructed in the old Pennsylvania Railroad right-of-way (The Ohio to Erie Trail). Even with this water main construction the rural area will still be considered rural because it is anticipated that wastewater collection will not be extended beyond the village during this planning period (see Chapter 2, Coordinated Land & Water Management Program, Urban Growth Management and Utility Extension Policies).

As one moves closer to Cedarville Village, housing starts have increased. As the village increases in population it is predicted that more housing units will be needed to service the increasing demand of residents.

A significant reason for the anticipated need for additional housing, within Cedarville Village, is Cedarville University. Currently, the University is at capacity for on-campus housing. This creates a need for not only student housing, but faculty housing as well. Student needs will be better served by medium to high density residential development. This will most probably occur through replacement or infill development, or new development along U.S. Route 72.

Commercial development is concentrated in the central business district of Cedarville Village with a commercial node located on the north village limits. It is expected to remain as such throughout the next planning period. A detailed village center redevelopment plan is suggested.

Industrial activity within Cedarville Township has decreased since the last land use plan was drafted in 1978. This resulted from the Morris Bean Company closing, as well as the Pennsylvania Railroad ceasing to run. It should be a goal of Cedarville Township to attract new industrial development within the next planning period. Specific emphasis will be placed on reuse of existing industrial structures.

Public and Institutional land uses in Cedarville Township are not expected to change within the planning period. Two cemeteries are located within the township, one on Tarbox Cemetery Road, and one at the northern village boundary on State Route 72. An area designated as Public and Institutional is located immediately west of the village along Massie Creek, occupied by the Cedarville Utility Farm. This area consists of the village water and wastewater treatment facilities as well as the village landfill, which is no longer in use. Cedarville University and Cedarville High School occupy the remaining area located just north of existing residential development in the northwest section of Cedarville Village.

The area designated as Open Space, Conservation, and Recreation is dominated by the floodplain of Massie Creek. Within the village, this category represents the Cedarville Community Park, where the north and south branches of the Massie Creek converge. The other area included under Open Space, Conservation, and recreation is Indian Mound Park, located north of U.S. Route 42, just west of the village.

It is anticipated that the predominant land use within Cedarville Township, throughout the planning period, will be agriculture. If any significant land use shift should evolve, it will most likely occur around the Cedarville Village area. This will be due, in large part, to the increasing enrollment of Cedarville University. It is possible that additional convenience shopping and medium to high density residential development may occur to service the needs of faculty and students attending the university.

Jefferson Township/Village of Bowersville Planning Partnership Area

In 1978 when Perspectives, was originally adopted, a majority of Jefferson Township was identified as and projected to be agriculture and rural residential in nature. The Village of Bowersville reflected medium density urban residential use as well as a community hub for Jefferson Township. The floodplain of the West Branch of the Rattlesnake Creek was identified as open space, conservation and recreation. The 1978 land use promoted sound land use practices which offered protection for agricultural lands from the unnecessary encroachment of competing land uses.

Today we can see the benefits of Perspectives, by the landscape of Jefferson Township and how it has evolved since the plan was adopted in 1978. Residential development within the township has occurred, in the form of rural non-farm lots along existing public roadways, leaving a vast majority of the township as farmland. From the years 1988 to Aug. 1996, 32 residential building permits have been issued within Jefferson Township. Although numerically small, these additional residential units indicate sizable development for a primarily agrarian area. Development has occurred at an average rate of four (4) new structures per year. It is anticipated that any new residential development within Jefferson Township will occur as rural non-farm lots, similar to the previous planning period.

The area around the intersection of I-71 and State Route 72 contain approximately 75 acres. Even though it is not a major interchange between Cincinnati and Columbus, it represents a site for highway oriented rural commercial or industrial activities within the planning period. Without central utilities, however, any development of this site is predicated on the natural capability of the land to support it. This area is currently zoned HB Highway Business. The northwestern part of this interchange is being developed for the extraction of mineral resources. Historically, mineral resources have played an important role in the economic growth of Greene County. This new land use in Jefferson Township should be carefully managed for the long-term benefit of the community.

Urban residential land uses in Jefferson Township are located within the Village of

Bowersville and on the south side of the Village, east of State Route 72. The Village of Bowersville has its own water treatment and distribution system that serves the needs of the Village. However, development may be limited as the Village lacks public sanitary sewer services. The Village of Bowersville has also matured and with that maturity has experienced the loss of some structures over time.

Minimal population change has occurred, as reflected in the 1970 to 2000 census. Forecast population characteristics indicate consistent population growth.

It is anticipated that Jefferson Township will maintain its overall agricultural characteristics. Development may occur, as residential non-farm lots, during the next planning period. If development occurs, it will most likely occur at a consistent rate of an average four (4) additional units per year. The Village of Bowersville should experience minimal growth, within the next planning period. Development may occur as a revitalization of currently vacant buildings or a possible shift in existing land use.

Miami Township/Village of Yellow Springs/Village of Clifton, Planning Partnership Area

Mr. Henry D. Thoreau once said “The finest works in stone are not copper or steel tools, but the gentle touches of air and water working at their leisure with a liberal allowance of time.” Miami Township has been touched by these elements to create a diverse and unique landscape within Greene County. The natural areas of Miami Township, including John Bryan State Park which is known as the most scenic state park in western Ohio, contains a remarkable limestone gorge cut by the Little Miami River which is designated as a state and national scenic river. A portion of the gorge itself is designated as a national natural landmark. To the east of the John Bryan State Park is the Clifton Gorge State Nature Preserve. The nature preserve is a unique place, it is home to over 460 species of plants and the animal communities that depend on them. To the north of the John Bryan State Park is the 216 acre Tecumseh Council Boy Scout Camp. To the west of the John Bryan State Park is the Glen Helen Nature Preserve, a private nature preserve owned and operated by Antioch University, “The Glen” consists of 1,000 acres of woods, waterways, prairies and fields. These natural and unique area combined equal over 1,860 acres of habitat for more than half of the county’s endangered, threatened and potentially threatened species. Other benefits of these areas include open space, environmental protection, visual beauty, and an unlimited number of other benefits.

The open space of this PPA provides for a multitude of opportunities and community well-being. The recreational and relaxation opportunities provided by open space are a significant benefit to the physical and mental health of all members of the community. These places provide education and spiritual enrichment, and protect cultural and scientific resources. Natural, undeveloped areas afford scientists and students the opportunity to study how ecosystems function, especially those adjacent to urbanized areas. They provide places to teach children the natural sciences and appreciation for the environment. Historic and archeological resources are often located at open space sites, where they may be protected for enjoyment and study.

The Little Miami Scenic Trail and its associated greenway is a good example of how open space enhances the community image, increases opportunities for recreation, supports commercial uses, attracts visitors and encourages tourism. The multi-purpose trail also provides an alternative transportation routes for pedestrians and bicyclists.

The natural areas around the Village of Yellow Springs has helped to create a philosophy of appreciation for the natural environment that the Village has. The open space that borders the village includes some of the above mentioned sites and the floodplains of the Little Miami River, Jacoby Branch, and Yellow Spring Creek. These water resources lend form to the Village by helping to define its exterior boundaries.

The Village recognizes it's potential and has planned for its future, as can be seen by the adoption of the Village of Yellow Springs Comprehensive Plan, 1996. This land use plan update supports the Village's efforts and includes the Village of Yellow Springs Comprehensive Plan as a part of this plan. The Village's comprehensive plan has many similarities with the policies outlined in the Coordinated Land and Water Management Program. The land use plan update recognizes and fosters the Village's comprehensive plan desire to maintain and encourage the current ambiance of the Village of Yellow Springs, "small" and "rural" should be preserved together with a healthy central business district, the "hub" of the Village is an integral part of the Village's valued character together with the green belt/open space both within and around the Village.

Unlike most Villages within Greene County, the Village of Clifton was not established to provide support businesses and services to area farmers, even though it became a secondary function, and it was not located along a railroad route. The Village of Clifton was built based upon the energy of the Little Miami River. The abundant supply of water did much to encourage the settlement of the Village of Clifton. The energy harnessed by the mills to produce and process goods and even supply electricity for a short period was the main purpose of this, before its time, "industrial park." To enhance and maintain the Village of Clifton's unique character a Community Vision/Action Plan should be developed.

The Village of Clifton and its surrounding natural environment creates a unique sense of place within the county. The historic commercial, industrial, public, religious and residential building of the Village of Clifton were built to meet the needs of the people attracted to the opportunities of the river together with the people living in the sparsely populated rural portions of north central Greene County and south central Clark County.

The land use plan update knows it is important that the Villages of Yellow Springs and the Village of Clifton retain their sense of identity as they mature. The potential future development that will occur does not necessarily represent a change in the function of these villages, but could be influenced by a change in the type and number of services provided brought on by a change in the nature of the surrounding population. New businesses should be located in available older structures whenever possible, and new buildings should be sited and designed to complement the environment in which they are built. Each village center "hub" should be expanded in a manner in keeping with its historic purpose. New development surrounding the original village center should be linked with, yet separate from, the historic character of the village cores.

The unincorporated areas of Miami Township outside of the above mentioned natural areas are predominantly agricultural. The land use plan calls for minimal new development in the agricultural areas of the Township and supports logical and planned growth of the Villages.

The plan encourages the protection of the existing land use trends of the unincorporated areas of the township:

- Agricultural uses;
- Countryside residential development, where limited single-family dwellings are allowed on non-prime farmland, along existing roadways; and
- The open space corridor.

Planning in the unincorporated areas of Miami Township will focus on the protection of farmland and farming as a way of life. Agricultural land is a nonrenewable resource that contributes to a stable county and national economy (see Chapter 2, Coordinated Land & Water Management Program, Rural Policy, Agriculture Preservation). By recognizing and protecting this important land use, and by setting an agenda for the future, *Perspectives*, seeks to allow agriculture and its supporting services to continue to thrive in Greene County.

New Jasper Township Planning Partnership Area

New Jasper Township has been and continues to be an agricultural community with a single concentration of population around Shawnee Lake in the eastern portion of the Township. During the past planning period, New Jasper Township development has been consistent with *Perspectives*: in that residential growth was substantially in fill at Shawnee Hills Subdivision as well as minor dispersed residential non-farm dwellings along existing public roadways.

The area around Shawnee Lake is developed as Low Density Urban Residential. Lots which remain vacant due to adverse soil conditions for on-site wastewater disposal are expected to be used within the succeeding planning period as wastewater collection is provided. With the future availability of public wastewater collection and public water improvements, the area north of Shawnee Lake is expected to see some developmental pressures for residential uses.

Between 1992 and August 1997, 42 single family residential dwelling permits were issued within New Jasper Township. This average of six new residential units per year is consistent with historic and anticipated population growth in the township.

During this planning period sanitary sewer improvements will occur in the Shawnee Hills area to address OEPA orders and they will have an impact on the land use of this PPA. However, major growth from this improvement is not anticipated during this planning period. Public water improvements will also take place in New Jasper Township along the old Baltimore & Ohio Railroad right-of-way (The Xenia to Jamestown Bikeway Connector). When this water main is constructed, the rural land along the bikeway

connector will still be considered rural because it is a policy of the Regional Planning and Coordinating Commission that areas of the county that have public water supply available without public wastewater collection are still considered rural (see Chapter 2, Coordinated Land & Water Management Program, Utility Extension Policy).

The only area designated as Commercial within New Jasper Township is located on the west side of Shawnee Trail at Jasper Road. This commercial area can be expected to develop as a neighborhood or convenience type center as infilling of Shawnee Hills occurs. Any more extensive commercial development will not be needed in the planning period due to the close proximity to Jamestown and Xenia.

The area designated as Open Space, Conservation, and Recreation includes the flood plain along all three branches of Caesar Creek up to their points of confluence and southward into Caesarscreek Township. Caesars Ford Park is located along the northern branch of Caesar Creek just east of the intersection of Jasper Road and Stringtown Road. This park site accommodates outdoor drama activities. Sebastian Hills Golf Club is the newest recreation activity with opening scheduled for the summer of 1999.

Agricultural land uses are expected to dominate New Jasper Township throughout the planning period. The construction of the new U.S. Route 35 will add new pressures for additional rural non-farm residential lot development. Most rural non-farm residential development has occurred in close proximity to Caesar Creek and its branches. This trend is expected to continue.

Ross Township Planning Partnership Area

Ross Township is the least populated PPA in Greene County. It has been and will continue to be an agrarian community. Ross Township's rural character will be indefinite as agricultural pursuits constitute the primary economic base for the Township.

It is therefore the intent of Ross Township to maintain and protect agriculture productivity as the primary use of the land. There are no commercial or industrial developments within the township. Two areas within Ross Township are designated as Public and Institutional. They are the Greeneview North School and the Ross Township House. Both are located at the intersection of South Charleston Road and Grape Grove Road. Rural non-farm residences have and will continue to occur randomly within the township. However, non-agricultural land uses which limit agriculture effectiveness either through encroachment on land resources or through incompatibility of land uses will be discouraged.

The flood plains of the North and South Forks of Massies Creek, and the Middle Branch of Caesar Creek are the only areas designated as Open Space, Conservation, and Recreation.

It is anticipated that, within the next planning period, agriculture will be the predominate land use as no new commercial or industrial developments are currently being planned.

Silvercreek Township/Village of Jamestown Planning Partnership Area

Farming has been the predominant use in Silvercreek Township since Greene County first opened to settlement. Farm families moved west from the east coast and established farms shaped by their diverse ethnic traditions. These traditions influenced settlement patterns and building styles and are still evident as part of the visual landscape. Many of the farms of Silvercreek Township are still family operated, with some multi-generational farms continuing the practice of agriculture.

The Village of Jamestown was established to provide support businesses and services to the growing number of farmers coming to the area. The Village was located along a railroad route, Baltimore and Ohio RR (currently abandoned and planned to be used as a part of Greene County's Bikeway system), providing easy transportation for manufactured goods and exporting agricultural products. The Village eventually grew to include opportunities for social activities, housing and employment while developing a unique community identity, that has been defined as follows:

The Village of Jamestown identity is that of a small town, including historic homes, antique shops and old community churches. The old fashioned feeling is complemented by village services which are modern, efficient and affordable. Its small town atmosphere, consumer opportunity, and rural surroundings contribute to the charm and character of this community.

The land use plan identifies minimal new development in the agricultural areas of the Township and supports logical and planned growth of the village including Greenwood Estates and the Shawnee Hills Subdivision area. In most of this area the plan discourages growth magnets such as significant road expansions and public sanitary sewer systems (see Chapter 2, Coordinated Land & Water Management Programs, Agricultural Preservation Policy and Urban Growth Management Policy). The plan also strongly discourages any expansion of Urban Service Areas that diverges from existing agricultural and village development patterns. Development will be steered towards the Village of Jamestown and Shawnee Hills, thus avoiding the potential displacement of the township's unique community identity.

The plan also encourages the protection of the three existing land use trends of the township:

- Farming, including agricultural infrastructure, agricultural industry and farmsteads;
- The Village of Jamestown which supports and enhances the agricultural community;
- and
- Countryside residential development, where limited single-family dwellings are allowed on non-prime farmland, along existing roadways.

The land use plan reinforces the premise that agricultural land in Silvercreek Township should not be considered a holding zone waiting for market pressures to dictate development. The agricultural areas outside of the village are not the appropriate place for large-scale non-agricultural economic development. Such development could

eventually push out farming as well as subsidiary industries.

The land use plan recognizes that the Village of Jamestown is the center of local services, social activities and employment as well as providing community identity to the surrounding farm areas. Because of these important functions, their preservation and growth is as important as that of agricultural land itself. Evolution of the village will be inevitable, as new and existing businesses expand services to meet the needs of in-town residents and surrounding farm families. The village should continue to function as local service, social, and as an employment center, expanding along existing development patterns when appropriate. As growth occurs, existing buildings and residences should be rehabilitated and kept in productive use. The update encourages the Village to create a Community Vision/Action Plan for its future.

U.S. Route 35 Interchange Areas

The U.S. Route 35 interchange areas within Silvercreek Township provide for an interesting challenge during the next planning period. The upgrade of U.S. Route 35 to a divided highway, that provides for high vehicular capacity with limited access and the two (2) interchanges - Hog Eye Road and State Route 72 - that are designed to provide access to the eastern part of the county could change the way eastern Greene County is perceived.

New Jasper Township, Ross Township, Silvercreek Township the Village of Jamestown and even Cedarville Township need to be proactive in deciding how they want the interchange areas to develop. These two (2) interchanges will make a strong statement about their identity. Lands surrounding the interchanges should be zoned to emulate the future vision of the communities and to reflect the general land use concepts put forward in this Plan and other studies and plans as they relate to the U.S. Route 35 Corridor. One example of this would be the plan that was prepared by the Miami Valley Regional Planning Commission (MVRPC), who is responsible for the overall transportation planning in the Miami Valley. MVRPC released a major plan for the US Route 35 corridor, entitled US-35 Corridor Greene County, Ohio Access Management Plan. The land use plan update encourages the implementation of the recommended access management strategies. This will optimize the use of the existing roadway network. When considering the two (2) interchanges and the existing road network for potential future development the decision makers need to keep in mind how do we get a return on the public investment that was made by the U.S. Route 35 improvements and to make sure the actions taken are not subsidizing million dollar driveways for any potential future development of these areas.

As for the future land use of the interchange areas, there are still some unresolved issues like public utilities, drainage, the need for development, and community perceptions & attitudes. During this planning period water and sanitary sewer improvements will occur in the Shawnee Hills area and they will have an impact on the land use of this PPA. However, major growth from these improvements is not anticipated during this planning period. The planning and development activities around the U.S. Route 35 interchanges should focus on the existing land uses and the preservation of farmland (see Chapter 2, Coordinated Land & Water Management Program, Agriculture Preservation). By

keeping these areas green and protecting the land best suited for farming from premature conversion to other land uses, agriculture as an integral part of the county's economy, landscape, and natural resource base can be maintained.

Planning in Silvercreek Township will focus on the protection of farmland and farming as a way of life. Agricultural land is a nonrenewable resource that contributes to a stable county and national economy. By recognizing and protecting this important land use, and by setting an agenda for the future, Perspectives, seeks to allow agriculture and its supporting services to continue to thrive in eastern Greene County.

Spring Valley Township/Village of Spring Valley Planning Partnership Area

Many of the roads in Spring Valley Township reveal the rural character of the area. The view of the countryside along these roads gives a sense of stability in a fast-changing world. Points of visual interest along the country roads, both man made and natural add to the enjoyment of the township and create a sense of place. In Spring Valley Township the roadways provide views of midwestern charm - gently rolling woods, and expansive farm field, the Little Miami River, Caesar Creek and their tributaries, farm houses, barns, hedgerows and churches.

Nestled within the township and on the slopes of the Little Miami River Valley is the Village of Spring Valley. Over the years the Village has grown to include opportunities for social activities, housing, employment, and recreation while developing a unique community identity. Its origin is typical of most villages within Greene County, established to provide support businesses and services to the growing number of farmers relocating to this area. The Village was located along a railroad route, The Little Miami Railroad Company. This abandoned railroad is now a part of the Little Miami Scenic Trail, an 80+/- mile bikeway/multi-purpose trail network that extends from eastern Cincinnati to Buck Creek State Park near Springfield. The Little Miami Scenic Trail is a wonderful pedestrian friendly corridor that connects the Village with the natural areas to the south - Spring Valley Wildlife Area and Caesars Creek State Park. The bikeways extension north of the village traveling through the Glady Run corridor taking its travelers to the City of Xenia. The section of the Little Miami Scenic Trail that runs through Spring Valley Township offers travelers many outstanding qualities that should be maintained for future generations.

Agriculture is an integral part of the Township's landscape and natural resource base. Agriculture within Spring Valley Township will continue to contribute to a stable and diverse county economy, (see Chapter 2, Coordinated Land and Water Management Program, Agriculture Preservation Policy) especially as the variety of agricultural crops and products such as nursery and greenhouse crops increase in response to changing markets. The land use plan calls for a minimum amount of new development in the agricultural areas which includes the occasional lot split, where a limited number of residential lots are allowed on non-prime farmland, along existing roadways. The plan also supports logical and planned growth of the village, as a community used to support the surrounding sparsely populated rural areas of the township.

Another benefit to the township and county residence are the natural areas within Spring Valley Township. The natural areas, Spring Valley Wildlife Area, Caesar Creek State Park and other natural settings provide for a multitude of outdoor opportunities. These unique places offer educational enrichment, recreational and relaxation opportunities, and protect cultural and scientific resources. Most of the natural areas in the township are located along the major water ways. The Little Miami River, Caesars Creek and their associated floodplains which meander through the community provide for a many green space opportunities. These waterways together with the Little Miami Scenic Trail enhance the communities image, increases opportunity for recreation, attracts visitors and encourages tourism to the township and village.

The land use plan knows it is important that the Village retains its sense of identity in a country side that is quickly changing. The Village's Main Street was placed on the National Register of Historic Places in 1989. This jewel within our community should be maintained and restored. Any new development or land use change that takes place in and around Main Street should not detract from its unique character. It is anticipated that any future development that will occur does not represent a change in the function of Spring Valley Village, but a change in the type and number of services provided by the utility purveyors and by a change in the nature of the surrounding area and it people. The update encourages the Village to create a Community Vision/Action Plan for the village and the Township to undertake a detailed community plan to ensure there futures.

The Accommodation Line Scenic Byway Corridor Management Plan has demonstrated the importance of the roadways in Spring Valley Township and the character that can be seen while driving down them. As one continues down the roads into the future planning in the Township will focus on the protection of its natural resource base, farmland and farming as a way of life. Land itself is a finite resource that must be used with wisdom. By recognizing and protecting the important land uses of the community, and by setting an agenda for the future, Perspectives, seeks to allow its limited resource base to continue to thrive in Greene County.

Sugarcreek Township/City of Bellbrook Planning Partnership Area

Community character refers to the image that outsiders have of your community and that you have of your community. The character of a community is primarily developed from history, cultural heritage, and from the nature and quality of its buildings and spaces - the built environment. The visual quality is also an important part of this character. While community character is largely derived from what already exists, that does not mean that it can only be that way. New development can either reflect and reinforce the existing built environment or ignore it. Residents can choose to emphasize or ignore any aspect of the community that they choose. In many ways, community character and its identity is shaped and redefined everyday.

The community identity of Sugarcreek Township and the City of Bellbrook are as distinct as their names, yet they complement one another to create a living environment that is

functional, sensitive to the environment, and citizen friendly. Sugarcreek Township, with its natural rolling topography, the convergence of the Sugar Creek, the Little Sugar Creek and the Little Miami River, its open space, rural landscape, agricultural lands, diversity of residential opportunities, commercial area, and its proximity to a major transportation corridor help make it a highly sought out community in which to live, and play. The City of Bellbrook's identity, on the other hand, is that of a progressive city with a small town environment, including an historic downtown "old village." The city's smalltownness is complemented by municipal services which are modern, efficient and affordable. Bellbrook is virtually a full-service city with no income tax and a very conservative approach to new development. Its small town atmosphere with access to the areas large cities contribute to the growth that this community has experienced over time.

The experience of the previous two decades has shown that rapid change is possible in Greene County. The locational advantages of this PPA, their natural landscape and their built environments make them a very attractive community in which to live. It also makes it likely that this PPA will continue to grow (population and built environment) into the next planning period, as a result of many decisions made by individuals, businesses, and government representatives. Therefore, it is in the township's/city's best interest to encourage growth that is orderly, efficient, attractive and sustainable. All too often we forget why we chose to live in a certain community, as the residents of the community and the local governments allow the slow despoliation of the favorable environments which drew them to it. This area of the county (the three western most townships Bath, Beaver creek and Sugarcreek and the Cities of Beaver creek, Bellbrook, and Fairborn) are also influenced by their proximity to the urban centers to the west in Montgomery County. Urban type development is expected to take place within the identified urban service area, where both water and wastewater collection currently exist or where the efficient provision of urban or governmental services can be provided outside of the identified environmentally sensitive areas (see Chapter 2, Coordinated Land & Water Management Program.)

The land use plan recognizes that it is critical to manage growth within the township while protecting the environment (both manmade and natural). This PPA will be the county's litmus test – will the township and city surrender to conventional suburban sprawl or make a stand for managed growth and the preservation of the countryside character and open space. The township, to a large extent, is where the future character of western Greene County will be determined.

The open space and recreation opportunities of this PPA are as numerous and varied as the residential housing styles. These special areas provide for open space, environmental protection, visual beauty, recreational and relaxation opportunities, and they often harbor historic and archeological resources.

The Little Miami Scenic River and its associated greenways which meander through the community is a good example of how open space enhances community image, increases opportunities for recreation, supports commercial uses, attracts visitors and encourages tourism. This simple and dynamic body of water also provides habitat for many wildlife species. This PPA's network of rivers, streams and their associated floodplains represent a natural backbone for an extensive recreation and open space system. It also creates a

natural buffer between urban densities and the agricultural/rural areas of these two communities.

This clear distinction is present in southern Sugarcreek Township where the Little Sugarcreek and the Little Miami River provide an edge for urban density to the north and west with agricultural and rural residential land uses dominating the lands to the south and east of these natural features. Even with the establishment of the Southwest Regional Water Supply in the area south of the Sugarcreek Preserve, it is a policy of the Regional Planning and Coordinating Commission that areas of the county that have a public water supply available without public wastewater collection are still considered rural. However, agriculture in Sugarcreek Township has a major threat, the encroaching rural residential home site on acreage lots and the conflicts and incompatibilities that arise between farm and non-farmland uses. Many intruding non-farm uses in agricultural areas not only permanently remove the land from production, but also create new problems. These include bringing conflicting land uses in contact, stimulating land speculation, and increasing property assessment and the cost of public services. Further, encroaching development discourages new investment in farm improvements and can cause crop losses due to the disruption of drainage systems. The new non-farm neighbors must contend with odors, dust, noise, and other conditions naturally present in agricultural areas.

In southern Sugarcreek Township the land use plan calls for as little new development as possible. In most of this area the plan discourages growth magnets such as significant road expansions and public sanitary sewer systems (see Agricultural Preservation Policy and Urban Growth Management Policy). The plan also strongly discourages any expansion of the Urban Growth Areas that diverges from existing patterns and trends. It supports logical and planned growth for the urbanized areas of Sugarcreek Township and the City of Bellbrook steering development towards the designated urban growth areas, thus avoiding the potential displacement of the township's unique community identity.

The land use plan recognizes that the City of Bellbrook is the center of local services, and social activities as well as providing identity to the surrounding community. Because of these important functions, their preservation and growth is as important as that of agricultural land itself. Evolution of the city will be inevitable, as new and existing businesses expand services to meet the needs of the city residents and the surrounding communities. The City of Bellbrook should continue to function as a local service provider, and as a social center, expanding along existing development patterns when appropriate. As growth occurs, existing buildings and residences should be rehabilitated and kept in productive use.

Planning in Sugarcreek Township and the City of Bellbrook will focus on the protection of its community identity. All land within the PPA is a nonrenewable resource that contributes to the community as an enjoyable place to live, work and recreate. By recognizing and protecting all the land uses that contribute to the community's identity and by setting an agenda for the future, Perspectives, seeks to make sure that the City of Bellbrook and Sugarcreek Township continue to thrive in their diversity and contribute to the enhancement of southwestern Greene County.

Xenia Township/City of Xenia Planning Partnership Area

Xenia Township has a unique countryside character - a blend of rural and semi-rural residential developments, open space, farmland, and the unincorporated community of Wilberforce. It is a transition zone between the more intensely developed urban lands of the Dayton metropolitan area to the west and the vast agricultural areas to the east.

The unincorporated community of Wilberforce is located approximately 3 miles northeast of the City of Xenia on U.S. Route 42. This community has its own distinct character, both manmade and natural. It overlooks the unique and beautiful Massie Creek Valley and offers a wealth of cultural amenities. Wilberforce is also home to two of the county's six universities, Central State University and Wilberforce University.

Central State University is part of the State University system, dedicated to higher learning and offering lifelong learning opportunities to a diverse population of adult learners in the United States and other countries. Through the distance learning process, students can acquire knowledge and skills that will greatly enhance their opportunities for career advancement in their chosen career field.

Wilberforce University is the nation's oldest private African-American university. It has a deep commitment to provide academically excellent and relevant higher education, particularly for African-American men and women. This commitment aims at increasing the probabilities of success in college and subsequent careers for all individuals.

This unique community is a place with an easy-going, semi-rural lifestyle that is complemented by modern public services. The residents of Wilberforce understand the importance of a community retaining its sense of identity even as it expands and grows. New development within the community of Wilberforce should represent the past trends of the community while maintaining its historic and cultural characters.

The elements of the land use strategy depicted in the land use plan, for the township focuses on preserving the unique countryside character and its natural resources. This plan calls for the preservation of agriculture (see Chapter 2, Coordinated Land & Water Management Program, Agriculture Preservation Policy,) open space including open space within new developments, coordination of transportation and land use, community character enhancement, balanced land uses, and water resource management (see Chapter 2, Coordinated Land & Water Management Program, Environmental Policies.)

Protection of open space and agriculture will directly benefit the water quality of the Little Miami River watershed within the township. Water resources like the Little Miami River, Massie Creek and Caesar Creek together with their associated floodplains and wetlands - are prominent natural features of the township and they should be enhanced as well as protected from pollution and encroachment.

A key to the enhancement and protection of water quality in the township is minimizing the amount of impervious surface in new development. Impervious surfaces include

rooftops, roads, driveways, sidewalks, and parking lots. The amount of impervious surface on a site directly affects the quantity and quality of runoff. Minimizing impervious surfaces reduces runoff, which reduces the rate, volume, and pollutant load of water traveling downstream. This is essential to protecting the quality of water within the Little Miami River watershed.

Much of the township that will be developed during this planning period, will develop under the influence of the surrounding area. Historically, Xenia Township has been predominantly agricultural in nature and this plan calls for a continuation of the agricultural land uses. The land use plan anticipates some planned new development in the agricultural areas of the Township as long as the development objectives of the land use plan are achieved.

The plan encourages the protection of the existing land use trends of the township:

Agricultural uses; and

Countryside residential development, where limited single-family dwellings are allowed on non-prime farmland, along existing roadways.

Planning efforts within Xenia Township will focus on the protection of farmland & farming as a way of life, together with the protection of its natural resources.

Approximately 24,164 people live in the City of Xenia, according to the 2000 census, that's about 16 percent of the county's residents. The City's 6,618 acres encompasses roughly 2.4% of the county's 271,865 acres.

The City of Xenia offers a pleasant lifestyle with open space, convenient transportation routes, a traditional downtown, industrial areas, proximity to shopping and other amenities. The desirability of the community is evidenced by the well maintained mature residential neighborhoods and newer master planned communities. These newer well planned residential developments preserve open space, create neighborhood identity and maintain community character by integrating both manmade and the natural environment. The urban density is made possible by the sanitary sewer and water infrastructure and the diversity is a result of the historic development patterns of the city.

The city will continue to develop primarily under the influence of its existing development patterns. The development strategies for the city includes downtown revitalization, neighborhood preservation & redevelopment, and infill development. As the city grows and prospers, coordinated planning will be needed to ensure that the edge of the city blends sensitively into the country side around it.

As growth occurs we will continue to be challenged to provide housing in a manner that creates a sense of community, rather than contribute to conventional urban/suburban sprawl. Residential character - the appearance and feeling of a residential area - helps to create a sense of community as people take pride in their homes and neighborhood. Good residential character is neighborhood-oriented and is integrated with the natural environment.

The historic downtown core of the City of Xenia is indispensable to the economy and

viability of the surrounding communities and the county. Every effort should be made to make sure that any development or redevelopment that takes place in the historic downtown core will be done in a manner keeping with its historic purpose and that any new development surrounding the historic central business district should be linked with, yet separate from, its historic character. The downtown center contains many beautiful, older buildings with historical significance and architectural integrity. Downtown uses include small shops, personal services, governmental services (the City of Xenia is the county seat), restaurants, open space and is the hub of the Greene County's bikeway/multi-purpose trail system.

The City of Xenia Land Use Plan which was adopted by the Xenia City Commission on February 13, 1997, recognizes the city's potential. This land use plan supports the city's efforts of downtown revitalization, neighborhood preservation and redevelopment, and infill development that takes advantage of the substantial infrastructure investments that have already been made. Both large and small tracts of land still exist within the City of Xenia with access to existing transportation systems as well as public utilities and services. These opportunities for new job creating businesses and residential neighborhoods can easily blend with existing land uses, and make efficient use of existing infrastructure. Infill development in the City of Xenia should reflect the historic patterns of the city. Within the historic downtown core new businesses should be located in available older structures whenever possible, and new buildings should be sited and designed to complement the environment in which they are built. In supporting the City of Xenia, the land use plan update incorporates the Xenia Urban Service Area Land Use Plan 1995-2015, as a supplement document, as it relates to the City of Xenia.

Downtown Xenia like a lot of cities face the challenge of accommodating increased traffic volumes and demands for convenience and available parking. Both local and regional vehicular travel frequently congests older existing streets that are not designed for today's transportation needs. The successful solution to this traffic congestion problem must be directly related to parking as a component of the economic viability of the businesses in the commercial core. The continued use and redevelopment of this commercial cores is vital to the economic growth and job creation within the city. Therefore, this issue needs to be addressed from both a local and regional perspective and in a coordinated planning effort.

Chapter 5 Implementation Program

Introduction

The Land Use Plan provides the policy foundation for decisions about the County's future. The purpose of this chapter is to establish a connection between the goals, objectives, and policies of the update and other actions that will enhance and improve the quality of life of the county residents.

The preparation of this plan is a step toward creating a more sustainable, manageable, and desirable living environment for the residents of Greene County. While the plan document itself is necessary and basic to any planning program, it has no value unless its concepts, goals, objectives, and policies are systematically considered by all parties involved in the development process. A community can only expect to receive benefits from the planning process in direct proportion to efforts made in plan implementation.

Being county wide in scope, the Land Use Plan provides a general framework within which the County's 23 units of government can engage in planning and zoning. Much of the development that occurs in the county is local in scale and it is important

Bath Township	Kettering City
Beavercreek City	Miami Township
Beavercreek Township	New Jasper Township
Bellbrook City	Ross Township
Bowersville Village	Silvercreek Township
Caesarscreek Township	Spring Valley Township
Cedarville Township	Spring Valley Village
Cedarville Village	Sugarcreek Township
Clifton Village	Wright-Patterson AFB
Fairborn City	Yellow Springs Village
Jamestown Village	Xenia City
Jefferson Township	Xenia Township

that local governments carry out their responsibilities to guide this development. The Regional Planning and Coordinating Commission of Greene County works closely with the local governments to help them relate the county wide plan to their special needs and interests.

There is a great deal to be accomplished if Greene County is to achieve this Plan's stated goals, and the many items of the plan. The greatest challenge however is for private individuals and enterprise to have faith in the long range future of Greene County and to make private investment in cooperation with public efforts. With continuing assistance and support of the County and other public agencies, the ingenuity and initiative of private investment will be able to meet the challenges and potentials which have been presented in this plan.

Development Framework

Since Perspectives was adopted, two (2) main areas or types of development issues have been reoccurring concerns to the Regional Planning and Coordinating Commission and staff. The first set of issues relates to land use, growth management and environmental protection. Policies, for dealing with these concerns make up a majority of Chapter 2, Coordinated Land & Water Management Program. The second set of issues deals with the development process. Both applicants and community members have difficulties in understanding and interacting with the current land use regulations and development review process. Some individuals state the concern that regulations were not clearly tied to the adopted Land Use Plan. The following sections will address the second issue.

Use of the Plan

The land use plan is an element of the Greene County's development regulations. It envisions land use twenty years or so into the future, and provides a policy framework to manage growth and development during that period. The graphic plan does not show sufficient detail to permit strict adherence to its land use type and the associated requirements (it is not intended to be a site plan). The plan is meant as a guide to assist county officials, local governments, developers, and citizens with decisions about the future. **It establishes countywide goals and recommends objectives and policies to achieve those goals. It sets policy direction, which will help direct development, against which development proposals may also be measured.**

The plan is intended as a guide for land use decisions such as requests to change zoning classifications and utilize community and man-made resources. Any rezoning request or development proposal should be evaluated for conformity with the goals and policies of the plan. Should changes in zoning be proposed, the rezoning should be in accord with the goals, objectives and policies of the land use plan. This may mean that amendments to the plan need to be considered. Any zoning change or land use proposal that is not consistent with the goals and policies of the land use plan should trigger a mechanism to set in motion a procedure to consider amending the land use plan or provide reasons to deny a request. This will assure that any change to the land use provisions of the plan are given due consideration prior to or at the same time as the review of the specific rezoning or development proposal. The Regional Planning and Coordinating Commission should review and act upon the land use plan amendment prior to or simultaneously as the specific rezoning or development proposal is being acted upon. How long does the amendment process take? There is no set time frame for processing a plan change. It depends on the size and complexity of the amendment and the amount of research required of planning staff.

General Amendment Process

Minor modifications to the land use plan would be changes to the land use plan that do not bring new land use classifications to the area, they are just an extension of an existing one. These modifications will generally be triggered by a rezoning request and are to be reviewed during the rezoning process. Approval shall be based on the Regional Planning

and Coordinating Commission's and the local jurisdictions determination that the modification(s) are not in conflict with the intent, goals, objective and policies of the plan and are consistent with the local jurisdictions vision. These modifications will be evaluated and acted upon during the rezoning process.

General Process

RPCC staff receives a rezoning request, staff submits a report and makes a recommendation to the Planning Commission. Planning commission passes a resolution to modify or not modify the land use plan based on the final action of the Township. Planning Commission passes resolution to approve or deny rezoning request.

Major modifications, of the land use plan would be the addition of a new land use to an area, a change to a local jurisdiction plan, the provision of public utilities (water and wastewater collection) beyond the identified urban service boundary, or a major increase to an existing land use that could impact adjoining areas. A major modification requires the re-evaluation of the plans intent, goals, objectives and policies.

General Process

RPCC staff receives a rezoning request, development proposal, utility extension or new information, staff studies the request, staff submits a report and makes a recommendation to the Planning Commission. Planning commission passes a resolution to modify or not modify the land use plan based on the final action. If the major modification involves a change to a local jurisdiction's plan – the local community shall go through the amendment process before it goes to the Planning Commission. If it is a rezoning the Planning Commission passes resolution to approve or deny rezoning request.

When considering rezoning and development proposals the Planning Commission should consider all facets of the land use plan. To facilitate the Planning Commission and provide consistency when reviewing rezonings and development proposals a check list is being provided to ensure conformance to the plan or to highlight the rezonings or development proposals short comings or even the plans short comings.

Is the rezoning or development proposal consistent with the following:

Coordinated Land & Water Management Program (Chapter 2)

1. Urban Growth Management
2. Utility Extension
3. Agriculture Preservation Policy
4. Rural Residential Development
5. Floodplain Management
6. Little Miami River Management
7. Mineral Resource Management
8. Wetlands

Land Use Location Requirements (Chapter 3)

1. Open Space, Conservation and Recreation
2. Low Density Urban Residential
3. Medium Density Urban Residential

4. High Density Urban Residential
5. Commercial
6. Industrial
7. Public and Institutional
8. Mineral Resource Management

Development Objectives (Chapter 3)

1. Government Considerations
2. Adjoining and Nearby Land Uses
3. Streets and Roads
4. Access Management
5. Driveways
6. Sewage Disposal
7. Water Supply
8. Storm Drainage
9. Solid Waste Disposal
10. Public Utilities and Community Resources
11. Utilities
12. Wireless Telecommunication Facilities
13. Signs
14. Siting and Construction of Buildings
15. Air Quality
16. Noise Levels
17. Archaeological and/or Historic Sites
18. Aesthetics
19. Special Interest Areas
20. Soils
21. Topography
22. Ground Water
23. Surface Waters
24. Shorelines
25. Aquatic Communities
26. Terrestrial Vegetation and Wildlife

Monitoring and Evaluation

The Land Use Plan provides principles for achieving a future that is perceived as being better than the future would be without planning - and a set of goals, objectives, and policies that will hopefully move the County towards the future.

The concept of monitoring progress towards the desired future and evaluating tools for implementation are integral to this process (see Chapter 1, The Planning Process). A well-designed monitoring and evaluation program can help the Planning Commission, member jurisdictions and citizens understand both progress and setbacks in achieving the Plan's goals. More importantly, the program can direct staff and decision makers, towards revisions of the plan and more effective ways of obtaining desired goals, objectives and policies. Most importantly, the monitoring program can provide citizens with the means to hold the government accountable for the actions it is taking to achieve the County's future.

Developing a meaningful monitoring and evaluation program is an important Plan implementation tool in itself and should have high priority among the many action items necessary to implement the Plan.

The monitoring and evaluation program should focus on the key indicators, the Plans - goals, objectives and policies and they could expand over time if needed. Each indicator should be analyzed by the following characteristics:

1. use readily available data;
2. be measurable over time, annually;
3. provide meaningful information relating to the Update;
4. be sensitive to change; and
5. be easily interpreted.

Three (3) general types of plan amendments are necessary to maintain the Land Use Plan as an effective guide to development. Over time, additional land use plan supplements, map amendments and urban service boundary adjustments may need to be adopted. Adoption of supplements and amendments to urban service boundaries and the land use map, should include community input and be considered by the Planning Commission as amendments to the Land Use Plan at any time.

The results of monitoring and evaluation program should be presented annually to the Planning Commission for their information. The annual monitoring and evaluation report should include proposed changes to the plans goals, objectives, and policies. Review of the report and consideration of proposed Plan amendments should include citizen input also. These changes to Plan policy and revisions to the Plan should be considered annually as part of an annual plan review process, to promote the viability of the Land Use Plan and the County planning process.

Periodically, the Planning Commission should conduct a major review of the Plans themes, principles and strategies. The timing of this major review effort is dependent upon the rapidity of changes in the county.

Implementation Tools

The land use plan is not self-enforcing. Once the land use plan is officially adopted, steps must be taken to carry it out. There is a wide range of implementation mechanisms, to achieve the plan goals, objectives, and policies. Most of these mechanisms are already in place for incorporated areas and the unincorporated areas of the county. The implementation mechanisms include zoning ordinance/resolutions, subdivision regulations, urban service boundaries, and other land development regulations, building codes, capital improvement programs, land acquisition, use and conservation easements, land use plans and maps, eminent domain, and nuisance laws. The potential complementary role of private investment actions (e.g. easements, deed restrictions and plat covenant and restrictions) in furthering plan objectives is essential if the plan is to be realized. The role of the planning Commission staff is to provide sound administration, coordination and communication on a continuing basis cannot be over-emphasized. Once the land use plan is adopted some of the existing development regulations may need to be

modified to help carry out some of the stated goals, objectives, and policies. Other items and studies that should be considered in the future include but are not limited to:

1. Each City, Village and Township within Greene County is encouraged to expand upon this initial plan and develop a detailed land use plan for their jurisdictions. Within the PPA's that have a village the Plan calls for the development of a Community Vision/Action Plan for the village. This plan would be a comprehensive long-range plan intended to guide the redevelopment, growth and development of the village. It also establishes recommended action programs needed to implement the community vision.
2. Zoning resolutions could be amended and modified to implement goals, objectives and policies for:
 - a. Agriculture Preservation;
 - b. Rural Residential Development;
 - c. Floodplain Management; and
 - d. Mineral Resource Management.
3. Existing utility extension policies need to look at the available water supply, there is not an unlimited supply of ground water. With the amount of physical growth taking place in the county it is recommended that water resources and water quality planning for Greene County should be performed within a water-shed framework, evaluating the interrelationship of surface and groundwater within the watershed.
4. Update the Thoroughfare Plan.
5. Further detailed study of the U.S. 35 corridor.
6. Reclamation of old quarry and mineral resource sites.
7. Countywide bikeway plan.
8. Impacts of public rural water being extended in the unincorporated areas of the County.
9. Impacts of utility extensions.
10. Future designation of open space and active recreational sites in the County.

This process should be never ending. When additional studies and plans are identified as needed, they should be placed in a work program to get the attention that they deserve.

Transforming the Plan Into Public Policy

The first step to insure the effectiveness of the future land use plan is to transform it into public policy through adoption by the appropriate local governmental authorities. The concepts, goals, objectives and policies of the plan are transformed into official stated public policy through public hearings and subsequent adoption.

Citizen Action and Participation

An essential element to any plan is the component of people. This partnership between the citizens and the Plan is an integral part of planning. Looking at the planning process and understanding that planning is not only a compilation of policies and rules helps everyone understand how we got to where we are and where we are going. Planning is, at its base, a community of individuals finding common goals and working on strategies

to achieve them that are fair both to the individuals and to the community. Citizen input - is and will continue to be a part of the planning process. This is evident through out the plan with issues such as quality of life and stewardship. Quality of life is determined by the citizens of the community and stewardship is about citizens and their ability to contribute to the future of Greene County.

Another way of citizen involvement with development issues, the planning process and the development of the land use plan is the Regional Planning and Coordinating Commission itself. The RPCC is made up of elected representatives from each of the member jurisdictions, who are accountable to constituents of their respective jurisdiction. This composition has enlarged the role of the individual community, creating a balance between community interests and county-wide priorities. Through the RPCC, all member jurisdictions have been brought into the planning and decision making process as full partners.

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