

Regional Land Use Planning in Jasper, Newton, Pulaski, and Starke Counties, Indiana¹

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Introduction

Jasper, Newton, Pulaski, and Starke Counties are located in northwest Indiana, the second tier of counties south of Lake Michigan. The population of this area in 1970 was 63,849 and by 1975 was estimated to have increased by more than 15% or nearly 10,000 persons. As a response to future projected growth trends, the Kankakee-Iroquois Regional Planning Commission (K-IRPC) began to develop a plan in 1975 which was completed in 1978. The land use Growth Policy Plan (4) provides a regional development framework for future urban growth decision making. The work "framework" represents the philosophy of the Plan in that it illustrates a broad superstructure within which individual local governments retain a wide latitude to plan for local needs. The recommendations of the Plan provide an indication of the most desirable general location for new urban growth based upon environmental, social, and economic information as well as goals and policies developed by a citizen advisory committee.

Methodology

Land Use Inventory

Growth management planning must consider the existing land use conditions since further growth in the region should be in harmony with development that has already occurred. Therefore, in 1975 and 1976, a detailed land use inventory was conducted to determine the existing uses of the land. All land within the four counties was classified according to a modified Level II system (1). Aerial photographs at a scale of 1 inch equals 2,000 feet served as the primary basis of the inventory. Field survey, topographic maps, plat books, and contact with area residents were other sources of information used to determine land uses. The resultant map is at a scale of 1:62,500. A statistical summary was also prepared which described acreage in each category of use employed in the inventory (Table I).

Environmental Inventory

An environmental inventory was prepared to determine the capability of the land to sustain and support urban development while minimizing resource loss. Eight different factors drawn from the categories of soils, hydrology,

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TABLE I *Land Use Inventory by County (1975)**

	Jasper	Newton	Pulaski	Starke
Residential (Incorporated)	1,554	883	665	820
Commercial & Services	617	659	317	238
Industrial	1,063	172	121	179
Transportation, Communications	3,333	1,826	957	1,452
Utilities				
Institutional	370	72	386	313
Strip & Clustered Residential	3,684	3,331	869	4,233
Open & Other	1,581	588	364	1,681
Cropland & Pasture	304,043	220,623	238,436	148,854
Deciduous Forest	37,988	28,341	33,722	34,034
Evergreen Forest	762	1,267	262	2,592
Streams & Waterways	1,033	210	659	413
Lakes	214	1,794	99	1,841
Non-Forested Wetlands	2,547	4,410	147	3,418
Strip Mines, Quarries	827	144	116	60
Totals	359,616	264,320	277,120	200,128

*Acres

geology, flora, and fauna were mapped using a transparent overlay technique. Three limitation classes were developed using shades of gray to depict the general potential of an area for urban development. A slight rating has few or no limitations for growth and is shown clear. A moderate rating indicates a level of limitation that reduces the desirability of an area and is shown in light gray. Some corrective measures are required in these areas. Severe ratings, depicted by a darker gray indicate unfavorable conditions which greatly restrict urban uses. Special engineering, design, and resource loss potential are problems which need to be overcome. The limitation system approach is useful in that it does not eliminate an area from urban development but instead indicates the degree of environmental modification needed. The maps were prepared at a standardized scale of 1:250,000 and can be viewed singly or in combination. The overlays prepared are not intended to be site specific but rather offer a general perspective on the potential of an area.

Three separate soils map overlays were prepared. Soil association data (2, 6, 7, 8, 9), were evaluated and classified into severe, moderate and slight classes. The general soils evaluation for urban development map depicted properties such as wetness, shrinking and swelling, poor bearing capacity, and high slope. Properties of the septic tank absorption capacity map were water moving too slowly through soil, wetness, and soil flood. Finally, prime agricultural land was classified utilizing the average productivity index, (6, 7, 8, 9) and a stratification of the resultant values.

Hydrologic factors considered for separate maps were 100 year flood hazard and groundwater availability. Information drawn from the U.S.G.S. indicating flood prone areas was mapped on lands adjacent to the four major rivers of the region as a severe limitation. These include the Kankakee, Yellow, Iroquois, and Tippecanoe Rivers. Groundwater availability was classified with

regard to the gallons per minute (gpm) supplied and was derived from data supplied from Kankakee River Basin, Indiana and Wabash River Basin Comprehensive Study (5, 10). Less than 100 gpm was classified as a severe limitation, 100 to 500 gpm as a moderate limitation, greater than 500 gpm as slight limitation for urban development.

A geologic map overlay was prepared. The properties classified into severe, moderate and slight limitations included poor bearing capacity, slumping soils, poor slope stability, high susceptibility to frost damage, and permeability. Geologic judgements were supplied through the Indiana Geological Survey (3).

Flora and fauna factors considered in separate maps were forested areas, and wildlife population and stream fisheries habitats. Information obtained from Arrow Head Country Resource Conservation and Development (R. C. & D.) (2) depicted the general location of forest lands in tracts greater than 60 acres and were classified as a severe limitation to development. Wildlife population and stream fisheries habitats data were also obtained from Arrow Head Country R. C. & D. (2). Good to excellent habitats were classified a severe limitation to urban growth.

The assessment of the above environmental inventory overlays yields the urban composite map (Fig. 1). This was achieved by viewing the eight environmental overlay maps in combination on a light table with the darkest areas indicating the environmentally most sensitive location for urban development. In like manner, the lighter areas represented the most "ideally" suited areas for urban development. The urban composite map represents a simplification of the various shades of gray and is classified into areas of severe, moderate, or slight environmental limitations for urban development.

Social and Economic Growth Potential Factors

To obtain a measure on the potential for future urban development in the various jurisdictions within the four counties, a weighted rating system addressing a number of selected socio-economic elements was prepared in consultation and with the unanimous approval of the Four County Growth Policy Committee, a citizen's advisory committee. Each of the sixty governmental units (townships, towns, and cities) were assessed for the presence or absence of selected socio-economic elements. Numerical point awards with values ranging from one to ten were assigned for a jurisdiction's commuter potential, major highway access, existing or planned water and sewer utilities, historical population growth rate values for three time periods (1930-1970, 1960-1970, 1970-1975), airport, railroad, or industrial park. The total point values for each of the governmental jurisdictions were compared with each other and stratified into high, medium, and low potential growth ranges. Points award ranged from a high of 50 points to a low of 9 points. A map was prepared to summarize the results (4).

Land Needed for Urban Conversion

Land use needs estimates were calculated to indicate the minimum amounts of rural land which will be converted to more intensive use by urban growth. The needs estimates, in acres, are based upon population projections, the 1975 land use inventory, local zoning standards, and the numbers of persons per

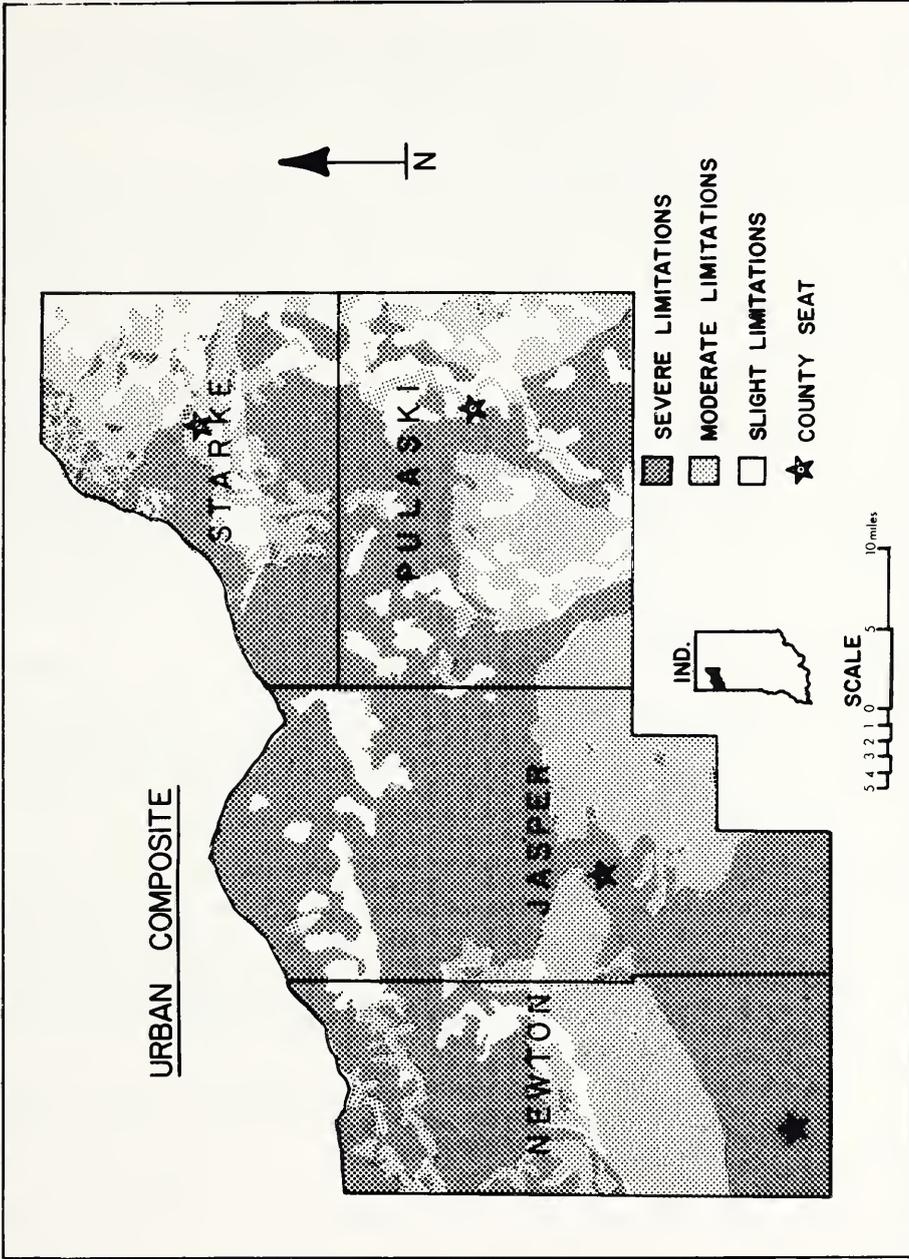


FIGURE 1. Map of Area

household. The resulting urban land use needs estimates for each of the governmental units were compared with each other and stratified into high, medium, and low ranges. A map was prepared to summarize the results (4).

Local Plans and Ordinances Inventory

Existing plans and ordinances have been inventoried and incorporated into the planning process. Special emphasis was placed upon the current zoning in the unincorporated areas. A zoning map of the unincorporated areas was prepared at a scale of 1:250,000 which delineated residential, commercial, and industrial areas.

Areas of Critical Concern Inventory

During the fourth quarter of 1975, specific critical concern areas were polled from individuals and organizations within the four county region. Ideas and problems identified were compiled (4) and mapped at a scale of 1:62,500. The four major areas defined included natural, environmental, cultural, and health, safety and convenience.

Current Growth Directions

Current growth directions and growth centers were mapped by comparing highway photographs, topographic maps, and aerial photographs within the time frame 1950-1975. Clusters of new urban development were identified. The resulting map at a scale of 1:250,000, portrays by location and compass direction strong growth centers of urban development since the 1950's (4).

Goals and Policies

Simply stated, goals and policies are statements that provide a framework for decision making. To varying degrees, they describe long range community desires and courses of action that can guide future development within the four county region. The Four County Growth Policy Committee developed and unanimously adopted the following goals:

1. To promote orderly growth that compliments and enhances established communities, the physical environment and preserves the rural character of the four counties.
2. To promote the conservation and improvement of the air, land and water resources of the four counties.
3. To promote the conservation and best use of our man-made and natural resources.
4. To promote energy efficient development patterns.
5. To promote resource management awareness among the area's citizens.
6. To preserve the traditional concept of home rule and local control over zoning ordinances.
7. To promote the collection of additional detailed environmental and socio-economic information for use in local growth related decision making.
8. To encourage urban growth which would be compatible with the agricultural community.

Conclusion

The fundamental purpose of regional land use planning is to provide technical assistance and guidance to the elected officials, local plan commissions, and citizens in the sound management of land resources for urban growth. The planning process provides a development framework within which today's public and private growth related decisions can be made with some sense of the future.

Preferred urban growth areas recommendations were prepared for the year 2000 based upon the planning process outlined above. Retaining a regional perspective, the recommendations indicated a general location for new urban growth which was usually expressed as a compass direction adjacent to an existing incorporated community. During the early months of 1978, the planning process was summarized and presented to the units of government within the region. Seventy-five percent of the local governments endorsed that portion of the Plan relating to their jurisdiction. Currently the Kankakee-Iroquois Regional Planning Commission is seeking to upgrade the efforts of the local units of government in the implementation of the Plan.

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