

2003 Master Plan

Warren County Missouri

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EXECUTIVE SUMMARY

Warren County, Missouri has established and maintained a planning and zoning program for land use regulation for several decades. The updated Warren County Master Plan is based upon a master plan analysis and report prepared by Bucher, Willis and Ratcliff. The 2003 Master Plan establishes planning policies as outlined below for particular planning tiers as well as directions regarding the amended zoning and subdivision orders to be drafted after the Master Plan is adopted.

The Plan establishes a **tier system**, for:

- Urban Tiers;
- Suburban Tiers;
- Rural Tiers; and
- Agricultural Preservation Tiers.

Urban Tiers are where growth is encouraged at urban densities on lots served by city services or by a community system of shared water and sanitary sewers, built to city standards. They are around established urban areas and along portions of the I-70 corridor at the fringe of the cities, towns, and villages of Warren County. Policies for development under County control in this tier are as follows:

Zoning: County zoning encourages urban residential density development, as well as commercial and industrial zoning.

Roads: Paved with a hard surface asphalt or concrete to County standards or the next closest city's standards at a minimum if for non-residential development or if on residential lots smaller than 1-acre. Gravel if for residential development on larger than 1-acre lots, in which case roads must be privately owned and maintained.

Sanitary Sewers: Provided through a city or community system built to city standards. Individual on-site septic systems allowed for development at rural densities on 3 acre or larger lots only in cases where city services are not provided, planned for, nor may be cost-effectively extended.

Suburban Tiers are where growth is allowed at suburban densities or at urban densities if stricter development standards are met.

Zoning: County zoning encourages suburban residential density development as well as commercial, and industrial uses but only when served by public or private community sanitary sewer systems.

Roads: Gravel if development is on 1-acre or larger lots. Paved with a hard surface asphalt or concrete to County standards or the next closest city's standards at a minimum, if for non-residential development or if on residential lots smaller than one acre. Paved access via a public road is required to all residential subdivisions.

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Sanitary Sewer: On-site septic systems allowed for development at suburban densities of 3 acres or more, provided there is no city service planned for the area.

Rural Tiers are where agriculture is encouraged to continue and rural ag-residential development is encouraged. Limited rural residential densities are allowed only as cluster development. Residential developments at suburban and urban densities are allowed if they meet stricter development standards.

Zoning: County zoning, encourages agricultural uses and allows agriculture-residential development, while permitting clustered development as an incentive to preserve farmland and green space. Commercial and industrial development are not allowed.

Roads: Gravel if development is on 3-acre or larger lots. Paved with a hard surface (asphalt or concrete to County standards), if on residential lots smaller than 1-acre. Paved access via a public road is required to all residential subdivisions.

Sanitary Sewer: On-site septic systems allowed for development at rural densities of 3 acres or more.

Agricultural Preservation Tiers are where floodplain, bottomland and other designated agricultural soils dictate preservation of prime farmland. Residences would be allowed only at agricultural densities, or as cluster development on prime farmland soils.

Zoning: County provides agricultural zoning only, while permitting clustered development as an incentive to preserve prime farmland. Commercial and industrial zoning would not be allowed.

Roads: Gravel if on 3-acre or larger lots.

Sanitary Sewer: On-site septic systems allowed for development at rural densities of 3 acres or more.

ZONING

The County in order to implement this Master Plan should update its zoning regulations to better differentiate among residential, commercial, and industrial land uses and development densities.

POLICY PLAN

The County through this Master Plan now seeks to influence land use development in the public interest by preserving its strengths and implementing the following new community objectives:

- Balance individual property rights with community rights;
- Define and preserve a "Sense of Place" in Warren County;
- Accommodate development while implementing new planning policies; and
- Ensure that urban growth occurs in or near the cities, or if in rural areas it pays its own way and creates quality environments.

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Rural Warren County beyond the designated Urban Tiers does not have the needed infrastructure to support urban and suburban growth (**Ref. Chapters 4 and 6**). Nevertheless, throughout America, suburban and urban growth continues to consume rural land. This occurs because it is the natural tendency for people to want to build and buy homes that are new, and they are nearly always built on the outer urban fringes, where empty land is available (**Ref. Chapter 2, Rural Housing Demand**).

If the rural areas develop at urban and suburban-zoning densities, which is happening at a rapid pace in suburban and rural areas of our Nation such as Warren County more public services are called for by these new residents. These urban services—street maintenance, snow removal, police protection, ambulance service, building and zoning enforcement, traffic controls, streetlights—are too much of an economic burden on rural County governments, cities or special districts with limited fiscal resources. Often as is Warren County, it is County government that these new "rural-suburbanites" expect will provide "city" services.

Recognizing this challenge, the key objectives of the Warren County Plan (**Ref. Chapter 3**) are:

- Allow urban growth where it can be served cost-effectively by the County or by the cities through annexation; and
- Require growth to pay its own way when it cannot be cost-effectively served by the County, cities or special districts.

Warren County and other political subdivisions within the County cannot provide urban services into rural areas. The County cannot afford to build and maintain rural roads to serve dense outlying developments. New commercial and industrial developments are desirable since they will generate jobs and added tax revenues, but those funds must be committed wisely for the infrastructure needs of urban users. Unincorporated rural areas of the County generate relatively little tax revenues to provide additional services and infrastructure and extending them to such areas is not cost effective.

Therefore, denser residential development along with most commercial and industrial developments should be concentrated in limited areas where there is the ability to provide public services and infrastructure in a timely manner and at reasonable cost. Given limited resources residential and non-residential development in the unincorporated County will have to be self-supporting in terms of water, sewer, roads, and related infrastructure. The Warren County Master Plan objectives require new policies and procedures to be implemented that recognize future needs as well as fiscal realities. Development proposals will be reviewed in the future based on new planning standards that aim to preserve the natural beauty and importance of the agricultural rural areas and the "sense of place" in Warren County. Development approvals will be granted to projects that create quality developments that enhance the County's future without jeopardizing its economic resources.

Once the associated land use regulations are adopted, the County can control the timing and phasing of growth through the planning and review process. The way this growth fits in terms of its appearance, impact on farmland and open space or economic costs and benefits into the County can be influenced, as well.

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Strengthening established communities is both a major challenge and goal for Warren County. The cities and the County should continue coordinating their planning efforts in order to attract quality urban development to the Urban Tiers. Finally, it should be noted that the Plan calls for initiatives that must be taken by many groups and not just the County government (**Ref. Chapter 3**) if its objectives are to be realized. The Plan objectives are challenges for the entire community. Cooperation among public and private groups, including developers, the MDNR and other agencies, state and local will be necessary in order to implement the Plan and improve the quality of life for Warren County residents.

The chart below in summary form illustrates how to use this document.

The Warren County Master Plan creates a process for applying new public policies to development review.

For Review of Zoning Map Amendment (Rezoning) Applications:

- Compare the application to the Planning Objective of Chapter 3.
- Evaluate proposals relative to the traffic standards in Chapter 5.
- Apply the planning recommendations of Chapter 6.

For Plan Implementation:

- Amend the County Zoning Order to incorporate site planning standards and procedures into the regulations.
- Amend County Subdivision Regulations to address cluster zoning, plat requirements and related site planning standards.
- Present the Plan to the cities of Warren County to build support for implementing the urban tier policies.

CHAPTER ONE: MASTER PLAN PROCESS

INTRODUCTION

In 1795 the renowned Kentucky hunter, Colonel Daniel Boone, established the first American colony in what is now Warren County. With the help of his son-in-law, Flanders Callaway, the settlement, Callaway Post, was built near the current town of Marthasville. In January of 1833, the Missouri legislature declared a portion of Montgomery County to be a separate and distinct County to be known as Warren County. The County was named in honor of General Joseph Warren who fell at the battle of Bunker Hill. General Warren was a member of our country's first three provincial congresses and was the president of the third.

Land Area and Vicinity

Warren County covers over 428 square miles of land area. The Missouri River borders the southern edge of the County. Topography of the County varies from river bottoms to rough hilly terrain to rolling hills and prairie as one moves from the Missouri River north.

Warren County is west of St. Charles County, which is adjacent to St. Louis County. Interstate 70 runs east and west through the northern part of the County, providing a freeway-level route to both St. Louis and Kansas City, the state's two largest cities. The St. Louis Lambert International Airport is 45 minutes to the east. For smaller aircraft, Washington Municipal Airport is located in the County near Dutzow on Highway 47, which provides north/south travel through the County and the region.

MASTER PLAN

The healthy and orderly growth of a community relies on the successful implementation of a set of well-defined development policies that serve as guidelines for all development decisions at present and in the future. The Master Plan (or "the Plan") serves as a guide for the planned and orderly growth of Warren County, focusing primarily on unincorporated regions that are under the County's control. Zoning changes, subdivision approvals, redevelopment and new development proposals should mesh with the Plan. The Plan sets out the key planning issues that are relevant to effectively managing anticipated growth to the year 2020 and realizing the County's long-range planning objectives.

The Plan must guide the direction and type of growth, but at the same time be a dynamic tool that accommodates changes in local markets, while remaining fiscally sound. The Plan serves as the basis for zoning decisions. If applications for zoning changes are in accordance with the Plan they are presumed to be reasonable. If zoning change requests are not in accordance with the Plan, but are perceived as reasonable, the County should review its planning and regulatory documents and amend either the Zoning Order or the Plan. Additionally, to ensure that the County is proactive to land use changes and development trends, the Plan should be reviewed approximately every five years.

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Figure 1.1: Vicinity Map

Unincorporated Warren County is a large, diverse community. Planning and zoning policies that are contained in this Plan are formulated around a well-structured scope of planning analysis that looks ahead even beyond a pre-set time horizon. At the same time, near-term implementation is important. Regulation of land development is one way the Plan is to be implemented. Following are the roles played by key policy makers and administrators, and the relationship of the Plan to regulations.

ZONING ORDER

A Zoning Order is a legislative tool used for implementing the comprehensive plan. It delineates on the zoning map the boundaries for land use districts to regulate:

- use;
- density of population;
- lot coverage; and
- bulk of structures.

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The purpose of the Zoning Order is to:

- encourage appropriate uses of land;
- maintain and stabilize the value of property;
- reduce fire hazards,
- decrease traffic congestion and its accompanying hazards;
- prevent undue concentration of population;
- create a comprehensive and stable pattern of land uses upon which to plan for public services and facilities, including highways, roads, water supply, sewerage, schools, parks, public utilities, and other public facilities; and
- protect, promote, and improve the public health, safety, convenience, comfort and general welfare.

SUBDIVISION REGULATIONS

Subdivision Regulations are another legislative tool to implement the Plan by guiding the subdivision and development of land. Subdivision Regulations coordinate otherwise unrelated plans as well as govern the internal design of individual sites. As with its Zoning Order, the County needs to keep Subdivision Regulations up to date and responsive to community needs.

The general purposes of the Subdivision Regulations are to:

- protect and promote the public health, safety, convenience, comfort and general welfare by requiring a subdivision plat when dividing a parcel of land into more than two lots;
- guide the future growth and development;
- provide for the proper location and width of streets, roads, building lines, open space and recreation and to avoid congestion of population;
- protect and conserve the value of land, buildings and improvements and to minimize conflicts among the uses of land and buildings;
- establish reasonable standards of design for subdivisions in order to further the orderly layout and use of land; and
- ensure that public facilities, including roads, water, sewer and drainage facilities, are adequate to serve the needs of proposed subdivisions.

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ROLE OF THE PLANNING AND ZONING COMMISSION

The Planning and Zoning Commission's role is that of an advisory body to the County Commission and public review body for certain enumerated land development functions delegated to it by the County Commission. The Planning and Zoning Commission is composed of eight Warren County citizens appointed by the County Commission. Recommendations regarding rezoning issues and the approval and adoption of long-range plans are forwarded from the Planning and Zoning Commission to the County Commission. Specific roles include the following:

1. Recommend approval of a Master Plan for the physical development of the unincorporated areas of Warren County.
 - Before recommending approval or amending the Master Plan hold public hearings and information gathering sessions to allow the general public to voice their opinion regarding the future development of Warren County.
2. Advisory body to the County Commissioners.
 - Hold public hearings to obtain public opinion regarding each rezoning application, conditional use permit application and proposed text amendments to the Zoning Order.
 - Submit a recommendation to the County Commissioners on each rezoning application and proposed text amendment.
3. Approve or disapprove both preliminary and final subdivision plats.

ROLE OF THE COUNTY COMMISSIONERS

The County Commission's role is that of an elected body for Warren County. In land use regulatory matters, the County Commission's jurisdiction is in unincorporated Warren County only. Specific roles include the following:

1. Enact and amend the Zoning Order and zoning district map after considering the Planning and Zoning Commission's recommendations.
2. Amend the Subdivision Regulations after considering the Planning and Zoning Commission's recommendations. This responsibility does not include approving subdivision plats.
3. In accordance with Missouri State Statute 64.815, approve and adopt the Master Plan after considering the Planning and Zoning Commission's recommendation.
4. After adoption, certify a copy of the adopted Plan to each incorporated city and village within the County.
5. Record a copy of the Plan with the Office of the County Recorder of Deeds.
6. Accept or reject dedications of easements, rights-of-way and public lands on subdivision final plats after approval by the Planning and Zoning Commission.

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7. Review and approve or deny plats under appeal or protest by an adjacent municipality or landowner.
8. Approve engineering plans for construction of public improvements (e.g., any infrastructure owned or dedicated to the public and accepted by the County) after input from the Planning and Zoning Commission.
9. Approve financial guarantees or financing mechanisms to ensure construction of all public improvements within subdivision plats.

ROLE OF THE BOARD OF ZONING ADJUSTMENT

The Board of Zoning Adjustment role is primarily a quasi-judicial body appointed by the County Commission rather than an advisory or legislative body. Its role is limited to appeals and other duties designated by the County Commission. Specific roles include the following:

1. In zoning administration, its role is limited to two types of tasks:
 - The appeal of an administrative decision or interpretation where there is an ambiguous provision or an alleged error in the administration of the Zoning Order; and
 - Decide on other matters expressly granted to them by the Zoning Order, such as granting variances in cases of unnecessary hardship.
2. The Board of Zoning Adjustment is not involved in the administering the Subdivision Regulations.

ROLE OF THE ZONING OFFICER

The responsibility of the Zoning Officer is to oversee and conduct the business of planning and zoning in Warren County as set forth in policy adopted by the County Commissioners. The Zoning Officer provides staff support to the Planning and Zoning Commission and County Commission regarding local regulatory decisions and serves as custodian of the official zoning map and regulations, providing an official copy to the County Clerk.

The Zoning Officer should assist other County departments in areas where he or she can provide relevant expertise.

THE BASIS OF DECISION-MAKING

As with other "police powers," the exercise of Zoning and Subdivision Regulations is subject to certain legal limitations. One of the most important of these limitations requires that Zoning and Subdivision Regulations cannot be applied in an "arbitrary or capricious" manner. Decisions regarding zoning and subdivision issues cannot be arrived at through an exercise of favoritism, whim, will or by caprice, without consideration or adjustment with reference to principles, circumstances, or significance.

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Procedures for avoiding conflicts of interest—including how to acknowledge and disclose conflicts or appearances of conflicts—are presented in Appendix B. They should be referenced when considering conflicts of interest as part of the decision-making process. Also presented are rules for Planning and Zoning Commission members to follow in terms of "informed participation" and ethical principles.

CHAPTER TWO: EXISTING CONDITIONS AND DEMOGRAPHICS

PURPOSE AND INTENT

To assess the pattern of development and land use in Warren County several trends must be evaluated. This chapter will review population trends and shifts, land use developments and housing demands. These trends play important roles in projecting population growth and more importantly, where this growth should occur based upon existing and future ability to serve urbanized growth. In summary, the limited ability of public agencies within Warren County to provide water and sewer service has restricted high tax-yielding commercial and industrial growth within unincorporated areas of the County.

The rural water districts, for example, have limited plans for expansion of water lines. In addition, the County and other political subdivisions have limited resources to improve and maintain desired urbanized services such as:

- additional law enforcement,
- fire protection,
- emergency services,
- improved streets, and
- social services.

For these reasons, this Plan promotes development in and around incorporated areas that have greater resources for providing these needed and desired services.

RESIDENTIAL DEVELOPMENT

Warren County has experienced a proliferation of single-family homes on individual parcels in rural areas during the last two decades. The number of new residential lots being developed in the unincorporated County equal the total of those developed inside the corporate limits of the Cities of Warrenton, Truesdale, Wright City, Marthasville, and Foristell, the Village of Innsbrook and the Village of Pendleton. There is a consensus that the County should avoid several patterns of development that create problems:

- Multiple subdivisions spread across the rural areas that are not developed in accordance with appropriate infrastructure standards;
- A proliferation of individual residences along County and state highways with driveways aligned indiscriminately;
- Development that interferes with and alters the "sense of place" of rural Warren County in unincorporated areas; and
- Clear-cutting and excavation on wooded, hilly sites to make way for development, rather than preservation of natural areas for shared open space, storm water management and related needs.

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Warren County Rural Housing Demand

In the Fall 2001, a telephone survey of rural Warren County residents was conducted. The results of the survey are summarized in **Appendix A**. Generally, the survey indicates that people are moving to Warren County primarily from the St. Louis region and are seeking larger lots.

The growth in the total number of housing units in the County has proceeded relatively rapidly in the last few years. Almost 500 housing starts were recorded in the County in calendar year 2000; approximately 60% of such starts in 2000 were single-family residences. Between 1997 and 2000, the County experienced a total of more than 1,700 housing starts, with the annual number of such starts increasing over 40% in that time period.

There were many factors which contributed to this growth, and its annual increase, many of which were not directly related to Warren County, i.e., a robust national and regional economy, historically low unemployment and reasonable interest rates. These "growth" factors have been mitigated by the economic slowdown and uncertainty in the employment picture. However, interest rates have continued to fall, making home mortgage financing of new homes attractive, as well as refinancing of existing homes. The picture painted by these factors shows that as the County approaches the future, the overall demand for owner-occupied housing (as well as new large-lot homes) will probably slow, but mortgage money is available, and at a very reasonable interest rate, for those who do want to purchase homes.

The factors which more directly impact Warren County will likely maintain a reasonable number of persons who do, in fact, want to purchase homes on large lots. The I-70 corridor will continue to confer excellent accessibility to the major markets/employment centers both east (St. Louis City and County and St. Charles County) and west (the city of Columbia). In particular, as employment continues to grow in St. Charles County—both new employment, as well as the relocation of jobs from St. Louis City and St. Louis County—many persons will recognize that they can live in Warren County and be a reasonable commuting distance from their jobs.

As retail-commercial uses follow suit, patrons will enjoy easily accessible shopping. These "new settlers" hope to leave behind the concerns that many respondents reported regarding living in the more "urban" St. Louis and St. Charles Counties. Moreover, the availability of land for new homes, (including property for large-lot, single-family residential development) at prices more reasonable than in St. Louis and St. Charles Counties means that the demand for home ownership in Warren County will likely continue in the near term in the range that the County has experienced in the last few years.

The following factors have influenced the increase of large-lot, single-family residential development in unincorporated Warren County:

- Migration from neighboring counties that have lost the rural character that once made them attractive places to live, and where land prices have escalated;
- Warren County's intact rural character, combined with its proximity to St. Louis and access to Interstate 70;
- The demand for 100+-acre sites by developers, which will then be subdivided and sold as lots of three acres and greater; and
- Demand for and availability of larger lots often acres or more.

WARREN COUNTY, MISSOURI - MASTER PLAN

The residential housing market in Warren County is providing large lots for high-end homes but relatively few lots that are served by public sewer and water systems in unincorporated areas. Rather, these homes are being developed on septic tanks. This pattern of development raises the issue of whether the County can provide affordable housing in the future on reasonably sized lots. The residential development standards in unincorporated Warren County do not meet minimum urban standards such as are provided in the cities located within the County. Therefore, new urban density development should occur within one of the area municipalities that have the ability to provide urban services and have the urban development standards to match.

The development of new affordable housing also will be a key factor in the growth of the cities in Warren County to meet the needs of and attract new workers and families. Currently, a typical three-bedroom house in the County rents for between \$450 and \$800 per month. Rent for two bedroom apartments in area municipalities within the County range from \$360 to over \$500 per month.

In addition to large-lot (3-5 acres) development, another recent housing development in the County is to build on smaller lots (1+ acre) on a central sewer system approved by the Missouri Department of Natural Resources (MDNR) and utilize either public water sources or wells and cisterns. These developments also include streets developed to urban standards and ample open space. While these developments are not connecting to municipal utility systems, they are creating a single package sewer system rather than having multiple septic systems across the County. Additionally, the utilization of an internal street network has reduced the impact of cars backing out onto County or State arterial roads. However, the three to five acre residential lots scattered across the County are inefficient uses of land and cost more to serve than compact development. Therefore, "smart growth" principles are needed along with residential development standards.

Smart Growth principles are summarized as follows:

- A recognition that every level of government, federal, state, regional and local, plays an important role in adopting and implementing policies that support Smart Growth.
- A regional view of community developed through regional planning process and implementation. Smart Growth recognizes the interdependence of neighborhoods and municipalities in a metropolitan area and promotes balanced, integrated regional development.
- Integration of land use and transportation planning to provide increased transportation choice. Transportation planning should include alternatives to the automobile, such as public transportation, bicycles and walking. Development must be pedestrian friendly. Land use planning must support the success of non-automotive transportation modes.
- Efficient use of land and infrastructure. Efficient land use results from compact building, **infill** development and reducing the amount of land needed to satisfy street and parking standards. Efficient use of public and private infrastructure starts with creating neighborhoods that maximize the use of existing infrastructure. In areas of new growth, roads, sewers, water lines, schools and other infrastructure should be planned as part of overall growth and investment strategies. Regional cooperation for large infrastructure investments avoids inefficiency and redundancy.
- A greater mix of uses and housing choices in neighborhoods and communities focused around human-scale, mixed use centers accessible by multiple transportation modes. Mixed-use housing is varied by type and prices, integrated with commercial development and places of employment. Human-scale design, compatibility with the existing urban context, and quality construction contribute to successful mixed use centers.

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Commercial Development

As stated above, the limited ability of Warren County to provide water and sewer service has restricted high tax-yielding commercial and industrial growth within unincorporated areas of the County. Additionally, the amount of commercial space and services in Warren County are limited by the lack of a major road system. Land along the north and south outer roads from Interstate 70 offers visibility; however, it is still a good distance from an interchange. Many of these sites are zoned agricultural or residential, thus reducing their viability for retail development. With coordinated development and appropriate buffering, these areas could provide excellent opportunities for the development of buildings for commercial services such as a light industrial use that requires access to the interstate system, including contractor storage facilities where large equipment could be stored.

The availability of retail space is limited due to low vacancy rates in existing shopping centers. New retail development will be slow due to high construction costs in relation to low rent prices. It is generally agreed that non-residential development should be allowed in "business districts" along major thoroughfares, such as County roads and state highways. It is believed that quality residential development is needed to attract new, quality retail development.

A market segment that is not being filled is the demand for 3,000-square-foot office space for single tenants. Smaller businesses, such as contractors and service providers, who do not wish to operate out of their homes, are the primary sources of this demand. Businesses of this nature do not require prime visibility or access, but do need adequate space to store service vehicles and supplies. This demand could be met with a small office/industrial park off of the outer road or near an I-70 interchange.

Industrial Development

The Plan encourages industrial development to locate in the cities or in the "Urban Tiers" where urban services can be cost-effectively extended. The Cuivre River Electric Cooperative owns an industrial park in Wright City, the "Gateway West Industrial Park." This industrial park has been slow to fill, in part, because the Electric Co-op has sought high electric load users. It is felt that industrial development in the park is a matter of timing. The Cuivre River Electric Co-op serves most of the unincorporated areas of Warren County, St. Charles County, Lincoln County, Pike County and Montgomery County. The Cooperative does not serve the City of Warrenton since it is an incorporated community with more than 1,500 people thus served by Ameren U/E. Ameren U/E also serves other areas within unincorporated Warren County.

The City of Warrenton has an industrial park, which is partly within the corporate limits of the City of Truesdale. A recently annexed section to the east includes privately owned industrial land within the City of Warrenton. The City of Marthasville also has some industrial land and has received a grant to extend sewer to Highway 47 and Highway O.

In general, the Cities of Warren County are in the strongest position to serve urban growth with extension of municipal utilities. It is generally agreed that commercial and industrial development will extend along the Interstate 70 corridor because of availability of roads, water and sewer service. Further, commercial and industrial developments typically seek interstate frontage for enhanced visibility.

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DEVELOPMENT REVIEW AND APPROVAL

The Warren County Planning and Zoning Office issues zoning permits based on zoning compliance. As a third-class county, Warren County cannot administer a building code for new construction. Warren County does have a septic order that provides for the permitting and inspection of on-site septic systems. The Cuivre River Electric Co-op and Ameren U/E support the enforcement of these codes by withholding electrical service unless the County has certified compliance with local septic regulations.

The County has experienced zoning permit activity in the volumes shown on the tables which follow over the past few years.

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Table 2.1: Housing Units By Year in Cities and Rural Areas of Warren County, Missouri 1997-2000*		
Year	Total	Percent Change
2000	493	6.5%
1999	463	14.6%
1998	404	17.1%
1997	345	—

Source: Warrenton Economic Development

* The entire County.

Table 2.2: Warren County Housing Starts 2000		
City/County	Unit Type	# of Units
Warren County	SF	186
	MH	61
Village of Innsbrook	SF	18
Marthasville	SF	15
Warrenton	SF MF	46
	Units MH	96
		46
Wright City	SF	25
TOTAL		493
SF = Single-family MF = Multifamily MH = Manufactured Home		

Source: Warrenton Economic Development

Table 2.3: Housing Units By Type 2000		
Units	Total	Percent
SF	290	58.8%
MF	96	19.5%
MH	107	21.7%
TOTAL	493	100%

Source: Warrenton Economic Development

Examples of trends are shown in Table 2.4: Subdivisions in the City of Warrenton, which is symptomatic of activity in other cities in Warren County.

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Table 2.4: City of Warrenton Total Subdivisions as of October, 2001		
#Lots	# Built	# Buildable
57	38	19
50	7	33
36	12	24
45	45	0
10	7	3
32	23	9
25	0	25
29	0	29
3	3	0
12	10	2
30	18	12
12	8	4
91	66	25
22	3	19
56	22	34
49	0	49
41	0	41
30	0	30
34	19	15
8	7	1
33	30	3
70	46	24
28	18	10
58	18	40
46	6	40
206	186	20
10	1	9
<u>58</u>	<u>18</u>	<u>40</u>
1171	611	560

Source: Warrenton Economic Development

Note: # Lots includes all lots approved in preliminary plat, even though not all phases may currently be final platted for construction.

The current time frame for review and approval of subdivision plats is deemed appropriate; though—as is typical—developers in many cases expect quicker review. The current Warren County process allows adequate time to ensure proper review and time to meet notification and submittal time frames. A "lot split" procedure is recommended to simplify the division of a legal lot of record into two conforming lots if the parcel or lot has never been split or subdivided under the current Subdivision Regulations.

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Landscaping

Warren County does not require landscaping for new development. Some commercial developers install landscaping voluntarily, and in some instances, residential developers plant trees and shrubs, or provide landscaping gift certificates to new homeowners. Developers may also raze existing trees and change existing topography during development without public review.

Landscaping and grading review can also play an important role in the County's efforts to manage erosion, sediment and storm water runoff caused by development. Developer acceptance of and compliance with landscaping requirements will be greater if the Zoning Order is amended, making requirements the same for all new development within the County.

Erosion, Sediment and Storm Water Controls

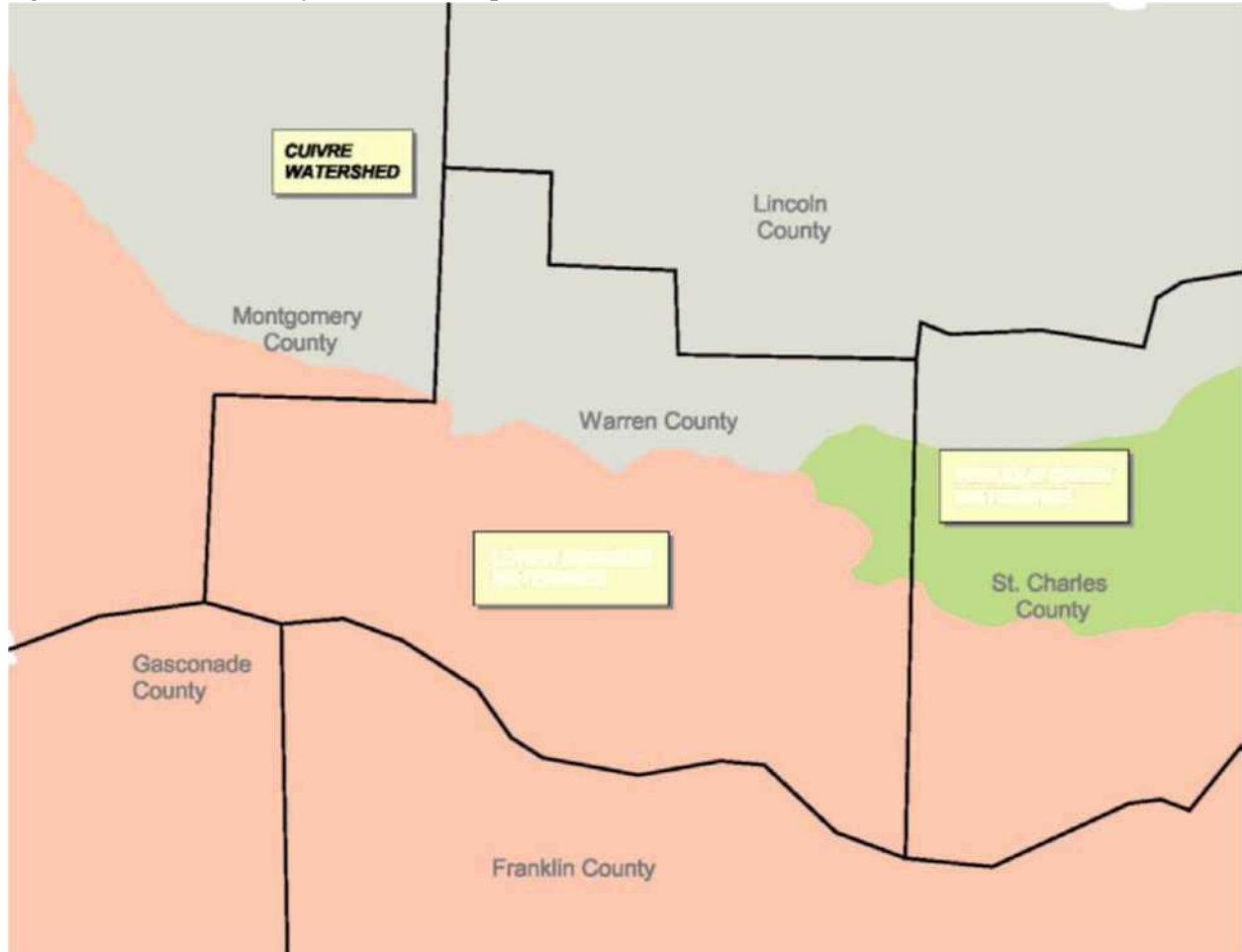
In Warren County, there is growing concern regarding how to manage increasing storm water runoff and erosion resulting from development during and after construction. Both residential and commercial development impacts water quality by causing soil erosion and increasing the volume and rate of storm water runoff. As residential development continues to grow, the need for best management practices during and after construction to minimize these impacts will grow as well.

WATERSHEDS

Warren County is crossed by three watersheds, Cuivre, Peruque Creek, and the Lower Missouri River. The largest of these is the Lower Missouri watershed which covers 1610 square miles. The Lower Missouri watershed encompasses 18 rivers and streams with 214 lakes covering 3883 acres. The Cuivre Watershed covers 1264 square miles. Seven rivers and streams are located in the watershed along with 147 lakes covering 2204 acres. The Peruque Creek watershed covers 636 square miles. Seven major rivers and streams are located within the Peruque Creek along with 159 lakes covering 2867 acres.

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Figure 2.1: Warren County Watershed Map



Protection of natural resources, particularly natural drainage basins, is a basic part of land use planning. Currently, the County does not require erosion, sediment and storm water controls during construction. Adoption of a uniform, County-wide standard will enable the County to manage erosion and storm water to the extent that pre-development levels are maintained or even reduced. Sample guidelines are provided in **Chapter 6** under Stream Buffer Requirements.

Agricultural Land Use

Agriculture is the largest land use within Warren County. As the County continues to grow, conflicts between agriculture and non-agriculture uses increasingly arise in relation to noise, odor, farm chemicals, and traffic. There is general consensus that protection of farming should not be so restrictive as to prevent the sale of farmland for development.

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Concerns regarding the effects of increasing the minimum lot size from 3 acres to 20 or more acres, for a residence in the AFM District, will have to be addressed through public involvement and education.

Benefits of increasing the minimum lot size for residential development in the AFM District include:

- Increased preservation of agricultural land;
- Limiting developments on septic systems; and
- Decreased pressure on the County to provide additional urban services to a dispersed population.

The promotion of urban residential development around existing municipalities will allow the County to grow without many of the negative impacts from conversion of agricultural land.

In 1969, 65% of the acreage of Warren County was in farms. By 1997, the acreage in farms had dropped to 48%. However, between 1987 and 1997, there has been an increase in farming activity in Warren County. The 1997 Census of Agriculture by the United States Department of Agriculture reported there was a 4.3 percent increase in number of acres farmed; from 127,096 acres in 1987 to 132,520 acres in 1997. The total number of farms also increased from 550 farms in 1987 to 555 in 1997. There has been major restructuring in the size of the farms, with a marked decrease in the number of small farms and a 40% increase in the number of farms of 1000 acres or more.

Table 2.5: Agricultural Statistics Summary (1997)

The average size of farms: The State of Missouri: 292 acres Warren County: 239 acres
In 1997, Warren County had 555 farms.
Total market value of agricultural products sold in 1997 was \$ 22,492,000
Market value of agricultural products sold in 1997—average per farm—was \$ 40,525
Total land in farms in 1997 was 132,520 acres
Percentage of Warren County land in farmland: 48%

Source: 1997 US Agriculture Census

Acceptable means of minimizing conflicts between agriculture and residential uses include:

- Creating buffers around more intense farming operations, such as "mega" livestock farms; and
- Controlling the number of livestock per acre in large commercial feedlots.

State law already regulates certain farming practices such as concentrated feed lots. The MDNR permitting process reviews items such as buffer distance, well locations and land application areas. Warren County should keep these regulations in mind when determining whether or not to adopt more

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stringent zoning regulations regarding concentrated feed lots. A description of the permitting process and specific requirements can be obtained from the MDNR.

MAJOR DEVELOPMENT AREAS AND INCORPORATED AREAS

There are numerous non-agricultural developments throughout unincorporated Warren County, most of which have been long-standing. Following is a description of the primary development centers in unincorporated Warren County along with a description of the services provided in the incorporated areas within the County. As previously indicated, with the County's limited ability to provide urbanized services to residential and commercial developments, existing and developing areas that can provide these services will and should absorb the majority of development in the future.

City of Foristell (2000 Population - 331)

The City of Foristell is a unique city within the region because the boundaries of the City are in both Warren County and St. Charles County. The City has 1,782 acres within Warren County and 1,426 acres within St. Charles County.

The City is currently in the process of developing a Master Plan/ Comprehensive Plan. The Plan should be adopted within the next year. The City's Zoning Ordinance was revised in 2000, and an Overlay District was approved and adopted this year. The same standards for growth and development will be enforced in both St. Charles and Warren County.

In the past two years there have been 7 new subdivisions approved for development within the City limits, for a total of 1,944 residential lots and 250 commercial lots. Prior to that, it had been 8 years since any residential development had occurred within the City. Most of these homes and commercial lots will be located within the mixed-use development of Liberty in the southern part of the City. While initial construction of the mixed-use development will be in St. Charles County, the majority of the development will be located within Warren County. Public water and sewer will service all of the new homes and businesses within the project.

The City of Foristell provides water service within its incorporated limits. The City's water is provided by a 75,000-gallon elevated storage tank, with an average usage of 47,000 gallons per day. The City is looking to increase the storage and pumping capacity within the next 5 years to handle new growth.

All but 30 homes within the City are serviced by the City's two wastewater treatment facilities. Currently, the City has a 26,000-gallon per day wastewater treatment plant and a secondary 47,000-gallon per day lagoon facility. The average flow to the treatment plant is 19,500 gallons per day and the lagoon is currently averaging 26,000 gallons per day. Peak flow to the facilities is 22,000 gallon per day to the plant and 28,000 gallons per day to the lagoon. There are plans to increase capacity to the lagoon to 110,000 gallons per day within the next 5 years. Presently, the City does not have the capacity to serve the development that is projected in the next 5 years.

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The City has one 40-acre industrial/business park on its western edge just north of Interstate 70. Currently, the park is vacant, but through incentives for development and the reactivation of the Chamber of Commerce, the City has hopes of filling the park soon.

Annexation plans for the City include moving north and south of its existing boundaries. This is due to the fact that the City of Wentzville is located to the east and the City of Wright City abuts the City to the west.

Village of Innsbrook (2000 Population - 469)

The Innsbrook development has incorporated as a village and encompasses approximated 6,000 acres of land. Innsbrook was initially developed in the 1970s as a "get-away location." In the past decade, it has become more and more a destination for "empty nester" homebuyers. There are 1,300 homes, the majority of which are second homes; however, there are approximately 200 all-season homes and 80 condominiums. There are 70 improved lakes and ponds within the development and most homes have a lakefront parcel. The overall density of Innsbrook is approximately one home per four acres.

Innsbrook Village intends to expand to include more all-season homes and a "town center" as a business district with a neo-traditional design. An outdoor amphitheater is planned along with other major improvements. The Charrette Creek water shed area would allow between 10,000 and 12,000 acres of development in a total build-out scenario.

Innsbrook Village seeks to become more than a weekend community, offering year round living and commercial services. The Village is marketing more and more to "year-round residents," including families with children. The Town Center Commercial District is one example of how the Village has changed its marketing plans for the future. The population in Innsbrook Village is 460 as of the 2000 Census. Long-term residents are expected to total between 1,000 and 1,500 people at time of build-out.

Public utilities other than on-site septic systems are provided. Cuivre River Electric Cooperative provides electric service. Water service is currently provided by Public Water Supply District No. 2 to a central water system for specific areas of the Village, with the remainder of the residents on wells and cisterns. Currently the nearest high-pressure gas line is five miles from the Village and as a result, all units are served by propane tanks. The Village does envision providing public water and sanitary sewer service to all residents and businesses in the future but it has not yet determined as to time period.

City of Marthasville (2000 Population - 837)

The City of Marthasville is located in southeast Warren County along the Missouri River Valley, with a total of 536 acres within its City limits. The City is at the crossroads of Highway 94 and Highway 47, which makes it accessible to commercial, residential and tourist traffic due to the scenic areas nearby and the Katy Trail.

Presently the City of Marthasville does not have a Master Plan, nor does it have any zoning regulations. Last year the City approved two subdivisions with a total of 105 lots.

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The City's water services include two water towers (40,000-gallon and 50,000-gallon water tanks). A new 40,000-gallon water tank is currently in the works for the City to increase storage capacity. The service capacity of the water system averages 70,000 gallons per day, but during the summer months pumping can reach around 100,000 gallons per day.

The entire City is served by a wastewater treatment facility. The capacity of the facility is 103,300 gallons per day, with an average daily flow of 57,186 gallons per day, and a peak flow of 63,500 gallons per day. The City is currently in the process of planning to increase the capacity of its treatment facility.

The City has an industrial park that has about 16 acres of available space. Currently within Marthasville there are economic development participants who work with the East-Central Missouri Development Association to promote industrial parks within the region.

The City presently has no plans for annexation; however, due to the location of the Missouri River floodplain the City would most likely only annex along the bluffs or to the north towards Warrenton.

Village of Pendleton (2000 Population - 52)

The Village of Pendleton is the newest incorporated municipality within Warren County. The Village was incorporated in 1999. The Village is located just south of Interstate 70 along Highway B, between the City of Warrenton and the City of Jonesburg.

Presently the Village does not have a Master Plan or a Zoning Ordinance. In order to ensure compatible and coordinated development the Village sees the need in the future to develop both of these documents.

Currently, the entire Village is on septic systems and water is provided by cisterns and wells. The Boonslick Regional Planning Commission is currently working with the Village to acquire funding for a public water distribution system and a wastewater treatment facility.

The lack of commercial and or industrial development restricts funding sources for municipal spending. Therefore, the Village realizes the need to annex north along Highway B to the intersection of Interstate 70, including the Flying J truck stop, to increase the Village's tax base.

City of Truesdale (2000 Population - 397)

The City of Truesdale is located directly to the east of the City of Warrenton along Highway "M". The City's 704 acres is landlocked in all directions, except to the east and northeast, by the City of Warrenton.

The City has developed a draft Master Plan, however, it has not been adopted. Currently, the City does not have a zoning ordinance adopted.

In 2000, the City had one application for a residential subdivision with 35 lots, platted for mobile homes in the first phase with 34 additional lots in phase two. Over the past five years two applications for new subdivisions have been approved with a total of 13 lots.

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Water for the City of Truesdale is provided by a 100,000-gallon elevated storage tank. At present all water lines within the City Limits are less than 6" in diameter, therefore, restricting the effectiveness of the water distribution system. Plans are in development to upgrade the majority of these lines.

The wastewater system is shared with the City of Warrenton and at present there are only a few septic systems located on the fringes of the City. The City has three industrial parks within its City limits. One park is owned and operated by the City of Warrenton, and the other two are privately owned. The City of Truesdale presently does not have an organization for attracting industry into these parks; however, the City does offer incentives for industries to locate within these parks. The Warrenton Area Economic Development Association is currently recruiting for these parks.

At this time the City has no plans for annexation. However, if annexations were to take place they could only be to the east and northeast.

City of Warrenton (2000 Population - 5,281)

The City of Warrenton is located at the heart of Warren County. The City has a total of 4,695 acres of incorporated area. As one of the fastest growing cities within the County and with it being the largest city by population and industry, Warrenton is very aware of coming changes within the County.

The City adopted a Master Plan in 2000 and with it they should be able to structure the City's growth into the future. Although the City's zoning ordinance was adopted in 1982, it has been updated and revised over the years to help coordinate growth.

For a City of this size, the applications for residential subdivisions have been relatively high. From January 1, 2001 to July 2001, three applications for subdivisions have been submitted for a total of 70 residential units. From January 1, 1996 to December 31, 2000, the number of subdivision applications was 50, with 48 of those applications approved, permitting a total of 593 residential units. That is an average of 12 subdivisions approved per year. Of those new subdivisions, all are or will be serviced by public water and sewer.

Water for the City of Warrenton is presently provided by a 2,050,000-gallon storage system. The pump capacity of the system can provide a maximum of 2 million gallons per day, with an average of 600,000 gallons per day. Presently 30 percent of the City is serviced by water mains less than 6" in diameter. Plans to upgrade the water main system will be on an as needed basis. Plans are also under development for a new water tower location in the next three to four years.

The wastewater treatment facility in Warrenton currently is a 1 million-gallon per day facility. A bond issue in April of 2000 was passed to enlarge the treatment facility to a capacity of 2 million gallons per day by 2003. Current average daily flow is between 700,000 to 800,000 gallons per day, with a peak flow of over 1 million gallons per day. Future residential development can be accommodated by the current system, which also services the City of Truesdale, but modification to increase capacity will need to be made before the City will be able to accommodate any additional large industry.

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Along with the growth in population for the City, Warrenton is also aggressively seeking new business and industry. The City owns one industrial park that is located to the east of Warrenton within the city limits of Truesdale. The space available within this and another industrial park in 2001 was about 40 percent. Various incentive programs have been used successfully to attract new business to the two industrial parks.

Currently, there is one economic development organization actively involved in the community, it is the Warrenton Area Economic Development Organization. Annexation plans for the City, in general, will be non-directional around the City. However, based on past annexation growth along the corridors of Highway 47 and west along Interstate 70 would be likely.

Public education in the Warrenton School District (**Ref. Figure 2.3**) includes a new high school that was constructed in 1997. Along with the new high school, renovations to the junior high school and elementary schools have occurred. In the school district's long-range 20-year plan, a new junior high school and 2 new elementary schools are planned for construction.

City of Wright City (2000 Population - 1,532)

Wright City has the second largest population in Warren County. It encompasses 1,615 acres. Based upon the growth projected to occur, the City is preparing to update its Master Plan and Zoning Ordinance. The updating of these two documents will allow the City to better react to and coordinate future development.

As of fall 2001 there had been only one subdivision application submitted with 27 lots for the calendar year. In 2000 no applications were submitted. From January 1, 1996 to December 31, 2000 there were only two subdivisions applied for within the City limits, with a total of 84 lots. This limited amount of growth allows the City to develop standards and increase public facilities and infrastructure to better handle growth.

Water for the City is provided by a 250,000-gallon water storage tank, and the City has the capacity to pump up to 750,000 gallons per day. Presently, 50 percent of the City's water lines are less than 6" in diameter, mostly in the older central portion of the City. The City does have plans in the next five years to upgrade the water storage capacity and to increase its pumping capacity. The City also has plans to upgrade the older water lines within the City on an as-needed basis.

The wastewater treatment facility for the City currently services 100% of the residences within the City limits. The systems capacity is 350,000 gallons per day. At present, the average daily flow is 180,000 gallons with a peak flow of 290,000 per day. There are plans to increase capacity to the facility within the next 5 years to meet the demands within the City and along the outer fringes in its planned annexation area.

Wright City is actively seeking new growth in business and industry within the City limits. Currently, there is one industrial park in the City limits, which is 75% occupied. The City has offered incentives to attract new business and industry with a good success rate. The continued growth of industry within the City limits will depend on the City increasing the capacity of the water and sewer facilities to accommodate the new growth.

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At present the City does not have a capital improvements list for the current year or any immediate district-wide plans for annexation; however, voluntary annexations have been completed. Wright City is currently developing plans to expand its public education facilities. A long-range plan is being developed to accommodate the projected new growth and development.

SUMMARY OF CAPACITY OF CITIES AND VILLAGES TO PROVIDE UTILITIES AND RELATED SERVICES

In summary, the municipalities of Warren County have the ability to serve urban development, though ambitious expansion plans are not proposed by any of the cities at this time. Rather, annexation is approved on a voluntary basis as private, urban development warrants. The County Commission of Warren County is not prepared to provide public utilities for urban growth. For these reasons, this Plan calls for urban growth and rural growth greater than rural densities to be focused in and around the corporate limits of the area cities—within the "Urban and Suburban Tiers" (**Ref. Chapters 4 and 6**). By focusing development in these areas, development pressures can be reduced in the County along with preserving agricultural lands.

RURAL WATER DISTRICTS

Montgomery County Public Water and Sewer District

Although the Montgomery County Public Water and Sewer District (PWSD) does not provide water or sewer service to an incorporated area within the County, it does provide water service to several unincorporated areas within Warren County. Existing water lines are located along State Highway Y south from Jonesburg to Tower Road, along both the north and south Frontage Roads of I-70, along Sunnyside Road, south along State Highway 47 to Deer Run Road, south along State Highway U to Post Oak Road and along portions of Lix Road and Palmyra Road. Although the PWSD does not have any specific long-range plans for extending its service area within Warren County at this time, it will evaluate each proposed development requesting services. However, there are plans to provide more capacity to the existing service area with an additional well and tower.

St. Charles County Public Water District No. 2 (Alliance Water Resources)

St. Charles County Public Water District No. 2 provides water service for a portion of Warren County. The District currently provides service to a portion of the Village of Innsbrook, Dutzow, a few customers on Highway J north of Wright City, and the northeast corner of Warren County, north of Interstate 70, west to Strack Church Road.

At present the water district's main water line is about one and one half miles from the Warren County/St. Charles County border along Highway "N" in St. Charles County. The goal of the Water District in its long-range plan is to continue the main water line into Warren County and the Village of Innsbrook. Additionally, future plans include providing more water service to the southeastern part of Warren County.

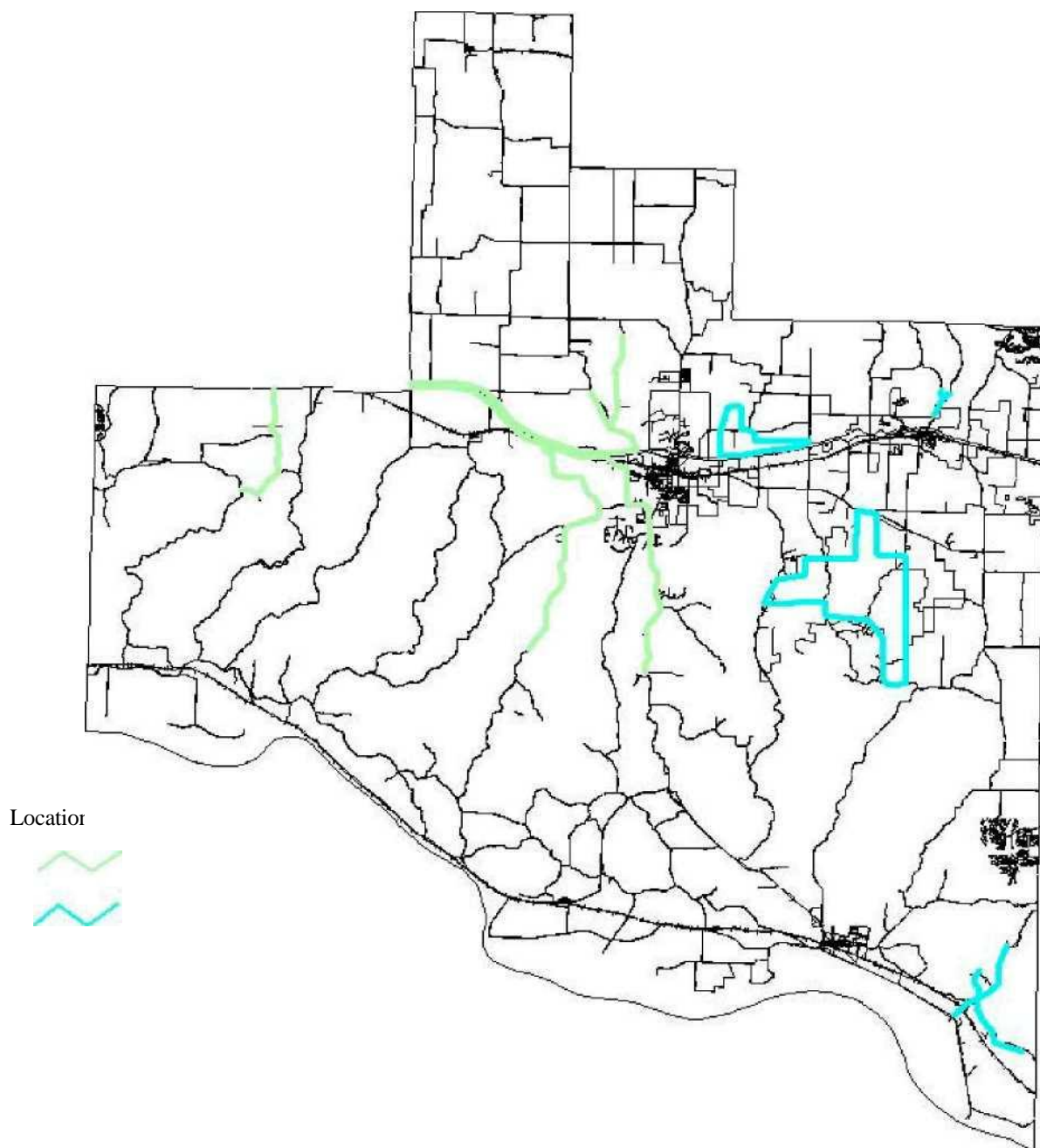
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The following map indicates where the existing water lines are located within Warren County for both the Montgomery County PWSD and St. Charles County Public Water District #2.

SUMMARY OF CAPACITY OF RURAL WATER DISTRICTS TO PROVIDE UTILITIES

In summary, the two water districts that provide public water to portions of the unincorporated County do not plan to increase their area of coverage. The rural water districts serve relatively limited parts of the unincorporated portions of the County (**Ref. Figure 2.2**). As a result of the limited service extension plans, residential, commercial and industrial developments should plan to cluster around areas with existing water services within the "Urban and Suburban Tiers" (**Ref. Chapters 4 and 6**). Development outside the current service areas will be reliant on wells and cisterns.

Figure 2.2 Rural Water District Lines



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EMERGENCY SERVICES

911 Service

Emergency calls are taken by Warren County Joint Communications. They then dispatch for the ambulance, fire and law enforcement departments that serve Warren County. A half-cent County-wide sales tax funds this service. Updating the current 4-digit 911 addressing system to 5-digits has been identified as a growing need. As the number of homes in Warren County continues to grow, so will the need to bring all residences into the same 5-digit system, as responsive and high quality service depends on the ability of emergency services to locate residences quickly and efficiently. Currently, 5-digit addresses are only assigned to homes in new subdivisions or to homes not yet assigned a 911 street address, such as those still on rural routes.

Ambulance Service

For emergency medical services, Warren County relies primarily on Warren County Ambulance. This ambulance district serves a 240-square-mile area making up the northern two-thirds of Warren County. Property taxes and user fees fund the ambulance services and staff of seventeen (17) full-time and fifteen (15) part-time employees. During peak operating hours between 8 a.m. and 5 p.m., eight emergency service staff and four trucks are on duty. This is reduced to six staff and three trucks between 5 p.m. and 10 p.m., and four staff and two trucks from 10 p.m. to 8 a.m.

Warren County Ambulance provides advanced life support, with both EMTs and paramedics on staff. Medical control is primarily through St. Joseph's Hospital in Lake St. Louis, however patients are sometimes transported to hospitals in Wentzville, Troy and Washington as well.

When air ambulance service is needed, the ambulance service contracts with several different companies. Due to a growing need for this service, Warren County Ambulance is negotiating with Arch Air Ambulance to locate a base permanently within the ambulance district. Arch has agreed to relocate on a trial basis, during which it will operate between the hours of 8 a.m. and 6 p.m. If demand is strong enough, the company will relocate its base to Warren County permanently to provide service on a 24-hour basis.

Due to the rapid growth the County is experiencing, the Ambulance District expects the demand for its services to increase as well. The district has been tracking the number of calls for service and is attempting to pass a property tax increase to fund any additional equipment or staff needed to meet increased demand. Anticipated improvements include the construction of a new base and helipad near the existing fire department.

Most of the southern third of the County is served by Marthasville Community Ambulance, except for a small southwestern corner of the County served by Hermann Community Ambulance. Marthasville Community ambulance district is staffed with paid professionals on 12-hour shifts and augmented by volunteers.

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Fire Service

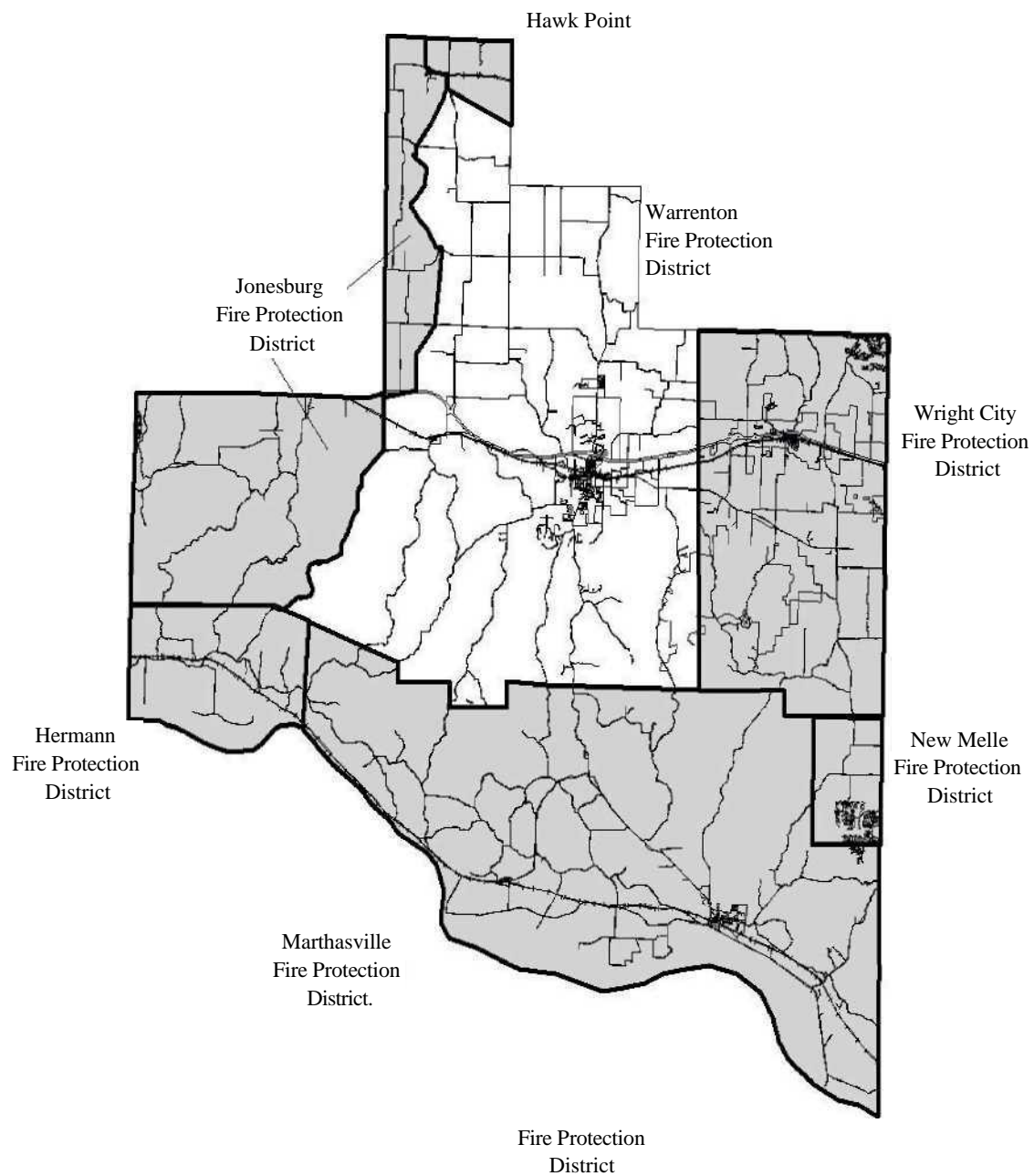
The following fire protection districts (**Ref. Figure 2.3 - Fire Districts Map**) provide fire services for the County:

- Wright City Fire Protection District;
- Warrenton Fire District;
- Marthasville Fire Protection District,
- Jonesburg-High Hill Fire Protection District
- New Florence Fire Protection District and;
- New Melle Fire District,

The southwest and extreme northeast corners of the County are served by fire services that are supported by member fees and charges. (**Ref. Figure 2.3 - Fire Districts Map**)

Any development within five miles of a station and 1,000 feet of a hydrant is given an ISO rating of 6. Rural areas that are beyond this type of service are given an ISO rating of 9. The ISO rating can be reduced from 9 to 6 with enough water hauling capacity and sufficient mutual aid response agreements with neighboring jurisdictions. It is the intent of the Fire Protection Districts to provide improvements during the coming year that will allow most rural areas of the County to be granted the more preferable ISO rating of 6, which would create a savings of 10 to 15 percent on insurance premiums.

Figure 2.3: Fire Districts Map



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Public Safety (Sheriff's Department)

The Warren County Sheriff's Department is composed of one Sheriff, three detectives, and 17 patrol officers. They provide safety services to the entire County, in that, they have a mutual aid agreement with all of the incorporated areas. On duty officers are distributed between the north and south zones. Officers working in the north zone are officed at the Warrenton Justice Center with officers in the south zone working out of the Lake Sherwood Security office. Currently the Sheriff's Department is fully staffed; however, to maintain the current level of service, additional deputies may be required in the future as growth within the County continues.

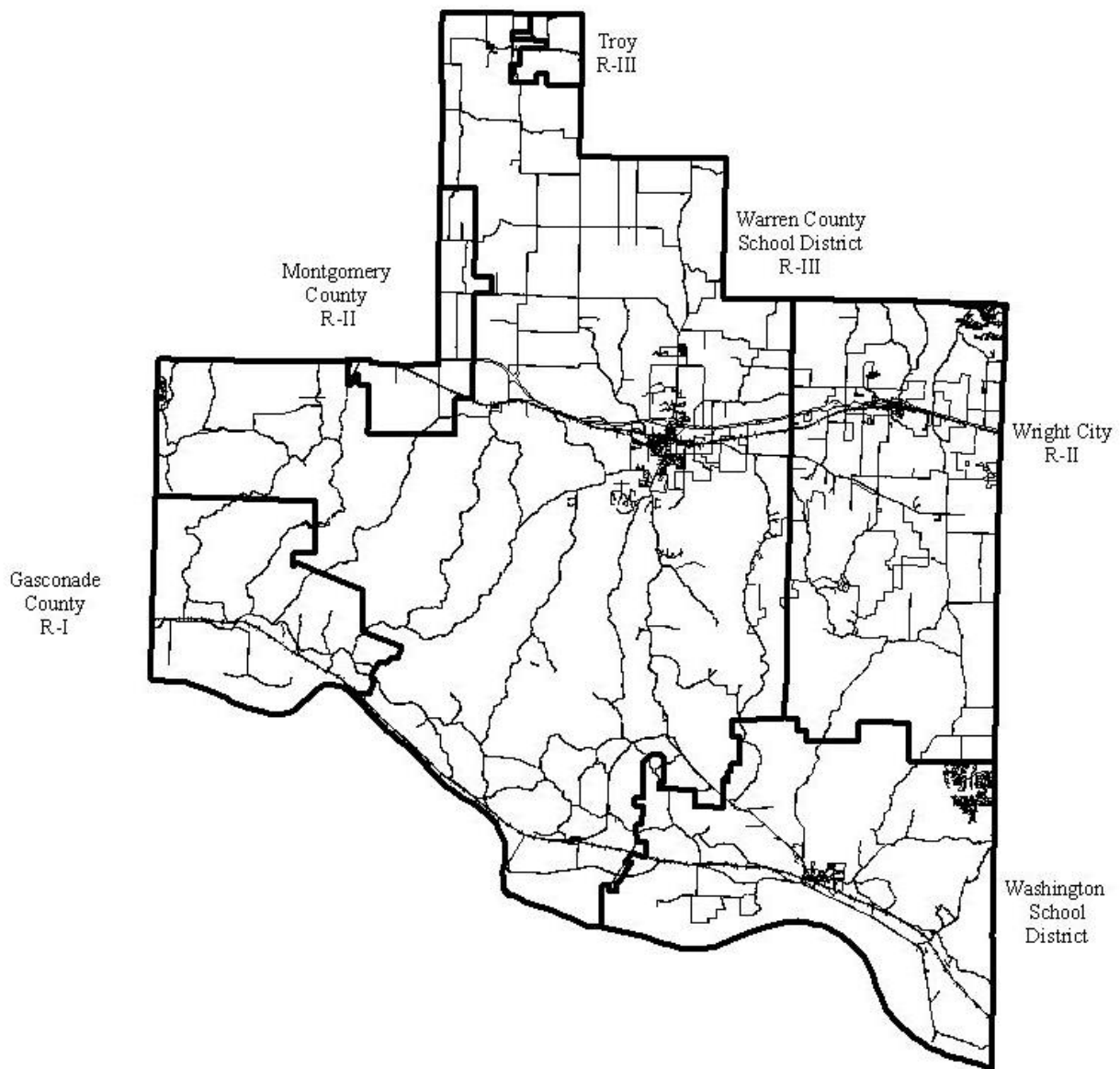
SCHOOL DISTRICTS

7,000 students attend one of the various elementary, middle, junior high or high schools in the area. Warren County is served primarily by three school districts:

- Wright City R-2 District;
- Warren County R-3 District; and
- Washington School District.

Parochial and private schools are also present in the County. The R-2 District encompasses Wright City and a rural area in the vicinity, the R-3 District encompasses Warrenton south to approximately Hopewell. The Washington School District encompasses primarily the southeastern corner of the County including Marthasville and Dutzow. **(Ref. Figure 2.4- School District Map)** The R-3 School District has been a major draw for development into central and western Warren County. In general, it is agreed that neither school district has a balance of commercial and industrial tax base to support a school district if there is significant residential development in the coming decades. The increased costs of serving a significant residential growth include the need for more classroom space, more teachers and staff, and increased bus service.

Figure 2.4: School Districts Map



The education pattern in Warren County has been categorized by a high dropout rate among high school students. This situation is improving, however, with higher graduation rates in the past year. Most social trends in Warren County that affect children have been *improving*, as reported by the *Citizens for Missouri's Children, Children's Trust Fund*, for the past year (2001):

- Higher rates of high school diplomas among new mothers;
- Declining rates of low birth weight among infants;
- Less infant mortality; and
- Declining rate of child deaths.

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Warren County trends that affect teens are changing for the better, as well. Fewer teen violent deaths and births to teens. There has been no change in the past year in the rate of students enrolled in free/reduced lunch programs; and the recent local trends have been negative in rates of child abuse and neglect (still below state average) and out-of-home placement entries (relatively high for the state of Missouri). These social trends should be monitored over the years, as they affect the future ability of Warren County to support development and a high quality of life.

DEMOGRAPHICS

The US Census Bureau's 2000 census brief stated that the Nation's population growth of 32.7 million people between 1990 and 2000 represents the largest census-to-census increase in American history. The previous record increase was 28.0 million people between 1950 and 1960, a gain fueled primarily by the post-World War II baby boom (1946 to 1964). Total decennial population growth declined steadily in the three decades following the 1950s' peak before rising again in the 1990s. Population growth varied significantly by region in the 1990s, with higher rates in the West (19.7 percent) and South (17.3 percent) and much lower rates in the Midwest (7.9 percent) and Northeast (5.5 percent). Meanwhile, despite overall population growth in each of the past five decades, the Midwest's share of total population fell from 29 to 23%.

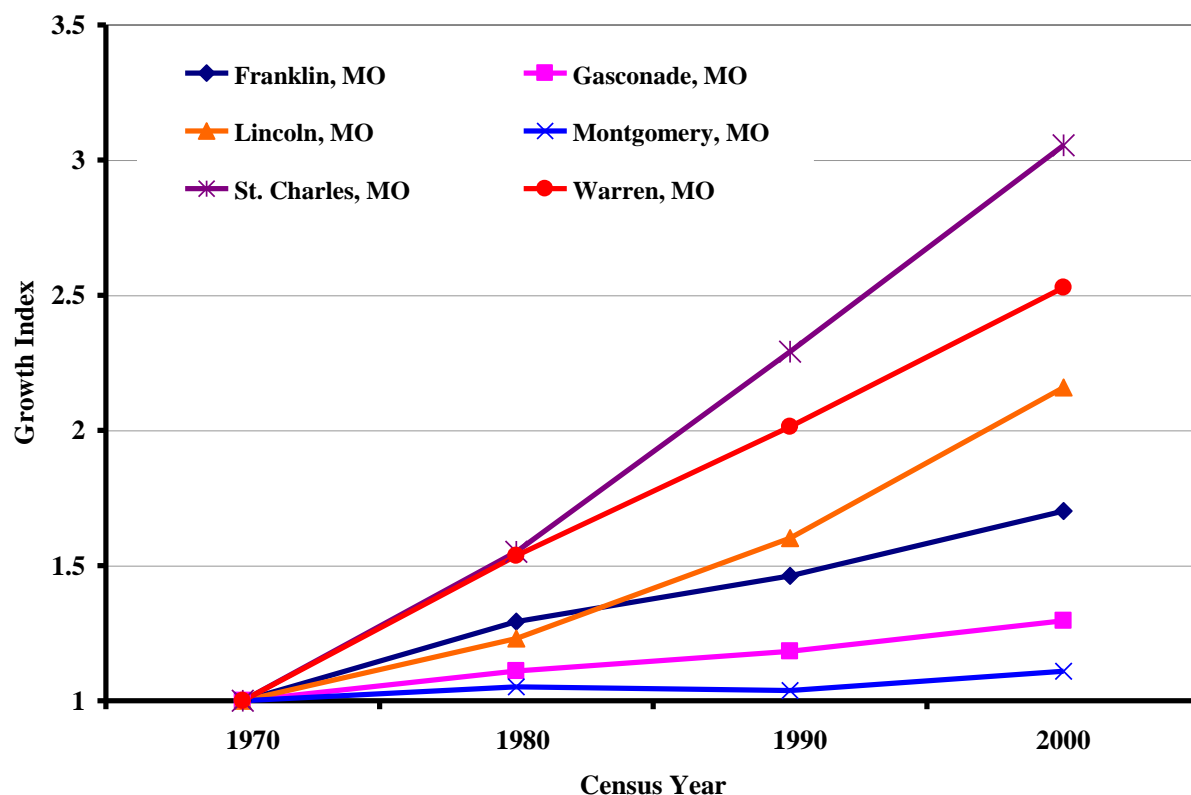
According to the 2000 census, Warren County's population is 24,525, an increase of 4,991 people (about 26 percent) from the 1990 census (**Ref. Table 2.6, Fig. 2.5**). In comparison, the St. Louis MSA grew by only 4.7%. Among its neighboring counties, Lincoln and St. Charles registered the largest increases of 35 and 33 percent respectively. These are significant increases compared to the average rate of growth for the Midwest and the Nation as a whole.

Table 2.6: Total Population and Percentage Change by Decade (1970- 2000)

	1970	1980	1990	2000	%change 70-80	%change 80-90	%change 90-00
Franklin, MO	55,118	71,233	80,603	93,807	29.24%	13.15%	16.38%
Gasconade, MO	11,840	13,137	14,006	15,342	10.95%	6.61%	9.54%
Lincoln, MO	18,041	22,196	28,892	38,944	23.03%	30.17%	34.79%
Montgomery, MO	10,941	11,501	11,355	12,136	5.12%	-1.27%	6.88%
St. Charles, MO	92,934	144,108	212,907	283,884	55.06%	47.74%	33.34%
Warren, MO	9,700	14,902	19,534	24,525	53.63%	31.08%	25.55%
St. Louis MSA	2,461,041	2,419,171	2,492,522	2,609,702	-1.70%	3.00%	4.70%

Source: US Census Bureau, BWR Corp

Figure 2.5: Population Growth Index (1970- 2000)



Source: US Census Bureau, BWR Corp

The Population Growth Index is a means of comparison of growth rates of different entities assuming the base population of one (1) for each entity (**Ref. Fig 2.5**). Warren County shows the second highest growth index in the last 40 years. St. Charles has been the fastest growing County in the 6-County region for the last 40 years. Lincoln County saw rapid growth after 1980 and is now the fastest growing County in the region.

The Population Committee of the American Statistical Association, St. Louis Chapter, estimated the 2000 County population to be 25,000, an increase of about 5,500 people (**Ref. Table 2.7**). They estimated 79% of that increase to be a result of net migration and only 21% due to natural increase. This estimated percentage increase in net migration was highest for Warren County among the five-county region. Lincoln County came in second at 73%.

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Table 2.7: Components Of Population Change (April 1,1990 to January 1, 2000)

JURISDICTION	1990 Census Population	Estimated Resident Births	Estimated Resident Deaths	Estimated Natural Increase	Estimated Net Migration	01/01/2000 Estimated Population	Percent Residual Migration
Franklin County	80,603	12,200	7,742	4,458	8,340	93,400	10.3%
Lincoln County	28,892	4,636	2,604	2,032	5,576	36,500	19.3%
St. Charles County	212,907	37,604	12,822	24,783	45,410	283,100	21.3%
St. Louis County	993,529	132,851	89,865	42,986	-27,215	1,009,300	-2.7%
Warren County	19,534	3,021	1,868	1,153	4,314	25,000	22.1%

Source: "1990-2000 St. Louis Metro Components of Population Change"--Prepared by the Population Committee of the American Statistical Association, St. Louis Chapter

The City of Warrenton is the largest City in the County (**Ref. Table 2.8**). Its population increased by about 1,620 people in the 1990s. High percentages of growth are also occurring in the smaller cities of the County, such as Truesdale, Marthasville and Wright City. The unincorporated areas of the County are also growing at a rate comparable to that of the cities. Between 1990 and 2000, the total population of the cities increased by 2,133 people, while that of the unincorporated areas of the County increased by 2,858 people. These trends indicate that the County has to accommodate and be pro-active in planning for new development occurring outside the city limits in a way that is desirable for quality development.

Table 2.8: Cities and Villages of Warren County: Total Population and Percentage Change by Decade (1970-2000)

	1970	1980	1990	2000	%change 70-80	%change 80-90	%change 90-00
Innsbrook	297	455	545	469	53.20%	19.78%	-13.94%
Marthasville	255	390	659	837	52.94%	68.97%	27.01%
Truesdale	160	246	291	397	53.75%	18.29%	36.43%
Warrenton	2,014	3,101	3,661	5,281	53.97%	18.06%	44.25%
Wright City	783	1,205	1,227	1,532	53.90%	1.83%	24.86%
Urban Population	3,509	5,397	6,383	8,516	53.80%	18.27%	33.42%
Balance of County	6,191	9,505	13,151	16,009	53.53%	38.36%	21.73%

Source: US Census Bureau, BWR Corp

Population Projections

Table 2.9: Projected Changes in Population of Top Ten

Rank	County	% Change
1	Christian	119
2	St. Charles	80
3	Platte	69
4	Lincoln	68
5	Stone	66
6	Warren	63
7	Cass	61
8	Johnson	52
9	Taney	51
10	Jefferson	48

Population shifts among Missouri regions have Missouri Counties (2000-2020) followed similar patterns for many years. Shifts have been from rural agricultural areas to urban areas and to rural areas rich in recreational amenities. Projections by the Missouri Office of Social and Economic Data Analysis (OSED) show that these patterns will continue, and that there will be more movement from older urban centers to their less densely settled fringes and to newer urban

Source: Missouri Office of Social and Economic Data Analysis (OSED)
Note: Projections are based on the 1990 Census. This scenario considers migration to be an important component of population change through to 2020

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Seven of the 10 counties in the most probable scenario are metropolitan counties that have strong socioeconomic ties to their central cities but may be located as far as 60 miles away. Christian County, south of Springfield, is projected to more than double in size by 2020. St. Charles County, northwest of St. Louis, will grow by 80 percent. Platte County, northwest of Kansas City, will grow by 69 percent. Warren County is projected to grow by 63 % (**Ref. Table 2.9**).

Detailed projections by the Missouri Office of Social and Economic Data Analysis (OSED) show that Warren County is expected to add 5,645 people between 2000 and 2010 and another 5,409 people in the following decade. Lincoln and St. Charles Counties are projected to have higher growth rates. While these projections are based on the 1990 Census, and have not yet been revised for the 2000 Census, the trends are expected to be similar, with a decrease from the high growth rates of the 1990s, to a gradual slowdown by the 2020s.

Table 2.10: Projected Population and Population Change (2000-2020)

		1990	1995	2000	2005	2010	2015	2020	2025
Franklin	Population	80,603	87,296	94,339	1,000,937	1,137,200	11,067	18,279	22,543
	% Change		8.3%	8.1%	7.0%	6.2%	5.5%	4.6%	3.6%
Gasconade	Population	14,006	14,415	15,022	15,634	16,264	16,911	17,491	17,972
	% Change		2.9%	4.2%	4.1%	4.0%	4.0%	3.4%	2.7%
Lincoln	Population	28,892	32,743	37,183	41,650	46,235	50,838	55,260	59,349
	% Change		13.3%	13.6%	12.0%	11.0%	10.0%	8.7%	7.4%
Montgomery	Population	11,355	11,606	11,933	12,269	12,592	12,876	13,095	13,235
	% Change		2.2%	2.8%	2.8%	2.6%	2.3%	1.7%	1.1%
St. Charles	Population	212,907	2,339	381,816	3,415,618	3,818,587	41,032	41,984	39,891
	% Change		15.7%	14.4%	12.0%	10.4%	9.3%	8.1%	6.8%
Warren	Population	19,534	22,354	25,219	28,043	30,864	33,656	36,273	38,590
	% Change		14.4%	12.8%	11.2%	10.1%	9.0%	7.8%	6.4%

Source: Missouri Office of Social and Economic Data Analysis (OSED)

Note: Projections are based on the 1990 Census.

CONSERVATION AREAS

Located within the Missouri Department of Conservation's Central Region, Warren County is home to four state designated "conservation areas." These are lands that are not available for future development in the County, but will provide residents and visitors alike with camping, boating, hunting, hiking and preserved natural areas.

Daniel Boone Conservation Area

The Daniel Boone Conservation Area contains a total of 3,520 acres, most of which is forestland. It is located in western Warren County, six miles southwest of Jonesburg on Route Y. A former conservation commissioner donated the original acreage for this area in 1943. Recreation facilities include primitive camping (no bathrooms, showers or running water), picnic area, hiking trail, designated horse trail and five fishable ponds. These amenities make up 13.4 of the park's total acres.

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Little Lost Creek Conservation Area

Little Lost Creek is 2,899 acres, located five miles south of Pendleton on Route B. It too is predominantly forest area. Recreation facilities include primitive camping, hiking trail, and a designated horse trail. Little Lost Creek is filled seasonally with water.

Reifsnider State Forest

Reifsnider encompasses 1,465 acres, and is located in central Warren County, two miles southeast of Warrenton off of Route M. Facilities include picnic area, hiking trail, firearms range, Reifsnider Forest Natural Area (22 acres of mature white oak forest), and intermittent stream (North Fork of Charrette Creek). Visitors can view various forest management practices underway to improve and preserve the natural area and maintain watershed quality.

Warrenton Towersite

This is a 10-acre forest area located three miles southwest of Warrenton on Route U. A Conservation Department office is located here.

PARKS

The Katy Trail State Park extends along the Missouri River from southwest St. Charles County into southeast Warren County and continues into Montgomery County. For bicyclists, joggers or nature lovers, the Katy Trail State Park offers many sights and attractions. Bikes can be rented from various shops along the trail.

SOILS OF WARREN COUNTY

The soils of Warren County are shown on detailed soils maps published by the United States Department of Agriculture, Soil Conservation Service. A General Soils Map of Warren County is attached hereto. The maps consist of soil areas outlined and identified by symbols printed on aerial photo sheets. Tables and other data in the study show the relative suitability or degree of limitation of soils for many specific purposes, such as farming and urban development. Warren County can use the soil maps and defining characteristics in assessing development proposals.

Soil Survey of Warren County, Missouri

Warren County encompasses approximately 429 square miles, or 273,920 acres. Corn, soybeans, and wheat are the principal crops. Livestock, mostly beef cattle and hogs, is the biggest income producing product of the County. Mixed livestock and cash-grain farming dominates the prairie region in the northern half of the survey area and the area of deep loess soils bordering the Missouri River flood plain. The bottom lands along the Missouri River are used almost exclusively for cash-grain farming. The sale of timber products is important economically in the steep, dissected areas between the prairie region to the north and the major flood plains along the Missouri River.

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The need for erosion control on sloping cropland overshadows all other management concerns in farming the soils of Warren County. Soils of the Mexico and Armster series in the prairie region are susceptible to severe sheet erosion, as are the Hatton and Keswick soils in the adjoining area of glacial and loessial soils. Winfield and Menfro soils, in the deep loess area bordering the Missouri River flood plain, are subject to both sheet and gully erosion. Upland soils of the Putnam and Marion series and bottomland soils of the Booker and Waldron series are wet.

Most of the bottomland and some of the nearly level or gently sloping uplands have a potential for increased yields under supplemental irrigation. Many areas of the narrow bottomland along small tributary streams have a good potential for growing walnut or other high-value trees. Some areas of Menfro and Winfield soils have a good potential for orchards and vineyards.

Soil Associations and Classifications

The General Soil Map shows the soil associations of the County. The map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where soils are not suitable can be identified. Because of its small scale, the map is not suitable for planning the management of a farm or field or for any other site-specific purposes. The soils in any one association differ from place to place in slope, depth, drainage, and other characteristics that affect management. The soil classification then becomes more important to determine the capability of the soil.

Soil classifications indicate the ability of the soil to support agricultural uses. Though Class I and II are prime agricultural lands, other classes can also be used for agricultural purposes with adequate conservation practices and choice of plants. The national capability classification shows soils groupings in eight classes:

Class I soils	Few limitations that restrict their use.
Class II soils	Some limitations that reduce the choice of plants or require moderate conservation practices.
Class III soils	Severe limitations that reduce the choice of plants or require special conservation practices, or both.
Class IV soils	Very severe limitations that reduce the choice of plants, require very careful management, or both.
Class V soils	Little or no erosion hazard but have other limitations impractical to remove that limit their use largely to pasture, range, woodland or wildlife food and cover.
Class VI soils	Severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, range, woodland, or wildlife food and cover.

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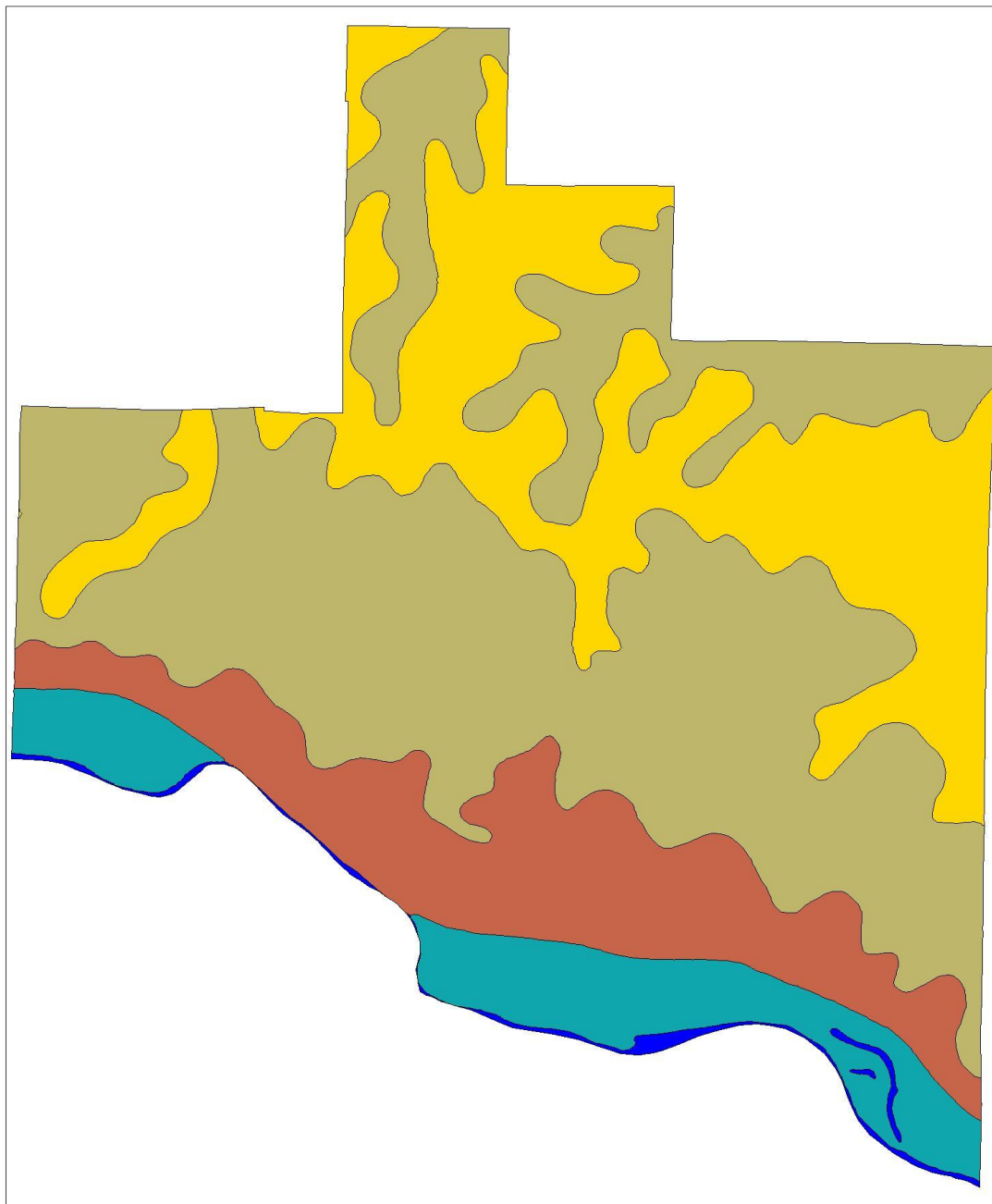
Class VII soils	Very severe limitations that make them unsuited to cultivation and that restrict their use largely to grazing, woodland, or wildlife.
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Class VIII soils	Limitations that preclude their use for commercial plan production and restrict their use to recreation, wildlife, or water supply, or to aesthetic purposes.
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Class I and Class II soils with soil yields-per-acre of crops and pastureland of certain types should comprise the primary soils protected for farming.

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GENERAL SOIL MAP



Comprehensive Plan: Warren County, Missouri

General Soil Map

LEGEND: Major Soil Associations

-  Winfield-Menfro Association: Deep Soils that formed in loess and are gently sloping to steep, moderately well-drained to well drained
-  Mexico-Armster-Putnam Association: Deep soils that are formed in loess and glacial till and are nearly level to moderately sloping and somewhat poorly drained, moderately well drained, and poorly drained.
-  Goss-Gasconade-Chilhowie Association: Deep, shallow, and moderately deep soils that formed in residuum reathered from limestone and shale and are moderately sloping to steep, well drained and somewhat excessively drained
-  Blake-Haynie-Booker Association: Deep soils that formed in alluvial sediment and are nearly level, somewhat poorly drained, well drained, and very poorly drained.
-  Water



.5 0 1 2 3 Miles

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7920 Ward Parkway Kansas City, MO 64114 (816) 363-2696

Path 2001275/soilmap

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The general soil map shows the map units in the survey area. A map unit is a landscape that has a distinctive pattern of soils in defined proportions. It typically consists of one or more major soils and at least one minor soil and it is named for the major soils. The soils in one map unit can occur in another, but in different patterns.

A map showing units for land use planning is useful to people who want to have a general idea of the soils in a survey area, who want to compare different parts of that area, or who want to locate large tracts that are suitable for a certain kind of land use. Such a map is a useful general guide for broad planning for a watershed, a wooded tract, or a wildlife area or for broad planning of recreational facilities, community developments, and such engineering works as transportation corridors.

SUMMARY OF EXISTING CONDITIONS

As noted earlier, Warren County lacks the resources to provide public water or sewer services into rural areas beyond the cities. Given the County's inability to provide public water and sewer service, the County should focus development in areas that are capable of providing these urban services. The same holds for police and fire protection, and public infrastructure maintenance. The County cannot build and maintain rural roads to serve "rural suburbanites" throughout a wide region, as has occurred in neighboring counties of St. Louis, such as St. Charles and Jefferson Counties.

New commercial and industrial developments generate tax revenues, but those funds should be committed for infrastructure to serve those urban uses. Unincorporated, rural areas of the County see limited tax revenues to provide infrastructure. Low taxes today attract development; yet, that very development demands more services, hence higher taxes. Therefore, residential development along with most commercial and industrial developments will need to be concentrated in areas where there is the ability to provide public services. Any intense level of residential and non-residential development in the unincorporated County will have to be self-supporting in terms of paying its way for water, sewer, roads, and related infrastructure and not unduly burdening County resources.

CHAPTER THREE: PLANNING ISSUES AND OBJECTIVES

ISSUES IDENTIFICATION

The process to develop the new Warren County Master Plan was publicly initiated with a presentation to the Planning and Zoning Commission and a "Focus Session" for issue identification in July 2001. This first of two public policy work sessions was advertised to the public and approximately 25 participants representing the County Commission, Planning and Zoning Commission, County Staff, the general public and the local media participated.

A follow-up "Work Session" was held in Fall 2001. The County Commission and County Planning and Zoning Commission along with the public and invited stakeholders verified findings and approaches developed to date. Again, the issues were discussed in terms of both the near-term (the immediate five-year period) and the longer-term (up to 20 years in the future).

Prior to the 2001 workshops, the County had facilitated a public planning process during 2000. This earlier effort was a visioning process that identified—among other issues—a general consensus for a Land Use Tier system of land use regulation. The *Master Plan 2002* process built upon the results and consensus of this earlier visioning effort.

The primary purpose of the Focus Session was to identify the most critical issues facing the County in the coming years: near-term and longer-term and to provide a detailed explanation of each issue. The session provided an opportunity for residents, landowners and business leaders to identify issues that are most critical to the County-wide community and to discuss initial strategies to resolve the issues.

The process for *Issues Review and Identification* used at the Focus Session was a structured idea-sharing process. Participants were asked to review issues identified during previous planning meetings and identify additional issues they thought are most critical with the entire group. Issues were grouped into one or more of the following categories:

1. **Growth:** issues discussed related to the location, type and quantity of land uses as well as infrastructure and services needs as Warren County grows.
2. **Transportation:** issues discussed related to the community's street and highway network along with minimum development standards.
3. **Zoning and Subdivision Regulations:** issues discussed focused on specific issues that can be addressed through changes to the Zoning Order or Subdivision Regulations. Examples include evaluating the commercial and residential zoning districts.
4. **Agriculture:** issues discussed related to the preservation of a rural "identity" and prime agricultural land.

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5. **Environment:** issues discussed related to proper development guidelines for environmentally sensitive areas and proper guidelines for stormwater management.

Following the review and identification of key issues, breakout groups were formed to discuss the issues in a Planning Charrette workshop. The breakout groups clarified, refined and answered questions pertaining to each of the five categories. Following discussion of issues, participants identified specifics on area maps. As a conclusion to the work session, a representative from each breakout group shared findings with the entire group.

The following section summarizes the workshop issues by major category.

GROWTH ISSUES AND PLANNING OBJECTIVES

1. **Resolve conflicts between rural and urban growth demands.**

- Preserve rural and natural areas and farming land while making urban growth pay its way.
- Accommodate urban growth near cities in Urban Tiers.
- Allow large-lot residences in Suburban Tiers, while preserving future growth potential.
- Allow rural density residences in Rural Tiers.

Consensus was formed around the concept of allowing urban development in areas where services can be provided. Services include sewer and water, adequate access, police and ambulance service. In terms of density, urban densities should be encouraged in areas adjacent to city limits where services can be provided. As sewer and water lines and public safety protection are increased, boundaries for urban development can be expanded accordingly. Conversely, areas adjacent to city limits with significant topography or limited ability to be served with City sewer and water should be developed at a lower intensity, such as one unit per three acres or one acre plus if community sanitary sewer service is provided.

2. **Accommodate commercial and industrial land uses for economic development.**

- Presently, there are very few vacant commercially zoned parcels within the County. In order to promote economic development additional properties will need to be rezoned for commercial and industrial development. This process could be initiated with the new future land use map, which will indicate recommended locations for commercial and industrial development.
- In order to use the limited number of interchanges with Interstate 70 in the most efficient manner, it will be imperative to plan for a rational number of appropriately designed commercial developments. Items to consider will include access control, shared entrances and parking, landscaping and buffering from adjacent residential uses.

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3. **Equitable financing of growth: public vs. private funding.**

- A key issue that must be dealt with in association with the growth of the community is the financing of infrastructure improvements. Regulations pertaining to financing the widening of roads and connecting through-streets must be clearly spelled out for developers to follow and elected officials to enforce.
- "Pay to Play" was the underlying theme during discussion of who will bear the costs of improvements and standards of those improvements. Therefore, the more urbanized a development, the more the costs must be borne by the developer; also the higher the standard to which public improvements must be held. An example would be the development of an urban or suburban subdivision. The developer would be required to provide streets with hard-surfaced pavement and sidewalks; however, a subdivision with 5-acre lots, may only be required to provide gravel streets.

4. **Large-lot residential sell-offs of unplatted land.**

- The current Subdivision Regulations allow for the selling off of a 3-acre parcel without platting or County review. This policy enables bad development practices, such as continuing "piano key" or uncoordinated development along major arterials. The minimum acreage allowed for an unplatted development needs to be evaluated and increased in minimum size.

5. **Land Use Tiers - Encourage concentrated development around services.**

- The use of land use tiers can be a method to help concentrate urban development in and around existing City limits.

6. **Cluster Development Incentives/Bonuses.**

- Bonuses or incentives, such as increased densities or reduced internal setbacks, can be offered to promote cluster-style developments to preserve open space. The desired outcome of such development is the preservation of a rural "sense of place," stormwater management and related benefits while filling a residential market niche.

7. **County-City cooperation with regard to infrastructure development.**

- An open line of communication needs to be maintained between elected officials in Warren County and the cities located within it. Topics of discussion could include stormwater management, the dedication and subsequent acceptance of County roads, adoption of common utility infrastructure standards and the possible joint funding of wastewater treatment facilities.

TRANSPORTATION ISSUES

1. Provide a mature major arterial transportation network within the County.

- Protect rural areas from degradation; and
- Help foster residential and commercial development in and around urbanized areas.

A major concern for development in Warren County is that the limited number of state highways have and are continuing to be utilized by local traffic as arterials. A mature traffic network of paved public roads has never been developed. In order for this to occur, minimum standards need to be developed and enforced through the Subdivision Regulations regarding street development, access control, sight distance, and the dedication of easements for future streets.

Any new development along the state highways in the County needs to require additional right-of-way dedication and improvements for widening the state highway for the future development of left-turn lanes and expanded capacity.

2. Provide the necessary and fair funding formula for road building and maintenance.

- Public Share.
- Private Share.

3. Create standardized requirements for easements and dedication to allow Cities to take over roads built in the County as they annex adjacent areas in the future.

- For example, street rights-of-way widths in new subdivisions should be 60'.

4. Develop access controls for all County highways and roads.

- Update Subdivision Regulations regarding such issues as minimum sight distance requirements and minimum requirements for point of ingress/egress.

5. Develop a plan and work with the state to improve state-maintained highways.

- When development does occur adjacent to state highways require additional right-of-way dedication and improvements to all proposed intersections creating safer turning movements into and out of the proposed subdivision.

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ZONING AND SUBDIVISION REGULATIONS

- 1. Revise the Zoning Order with regard to Residential Districts.**
 - Develop additional residential districts to create compatibility and inclusive zoning, specifically allowing multifamily complexes as a permitted use in a residential district.
 - Create planned districts to allow for clustering and other alternative styles of residential development.
- 2. Revise the Zoning Order creating distinct Commercial Districts.**
 - Consider increasing the number of commercial districts.
 - Consider promoting commercial district zoning along each side of the Interstate 70 in cooperation with Wright City and Warrenton as well as provide development standards for such projects.
- 3. Evaluate and define additional uses that are currently not permitted or prohibited in the Zoning Order.**
 - Cemeteries.
 - Consider providing for heavy/light industrial districts.
- 4. Create landscaping and buffering requirements to be utilized between commercial/ industrial and residential properties.**
 - Items such as landscaping and berms located between incompatible uses can mitigate some problems before they arise.
- 5. Revise the Zoning Order with regard to the following items.**
 - Require erosion, sediment and storm water controls.
 - Establish site design criteria for commercial development.
 - Require developers to "pay their own way regarding infrastructure."
- 6. Evaluate Adoption of Sign Regulations.**
 - Review the locational requirements for advertising signs.

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AGRICULTURE AND THE ENVIRONMENT

1. **Preserve prime agriculture land.**
 - Identify prime agriculture land in the flood plain; primarily in the "bottoms."
 - Do not develop absolute regulations regarding the preservation of prime agriculture land. The regulations must work with each separate case in terms of location and surrounding uses.
2. **Maintain a "Sense of Place" in rural Warren County.**
 - Preserve pristine areas, which include trees and creeks.
 - Maintain open space.
 - Preserve Wagner Woods near Holstein.
3. **Resolve conflicts regarding development in the floodplain and floodway.**
 - Encourage development in other areas and prohibit certain incompatible development in such areas.
 - Flood prone areas are typically prime agriculture land.
 - County orders should comply with FEMA regulations.
4. **Require adequate land dedication of open space in association with residential, commercial and industrial developments.**
 - Make the necessary changes to the Zoning and Subdivision Regulations to require sensible land dedications in association with residential, commercial and industrial development.
5. **Resolve conflicts between adjacent incompatible uses.**
6. **Develop a Stormwater Management Plan.**
 - Develop on-site detention requirements.
 - Storm water management should be based upon regional cooperation and enforcement.
7. **Develop on-site septic standards.**
 - MDHSS review of requirement.

CHAPTER FOUR: FUTURE LAND USE

PURPOSE AND INTENT

This Future Land Use chapter outlines land use principles, a tier system to provide guidance when making rezoning and development decisions. The Land Use Tier was developed to accomplish the goals established during the prior process of developing the Plan, including: agricultural land preservation, discouraging low-density residential development, and the appropriate expenditure of limited County funds on infrastructure and service improvements.

LAND PLANNING PRINCIPLES

The Warren County planning program has been applying public policy to influence change—in the public interest—as it has responded to change over time. In order for the entire County to attain the objectives of the Plan, it is helpful to restate the dynamics of development. Without such an understanding, local efforts cannot promote community goals as effectively. The Plan has been developed with the land planning principles presented in this section.

Land Use Effects

Certain basic planning issues are relevant to sound public policy. The impact of a given parcel of land on its neighboring properties must be considered. For example, a residential district that abuts agricultural areas can experience negative externalities. If not carefully site-planned, the residential district and the farm operation are both negatively impacted. In effect, the land use incompatibility creates a cost imposed by the agricultural owners on the residential owners. The best way to minimize these external costs is to buffer opposing land uses. These planning principles help create compatible transitions between residential and agricultural areas.

Areas of the County that are vulnerable to the "externalities" of change and need careful land use planning include not only existing agricultural uses near residential areas. Non-residential uses, such as industrial or commercial facilities which are not part of an existing urban community, can be made compatible with residential development with sensitive screening and other mitigating design features.

Transportation Access

Proper access control includes limitations on curb cuts, widths of driveways and related design issues. The planning principles for Warren County in the Plan include site plan review of non-agricultural development as it occurs on arterial roads and highways. The County must protect not only existing development but also certain "urban systems." Growth along major arterial roads must be carefully planned to allow major thoroughfares to continue carrying traffic. Development along the arterial roads must be designed to minimize transportation conflicts.

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Access within Warren County to the interstate and regional highway network is important to the viability of Warren County development areas, including the cities. However, the design of these transportation networks must be planned with the same sensitivity to the rural sense of place as other improvements.

Community Design

Focusing on neighborhood design is appropriate at both the urban scale and County-wide scale. Agricultural areas experiencing growth function as large-scale communities. Traffic impacts must be understood within rural communities much like urban communities. Good community design can help new developments relate to adjacent developments to form strong communities. The land use pattern of a community plays a major role in determining its strengths and weaknesses.

The current Warren County pattern of rural landscapes must be preserved (as called for in Chapter Three) in ways similar to community preservation. The scale is larger, but the principles for planning are similar: being good neighbors to one another.

Municipal Services and Natural Features

In addition to public land use policy, the physical features of the land affect future development. The County should consider this factor when reviewing development proposals and should coordinate its efforts with adjacent cities.

The County administers the FEMA floodplain regulations. In addition to the administration of the FEMA regulations affecting floodplains, the County should encourage the cities to plan for development based on drainage basins. To accommodate the projected future land uses, the County must assess the cities' abilities to serve existing and additional growth. Once this ability to serve has been assessed, the desire for and appropriateness of a specific use can be weighed against the ability to serve such a use and need for improvements based upon the projected impact of the use. This is especially important when assessing proposed development in the planned "Urban Tier" areas outside the boundaries of the various cities, as discussed in the next section.

Residential Development

The Warren County Plan seeks to define the contradictions inherent in unplanned, unmanaged, uncoordinated land use patterns of urban growth into rural areas. In particular, the Plan must recognize how far the present system of land use planning in most communities falls short of what is needed if urban development is to be managed better.

Well-designed rural subdivisions on lots served by paved roads and community sanitary sewers, with access restricted from County roads or state highways, can be accommodated in Urban Tier areas. Large-lot residences on gravel roads can be developed, as well in Suburban Tiers and Rural Tiers. "Well-designed" means subdivisions approved based on policies and site design/platting standards that preserve open space through buffering requirements to shield neighboring agricultural activity and to maintain rural character.

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Development at residential lower-densities can be accommodated, if subdivisions are on shared sanitary sewer systems. The policy rationale is the same: create open space to buffer neighboring agricultural activity and to maintain rural character. Development trends as the County's population grows will pass through phases and turning points. Growth pressures in the future may be significantly different from the recent past. For that reason, the biggest policy challenge is to reduce dissention about land use change by adopting policies that cope intelligently with existing settlement patterns and prepare the County for future changes in urban, suburban, and rural land use.

In Rural Tiers, the County should aim to maintain its rural character, but at the same time provide for development to take place by permitting landowners to sell off three-acre parcels of their land while maintaining the rural character of the County.

LAND USE TIERS

The land use tier system was developed to help evaluate proposed residential and commercial development across the County. The tier boundaries were laid out utilizing several factors while providing ample area to accommodate 20 years of growth:

- Natural barriers—primarily ridgelines—which result in drainage flows to creeks and rivers in major basins and sub-basins;
- Man-made improvements, such as highways and major roads, sanitary sewer systems, (both current and future improvements) and related urban systems that support non-agricultural growth; and
- Political boundaries, primarily at the edges of Warren County.

However, as new development and infrastructure are built, tier boundaries must be reevaluated so that these improvements are taken into consideration when new proposals are revised.

The Plan establishes a "**tier system**," which includes:

- Urban Tiers;
- Suburban Tiers;
- Rural Tiers; and
- Agricultural Preservation Tiers.

Urban Tiers are where growth is encouraged at urban densities on smaller lots, served by city services or by a community system of shared water and sanitary sewers, built to city standards. They are around established urban areas and along portions of the I-70 corridor at the fringe of the cities, towns, and villages of Warren County. Policies for development under County control are as follows:

Zoning: The County encourages urban development, including commercial and industrial zoning.

Roads: Paved with a hard surface (asphalt or concrete to County standards and the next closest city's standards at a minimum) if for non-residential development or if on residential lots smaller than 1-acre. Gravel if for residential development larger than 1-acre lots, in which case they must be privately owned and maintained.

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Sanitary Sewers: Provided through a city or community system built to city standards. Individual on-site septic systems allowed for development at rural densities on 3 acre or larger lots only in cases where city services are not provided, planned for, nor may be cost-effectively extended.

Suburban Tiers are where growth is allowed at suburban densities or at urban densities if stricter standards are met.

Zoning: The County encourages suburban residential development, allowing urban densities of residential, commercial, and industrial zoning only when served by public or private community sanitary sewer systems.

Roads: Gravel if on 1-acre lots or larger. Paved with a hard surface (asphalt or concrete to County standards and the next closest city's standards at a minimum), if for non-residential development or if on residential lots smaller than 1-acre. Paved access via a public road is required to all residential subdivisions.

Sanitary Sewers: On-site septic systems allowed for development at rural densities of 3 acres or more.

Rural Tiers are where agriculture is encouraged to continue and rural ag-residential development is encouraged. Limited rural residential densities are allowed only as cluster development. Residential developments at suburban and urban densities are allowed if they meet stricter development standards.

Zoning: County zoning, encourages agricultural uses and allows agriculture-residential development, while permitting clustered development as an incentive to preserve farmland and green space. Commercial and industrial development are not allowed.

Roads: Gravel if development is on 3-acre or larger lots. Paved with a hard surface (asphalt or concrete to County standards), if on residential lots smaller than 1-acre. Paved access via a public road is required to all residential subdivisions.

Sanitary Sewer: On-site septic systems allowed for development at rural densities of 3 acres or more.

Agricultural Preservation Tiers are where floodplain, bottomland and other designated agricultural soils dictate preservation of prime farmland. Residences would be allowed only at agricultural densities, or as cluster development on prime farmland soils.

Zoning: County provides agricultural zoning only, while permitting clustered development as an incentive to preserve prime farmland. Commercial and industrial zoning would not be allowed.

Roads: Gravel if on 3-acre or larger lots.

Sanitary Sewer: On-site septic systems allowed for development at rural densities of 3 acres or more.

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PLANNING POLICY OF THE LAND USE TIER SYSTEM

Urban Tier

The urban growth areas within the County should be (a) contiguous or in close proximity to existing municipal boundaries and should encompass the likely sites of higher density residential or non-residential growth over the next 20 years; (b) reasonably compact yet sufficiently large to accommodate that growth; and (c) reflect the municipality's ability to facilitate development of its resources while controlling urban expansion, and taking into account impacts on agricultural lands, forests, recreational areas, and wildlife management areas.

The Warren County Urban Tier is representative of those areas within Warren County that include the highest densities, located along highway, major arterials and intersections, and predominately developed for residential, industrial and commercial purposes. Future growth in the Urban Tier should reflect the type of land uses and zoning and Subdivision Regulations that direct infrastructure growth specifically to and from these types of high volume generated by such clusters while minimizing interference with surrounding, existing neighborhoods and uses.

Suburban Tier

The second most intensively developed classification is the Suburban Tier. This development sector is typically located further out from existing towns and municipalities, along a transportation routes which are adequate to support growth, and in fact encourage it. The availability of adequate police and fire protection, infrastructure and all other necessary public services must be evaluated prior to authorizing development within this tier. The Suburban Tier is presently a mix of medium-density to low-density residential and neighborhood commercial development. Future growth within this tier should be directly compatible and within existing or planned infrastructure improvements. Future development that does occur should be less disruptive to the lower density areas within this tier. With the inclusion of growth boundaries, development within this tier should be in areas that can be readily served with water, adequate sewer service and roads. Thus, future development should focus on compatibility, similarities in density, and topographical capabilities/constraints should be considered prior to any future development within the Suburban Tier. Planned growth areas of the County should fall within the existing or urban growth boundaries of the municipalities and should encompass the likely sites of high-density residential or non-residential growth over the next 20 years. They should be reasonably compact yet sufficiently large to accommodate that growth and take into account impacts on agricultural lands, forests, recreational areas, and wildlife management areas.

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Rural Tier

The Rural Tier historically has experienced a very slow growth. As a result, the Rural Tier has the least density and is characterized by farmland and low-density residential development. The Land Use Tier Plan, with its attention to floodplain lands and other sensitive lands, would be particularly useful in deciding where to allow development and where to set aside land as open space. Protection of natural features and adverse impacts of uncontrolled growth would be the future direction—as well as the driving force—in the design criteria of any future development into this area. Rural areas shall include territory that is not within urban growth or planned growth areas and is to be preserved as agricultural lands, forests, recreational areas, wildlife management areas, or for uses other than high-density commercial, industrial, or residential development.

Agriculture Preservation Tier

Where floodplains, bottomland and other designated agricultural soils dictate preservation of prime farmland is the "Agricultural Preservation Tier." The planning policy intent is not to set aside farmland throughout the County; rather to consider unique constraints and value of floodplains, bottomland and other designated agricultural soils when reviewing proposals under the new Site Plan Review procedures.

ZONING

The Plan calls for the County to update its zoning regulations to differentiate among residential, commercial, and industrial land uses and development densities.

ROADS

The Plan calls for the County to update its subdivision regulations to require hard surfaced road in "Urban Residential" districts, and access to subdivisions via a paved public road in areas outside the Urban Tiers. Other roads may be gravel and kept private. Paved roads shall be improved to standards of the County.

SANITARY SEWERS

Public sewers systems approved by MDNR are required for development in Urban Residential zoning districts. On-site septic systems must be built to County standards.

CHAPTER FIVE: TRAFFIC CIRCULATION AND ACCESS CONTROLS

FUNCTIONAL CLASSIFICATION

The public street system serves two primary functions. It provides mobility for traffic to move efficiently and safely through the community, and it provides access to serve abutting property. However, these two functions are generally in conflict with each other. Safety deteriorates on the street system when either streets that are intended to provide access are also expected to carry heavy traffic demand, or when streets intended to provide a high level of mobility also provide a high level of access. The conflict between numerous turning vehicles at a slow speed, and heavy through volumes of traffic at higher speeds result in higher accident rates, and create vehicle friction that reduces the street's capacity to carry traffic. It is for these reasons that it is important to clearly identify the intended purpose of each major street within a community, and then to manage the street system so as to protect the function of each street for its intended purpose.

Streets and roadways are often times classified into the following functions and are shown on the Major Thoroughfare Plan Map:

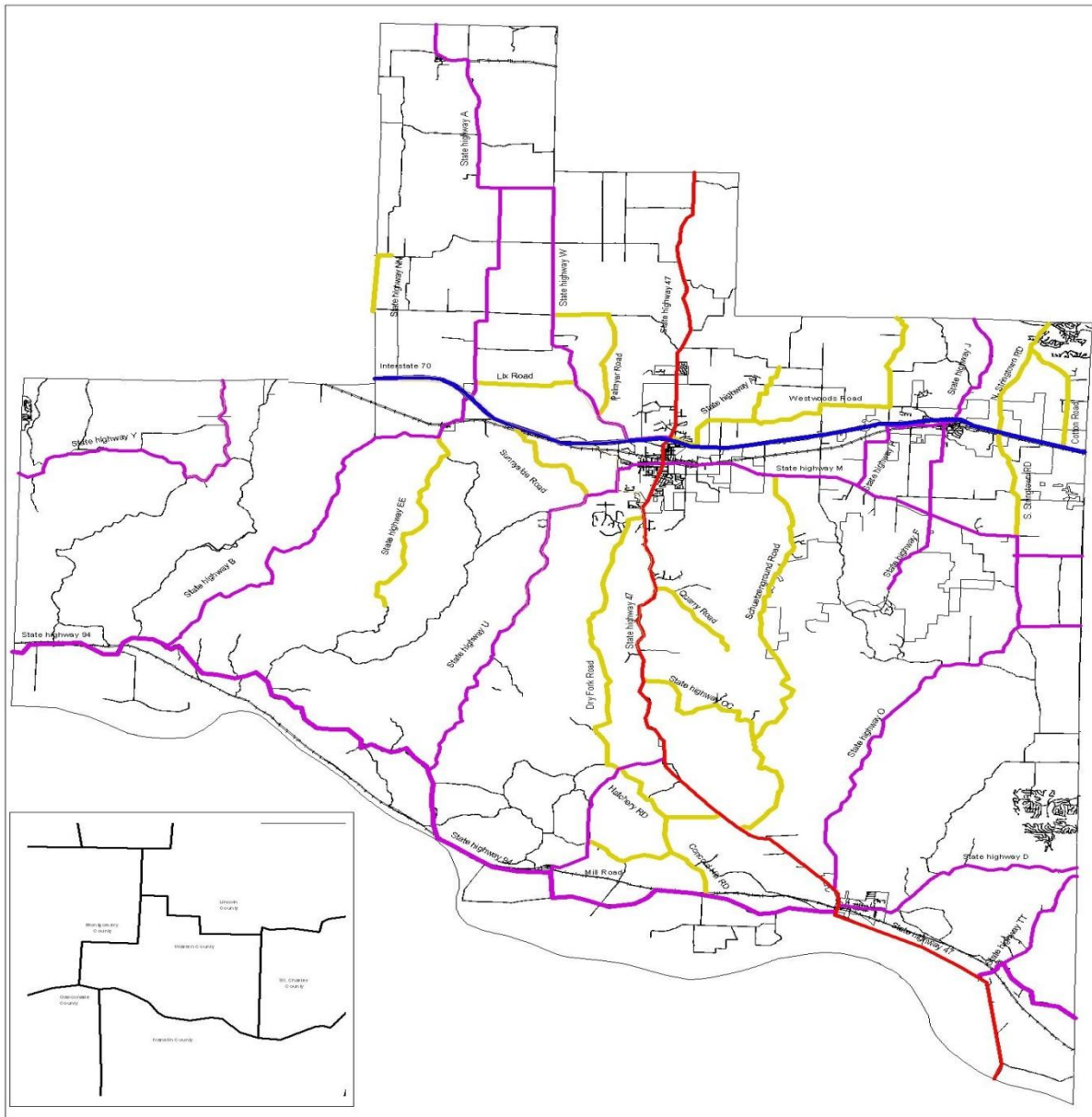
Freeways/Expressways - Freeways and expressways are intended to provide a high level of mobility to vehicles, with access totally controlled. The restriction of access on freeways to grade separated interchanges results in freeways having the potential to move high traffic volumes efficiently at high speeds. Often, freeways are constructed and maintained by state highway departments or toll authorities. Thus, while providing an essential service to the traffic network in the city, freeways are oftentimes not under city jurisdiction. I-70 is an example of a freeway/expressway.

Arterial Streets - Generally, arterial streets are intended to provide a high level of mobility to traffic passing through a community, with limited service to local development. Often, the high traffic volumes on the arterial present an attraction for local developments that seek to capture the traffic for business. This frequently results in pressures for direct access onto the arterial from the abutting properties. This subsequently results in the deterioration of the arterial for its intended purpose. This natural tendency toward the degradation of arterial streets in providing mobility has given rise to some arterial streets providing a level of mobility for locally generated traffic, rather than for through traffic. These streets no longer function as *major arterial streets*, but have assumed the function of *minor arterial streets*. Examples of major arterial streets would be State Highway 47 and the east/west Frontage Roads. However, in the City of Warrenton, increased traffic congestion and limited access control has resulted in a portion of State Highway 47 functioning as a minor arterial. Arterial streets typically operate in the range of 10,000 to 40,000 vehicles per day.

Collector Streets - Collector streets provide direct services to residential areas, commercial areas, local parks, churches, etc. To preserve the amenities of neighborhoods, they are usually spaced at about half-mile intervals to collect traffic from local-access streets and convey it to major and minor arterial streets and highways. Generally, collector streets are not intended to carry high traffic volumes, and are therefore more suitable to provide a high degree of access without compromising safety of traffic operations. Traffic volumes on collector streets can range from 1,000 to 10,000 vehicles per day.

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MAJOR THOROUGHFARE PLAN MAP



Comprehensive Plan: Warren County, Missouri Major Thoroughfare Plan

LEGEND:

- | | | | |
|--|-----------------|--|-------------|
| | Interstate | | City Limits |
| | Minor Arterial | | Railroad |
| | Major Collector | | Road |
| | Minor Collector | | |



.5 0 1 2 3 Miles



BUCHER, WILLIS & RATLIFF
CORPORATION

7920 Ward Parkway Kansas City, MO 64114 (816) 363-2696

Plan 2001276/Highway Map

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Local Streets - Local streets are those not selected for inclusion in the arterial or collector classification. They are intended to provide access to individual homes and businesses. Generally, through traffic is to be discouraged from using local streets, as they are intended to primarily provide property access.

ACCESS CONTROLS

As the number of direct access points along a major street increases, the friction between through traffic and turning traffic also increases. This can contribute to an increase in accident potential, a decrease in street capacity and a decrease in level of service. Lack of access management effects are not as severely felt by motorists where vehicle speeds are low, and sufficient reserve street capacity is available,. However, where street capacity is inadequate and vehicle speeds are higher, the effects of poor access control become a major factor in the decline in the level of service and the increase in accident potential.

Access management in the Land Use Tiers includes the proper spacing and design of driveways, median openings, and traffic signals. The final outcome of proper access management is the safe and efficient flow of traffic through the street system and access to their destination. The goals associated with proper access management are to limit the number of conflict points, separate the conflict points, and remove turning vehicles and queues from through traffic movements.

Access management plans may be most beneficial when invoked at the time the street is constructed, and when maintained throughout the development of the adjacent land parcels. Once access control is lost and congested conditions have been established, it becomes very difficult to provide an effective remedy. An example of the impacts of the lack of access management is the congestion that has resulted from numerous local trips and the excessive number of curb cuts on State Highway 47 south of Interstate 70. The application of access management standards should be an important component in the development of new land. The following section of this report will present appropriate access management guidelines for new developments and re-developments along major streets.

Intersection Spacing

Adequate distance between intersections is essential for the safe and efficient flow of traffic. Appropriately spaced intersections provide through-motorists an opportunity to respond to traffic entering the street from a side street. Table 5.2 shows the recommended minimum standards for spacing intersections, determined by through-traffic speed.

Table 5.2: Minimum Intersection Spacing Standards—Major Arterial Road	
Through-Traffic Speed	Minimum Intersection Spacing
30mph	210 feet
35 mph	300 feet
40 mph	420 feet
45+ mph	550 feet

Source: Institute of Transportation Engineers

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Driveway Spacing—Access Control

Like a street, private driveways create an intersection with a public street. Conflicts and potential congestion occur at all intersections - public and private. Methods to reduce conflict include:

- Separating the conflicts by reducing the number of driveways and intersections;
- Limiting certain maneuvers such as left turns; and
- Separating conflicts by providing turn lanes.

No access drives should be located within the operations area of an intersection. Driver conflicts need to be spaced in order to eliminate overlaps between through traffic and right turns.

Proper spacing of driveways permits adequate storage and stacking of automobiles on the public street. This distance may have to be increased in cases with high volumes to ensure that driveways do not interfere with the operation of turning lanes at intersections.

The number of driveways accessing undivided arterial roadways should be minimized. AASHTO standards and the ITE Manual should be used as the County develops standards for the County.

Corner Clearance

Guidelines can be used to regulate new commercial developments located along arterial or collector streets. AASHTO standards and the ITE Manual can be used by the County to develop standards for corner clearance.

SYSTEM CONSTRAINTS

Several system constraints exist where local roads connect to I-70. There is also insufficient local road capacity to support any traffic volumes greater than rural levels. The constraints include:

- The intersection of State highway 47 and Interstate 70;
- The intersection of State highways 47 and MM; and
- The limited east/west connections in the southern portion of the County.

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IMPLEMENTATION PLAN

Access Management Policies

The purpose of access management guidelines is to standardize, regulate, and control the location, size, type, construction, maintenance, and quantity of curb cuts, driveways and sidewalk driveway crossings for proper design, safety of vehicular traffic, and safety of pedestrian traffic.

Access management may be achieved by zoning controls, geometric design, access control guidelines, and purchasing access rights. Methods include:

- Classifying roadways based upon criteria such as functional classification.
- Planning and maintaining a logical hierarchy of classified roadways.
- Defining allowable types and levels of access for each road class.
- Applying appropriate geometric design criteria and traffic engineering analysis to both the roadway and the allowable access.
- Setting criteria for spacing of signalized and unsignalized access points, based on roadway class and speed.

These criteria reflect the type of road, allowable access, type and size of activity centers, and the kind of driveways and their traffic volumes.

A good access management program requires clear and precise standards, and a consistent variance process is necessary when deviating from the standards.

With proper access management three main goals can be achieved. These goals are:

- Access control provides for organized movement of traffic within an urbanized area.
- Proper access control provides acceptable levels of capacity and safety.
- Access management can reduce the chance that a highway or arterial will need to be relocated or reconstructed.

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CAPITAL IMPROVEMENT PROGRAM

The establishment of a capital improvement program for a county provides several benefits.

- It provides a framework for establishing capital expenditure priorities based on established planning, rather than on impulse.
- It identifies the total financial demands for infrastructure improvements for fiscal planning purposes.
- It provides a schedule for the development community to anticipate the creation of new infrastructure to serve new developments.
- It allows the County constituency to respond to proposed improvement priorities.

A capital improvement plan should be established for both a short-term horizon of five years (to be updated annually) and a long-term horizon of 20 years to be based on comprehensive long-range planning.

Capital improvements for transportation in Warren County fall within one of three categories.

- Replacement of pavement that has completed its life cycle.
- Widening, or other capacity enhancements to existing streets and bridges.
- Construction of new major streets in the Land Use Tiers.

CHAPTER SIX: IMPLEMENTATION

PURPOSE AND INTENT

As Warren County grows over the next 20 years there are several factors that could threaten the agricultural land uses and hinder efficient and coordinated development. Low-density residential developments adjacent to municipal limits and uncoordinated street development can have an adverse impact on the manner in which an area develops. Therefore, the following implementation strategies have been created to fulfill the goals and objectives developed by the County Commission, Planning and Zoning Commission and residents of Warren County. These goals and objectives include:

- the preservation of agricultural land;
- appropriate location and densities for new residential development;
- the rational distribution of limited tax revenues for public improvements; and
- policies that require private, urban development to pay its own way in rural areas.

The Land Use Tiers (Ref. Chapter Four) are addressed below by recommending implementation strategies that affect:

- density of development;
- standards of development; and
- location and type of land use.

The recommendations should be implemented through:

- Zoning Order amendments;
- subdivision regulation amendments; and
- other policy procedures and regulations that implement the Plan.

URBAN TIER

The Urban Tier is contiguous or in close proximity to existing municipal boundaries. As a result, these areas can be more readily served with municipal water and sewer. To promote coordinated and efficient development, it is in the best interests of the County and the cities within the County to locate urban density developments in the cities. Therefore, proposed urban density developments should be annexed into the adjacent municipality and connected to city utility services. This will ensure that efficient development occurs and reduces the number and reliance on septic systems in the County.

For larger lot residential development proposals within the Urban Tier, specific residential development standards should be required. The County should promote Urban Residential Zoning Districts. The development standards will help reduce rural sprawl.

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Street Requirements- Urban Residential Districts

- Restricted access onto a County or State Arterial or Highway
- Improvements to the existing street network to support the additional traffic from the proposed development
- Stub streets shall be provided to connect to future residential developments
- Adequate right-of-way dedication to allow for future widening
- Minimum pavement widths and construction standards which meet or exceed municipal standards

Sanitary Sewer Requirements

- Require an approved Missouri Department of Natural Resources central sewer system.

Additionally, large-lot developments of 3-acre and larger on septic systems should be discouraged within the Urban Tier. If this pattern of development is allowed to occur, future infrastructure improvements required by municipalities to serve outlying areas may become cost prohibitive and stifle a City's growth.

To ensure intergovernmental coordination, all rezoning applications or development plans within an Urban Tier adjacent to a municipality, the County should request that the municipality should comment on the impact of such application and plan on the municipality. While municipalities do not have any jurisdiction over the development, because such areas are likely to become part of the municipality in the future, their comments should be taken into consideration by the County Planning and Zoning Commission and County Commissioners

SUBURBAN TIER

The Suburban Tier is located further from municipalities. However, it will experience significant development over the next 20 years. Current constraints to intense residential development in this tier are the lack of public services, including, sewer and water connections, lack of police and fire coverage and limited improved traffic routes.

In view of these constraints, but recognizing the potential for future development, a variety of residential development styles should be promoted in the Suburban Tier. Based upon their residential intensities and development standards, both the 3+ acre lots and 1-acre lot developments are appropriate in the Suburban Tier. The following standards should help mitigate land use conflicts and limit future infrastructure expenditures by the County or Cities. Additionally, development of new homes and small farms in the AFM districts should be discouraged.

WARREN COUNTY, MISSOURI - MASTER PLAN

Street Requirements- Suburban Residential Districts

- Restricted access onto a County or State Arterial or Highway Improvements to the existing street network to support the additional traffic from the proposed development
- Stub streets shall be provided to connect to future residential developments
- Adequate right-of-way dedication to allow for future widening
- Minimum pavement widths and construction standards which meet or exceed municipal standards at a minimum

Sanitary Sewer Requirements: Require an approved Missouri Department of Natural Resources central sewer system, city or community system if planned for extension of sewers by a city. Alternatively, an on-site septic system.

Any proposed development with a large number of units in this tier must take into consideration the impacts on the surrounding street network and potential conflicts with surrounding agricultural uses. Typically, people purchasing homes within an subdivision setting prefer improved streets for the length of their commute. Unfortunately, the majority of the roads within the Suburban Tier are not improved to handle a significant amount of traffic. This issue must be evaluated when reviewing the proposal. Additionally, many of these roads are still utilized by agricultural traffic, which is typically incompatible with significant residential traffic. Therefore, if a proposal does not connect to or propose improvements to the streets network, the proposal may be premature in the Suburban Tier.

RURAL TIER

Historically, the Rural Tier is represented by large agricultural uses. Even today this land uses/scenario still exists in Warren County's Rural Tier. However, to protect prime agricultural land and promote cost-effective development with regards to infrastructure expenditures across the County, dense urban residential development should not be promoted in the Rural Tier unless the proposal is able to provide adequate infrastructure improvements including central sewer and water, along with improved street connections.

By not allowing dense residential developments in the Rural Tier, potential conflicts between agricultural uses and residences can be reduced. Therefore, residential development that occurs in the Rural Tier should be at a low density within the either the R-1 Rural Residential District or the AFM District, taking the cluster design principles into consideration, and should be developed with the following residential design standards. These design principles will help to ensure that new residents expecting urban facilities will receive a good product for their investment.

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Street Requirements- Rural Residential Districts

- Require turn around capabilities for entrances onto a County or State Arterial or Highway
- Improvements to the existing street network to support the additional traffic from the proposed development
- Adequate right-of-way dedication to allow for future widening

Sanitary Sewer Requirements

- On-site Septic Systems

AGRICULTURE PRESERVATION TIER

Where floodplains, bottomland and other designated agricultural soils dictate preservation of prime farmland is the Agricultural Preservation Tier. The planning policy intent is not to set aside farmland throughout the County; rather to consider unique constraints and value of floodplains, bottomland and other designated agricultural soils when reviewing proposals under the new Site Plan Review procedures.

FARMLAND PROTECTION AND A SENSE OF PLACE

The protection of farmland is a public policy of the Warren County Plan. According to the American Farmland Trust (AFT), farmland protection toolbox programs that are generally enacted at the state level are as follows:

American Farmland Trust Ideas

Agricultural District Laws

Agricultural district laws allow farmers to form special areas where commercial agriculture is encouraged and protected. Common benefits of enrollment in a district include automatic eligibility for differential assessment, protection from eminent domain and municipal annexation, enhanced right-to-farm protection, exemption from special local tax assessments.

Conservation Easements

Every state in the nation has a law pertaining to conservation easements. Conservation easements limit land to specific uses and thus protect it from development. These voluntary legal agreements are created between private landowners (grantors) and qualified land trusts, conservation organizations or government agencies (grantees).

Executive Orders

Governors of at least 10 states have issued executive orders that document the importance of agriculture and farmland to their states' economy, environment and culture.

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American Farmland Trust (AFT) works with landowners, policy-makers and other key influential persons in local communities and at the state level to help them develop effective farmland conservation programs. Why save farmland? The Warren County planning process has identified the objective during public meetings. The AFT presents the arguments as follows:

Why Save Farmland?

- It's the only farmland we've got; when it's gone, it's gone forever!
- American farms ensure a safe and plentiful food supply.
- Many American families and rural communities are supported by their farmland.
- Saving farmland helps control sprawling development.
- Farms and ranches provide wildlife habitat.
- Urban-edge farms provide fresh, local produce for city residents.
- Farming is a better economic use of the land than scattered development.
- Farms provide a direct link to our agricultural heritage and America's history.
- Farms provide jobs.
- Farmland provides scenic open space.

American Farmland Trust
National Office 1200 18th
St. NW Suite 800
Washington, DC 20036 (202)331-7300

Warren County may consider implementing a conservation plan for area watersheds. This Plan is designed, in part, to mitigate the potential for contamination through implementation of best-management practices and educational activities—such as cluster development to preserve open space and stream buffer strips—to reduce contributions of constituents such as nutrients and pesticides to the Missouri River.

Results of a Water Resources Investigation study, conducted with assistance from USGS would document water quality concerns in the watershed. The median dissolved-solids concentration in the watershed could have an effect on the variety and abundance of plants and animals. Pesticide usage in many Midwestern agricultural watersheds is typically high during the spring and early summer when crops are seeded. Combined with seasonal precipitation, pesticides commonly are transported with surface water runoff to receiving streams that may discharge to area rivers.

The primary areas of concern for the nonpoint pollutant sources include:

- Failing wastewater systems;
- Erosive cropland;
- Improper chemical application (urban and farm); and
- Stream bank and shoreline erosion.

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Experience has shown that the most effective means to encourage voluntary pollution control is to make personal contact with the landowner. A successful one-on-one personal contact will result in determining pollution control practices currently being used, provide the opportunity to recommend improvements in pollution control, either through adoption of management practices or improved recommendations in maintenance of existing pollution controls. The main goals and objectives of the Water Quality Protection Project are:

- Reduce soil loss on eroding cropland.
- Install filter strips and/or riparian buffers along streams, including crop fields.
- Upgrade failing septic systems.
- Reduce nutrient, pesticide and related contaminant levels and its tributaries to state maximum acceptable concentrations.
- Ensure that development around riparian areas is done according to sound land use policy. Continue water-monitoring efforts.

CLUSTER DEVELOPMENT PRINCIPLES AND BUFFER ZONE IMPLEMENTATION OPTIONS

Two techniques are suggested as a strategy for Warren County's dual objectives of protecting agricultural land for the rural atmosphere enjoyed by non-farming residents. Agricultural Buffer Zones are intended to protect the farmer's ability to conduct agricultural practices, while a Cluster Development Overlay Zone can help accommodate development in the County that preserves the rural character of non-farm areas.

Agricultural Buffer Zones

Tom Daniels and Deborah Bowers, authors of Holding Our Ground, Protecting America's Farms and Farmland (1997), describe two types of agricultural buffer ordinances. One type refers to the siting of nonfarm dwellings on building lots subdivided off a farm. The second type regulates the quantity of development allowed by non-farm agricultural zoning. A blend of these two approaches is recommended for an agricultural buffer zone in Warren County.

A buffer of land required between nonagricultural buildings or lots and property with an agricultural zoning designation will help minimize potential incompatibilities among land uses. A limited range of uses can be allowed for buffer areas, including open space, recreational uses, or cemeteries. Site review of the landscaping plans of buffered areas should include consideration of potential crop reduction due to shade created from planted vegetation.

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Developers of new homes built within 300 feet of an agricultural use in the agricultural district should be encouraged to provide in their promotional materials and deeds disclosure of adjacent agricultural uses. An example of a disclosure of agricultural uses is as follows:

All lands within the Agricultural Zone are located in an area where land is used for commercial agricultural production. Owners, residents, and other users of this property or neighboring property may be subjected to inconvenience, discomfort, and the possibility of injury to property and health arising from normal and accepted agricultural practices and operations, including but not limited to noise, odors, dust, the operation of machinery of any kind, including aircraft, the storage and disposal of manure, the application of fertilizers, soil amendments, herbicides, and pesticides.

Disclaimers and disclosure agreements raise the buyer's awareness of the potential neighboring land uses. They may lessen the ability of a non-farm neighbor to win a nuisance suit against a farmer who employs normal farming practices.

Cluster Development Overlay Zone

Cluster development, also known as Open Space Development or Conservation Design Development, groups homes or lots tightly on the more buildable or accessible portions of a site, leaving more open space and preserving land or natural features such as trees, streams, valleys, and steep slopes. For example, if zoning allows one unit per three acres, a typical 50-acre site would permit 13-15 homes. With clustered development, homes could be built on three times as many half-acre lots, leaving 25 acres of permanently protected open space. Cluster development is often opposed and misinterpreted as including higher densities and concessions to the developer, but can be a valuable tool to preserve open space or natural features.

Once the overlay zoning designation is applied to the site by the Planning and Zoning Commission following a public hearing, a sliding scale can be used by the developer to increase the proportion of open space to development density. The sliding scale encourages greater open space set-asides by allowing the gross density to rise if the net area consumed by development is reduced. Table 6-1 describes the sliding scale to be used as a guide in proposing the development density to be used in preparing the preliminary plat of the development for consideration by the Planning and Zoning Commission.

Table 6-1 -Cluster Development Density Sliding Scale (Example based on a 100-acre Tract, 75% built-out*)

Zoning District	Open Space Preserved	Maximum Reduction of Lot Size	Increased Road Setback	Minimum Lot Size	Normal Number of Lots	Clustered Number of Lots
R-1	20%	35%	20%	1.95 Acres	25	30.7
R-2	20%	35	20	0.65 Acres	75	82.5

*Assumes 25% non-developable

Cluster development also has the advantage of being able to site buildings away from environmentally fragile areas, rather than in a "cookie cutter" pattern associated with a typical rural development of large minimum lot sizes. But an important issue is the density that is allowed with the clustering.

Large minimum lot sizes without the Cluster Development Overlay Zone can limit the number of non-farm dwellings and can provide opportunities for hobby farming. However, a large minimum lot size can also create an awkward pattern that eats up the land in the buffer zone fairly quickly. Although, if public or centralized sewer and water systems are not provided, or expected to be available for many years, a large minimum lot size can often safely accommodate septic and well systems in a much more efficient manner than cluster developments with higher densities.

Other issues that must be taken into consideration with regard to cluster developments in rural areas are the availability of fire and police protection, associated costs to the school districts and the added costs of maintenance to the County. Even though it is still expensive to provide public services to cluster developments, they are more efficient than low-density residential development across the County.

STREAM BUFFER REQUIREMENTS

Headwater streams are often severely degraded by urbanization. As a consequence, many communities have adopted stream buffer requirements as part of an overall watershed protection strategy. Stream buffers are an integral element of any local stream protection program. By adopting some of these rather simple performance criteria, communities can make their stream buffers more than just a line on a map. Better design and planning also ensure that communities realize the full environmental and social benefits of stream buffers. Recommendations in this section are from the APA, PAS Memo of August 2000.

The ability of a particular buffer to actually realize its many benefits depends to a large extent on how well the buffer is planned or designed. In general, a minimum base width of at least 100 feet is recommended to provide adequate stream protection. In most regions of the country, this requirement translates to a buffer that is perhaps three to five mature trees wide on each side of the channel.

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Some provision must be made for linear forms of development that must cross the stream or the buffer, such as roads, bridges, fairways, underground utilities, enclosed storm drains or outfall channels. Suggested performance criteria could include:

- Crossing width: define a minimum width for maintenance access.
- Crossing angle: direct right angles are preferred, because they require less buffer clearing than oblique crossing angles.
- Crossing frequency: allow only one road crossing within each subdivision, and permit no more than one fairway crossing for every 1,000 feet of buffer.
- Crossing elevation: have all direct outfall channels (the places where effluent is discharged into receiving waters) discharge at the invert elevation, or the lowest point of the stream channel.

Three-Zone Buffer System

Effective stream buffers divide the total buffer width into three zones:

- Streamside;
- Middle core; and
- Outer zone.

Each zone performs a different function and has a different width, vegetative target and management scheme.

The **streamside zone** protects the physical and ecological integrity of the stream ecosystem. The vegetative target is mature riparian forest that can provide shade, leaf litter, woody debris, and erosion protection to the stream. The minimum width is 25 feet from each stream bank — about the distance of one or two mature trees from their stream bank. Land use is highly restricted, limited to stormwater channels, footpaths, and a few utility or roadway crossings.

The **middle core zone** extends from the outward boundary of the streamside zone and varies in width depending on stream order, the extent of the 100-year floodplain, any adjacent steep slopes, and protected wetland areas. Its functions are to protect key stream components and provide further distance between upland development and the stream. The vegetative target for this zone is also mature forest, but some clearing may be allowed for stormwater management, access and recreational uses. A wider range of activities and uses are allowed within this zone, such as bike paths and stormwater best management practices (BMPs). The minimum width of the middle core is about 50 feet, but it is often expanded based on stream order, slope, or the presence of critical habitats (see Buffer Expansion and Contraction).

The **outer zone** is the buffer's buffer, an additional 25-foot setback from the outward edge of the middle core zone to the nearest permanent structure. In many instances, this zone is within a residential backyard. The vegetative target for the outer zone is usually turf or lawn, although the property owner is within a residential backyard and encouraged to plant trees and shrubs. Few uses are restricted in this zone. Gardening, compost piles, yard wastes, and other common residential activities are promoted within the zone. The only major restrictions are no septic systems and no new permanent structures.

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Buffer Crossings

Two major goals of a stream buffer network are:

- To maintain an unbroken corridor of riparian forest; and
- The upstream and downstream passage of fish in the stream channel.

Some provision must be made for linear forms of development that must cross the stream or the buffer, such as roads, bridges, fairways, underground utilities, enclosed storm drains or outfall channels.

Suggested performance criteria could include:

- Crossing width: define a minimum width for maintenance access.
- Crossing angle: direct right angles are preferred, because they require less buffer clearing than oblique crossing angles.
- Crossing frequency: allow only one road crossing within each subdivision, and permit no more than one fairway crossing for every 1,000 feet of buffer.
- Crossing elevation: have all direct outfall channels (the places where effluent is discharged into receiving waters) discharge at the invert elevation, or the lowest point of the stream channel.

Stormwater Runoff

Using buffers for stormwater treatment. The outer and middle zone of the stream buffer may be used as a grass/forest filter strip under limited circumstances. For example, the buffer cannot treat more than 75 feet of overland flow from impervious areas and 150 feet from pervious areas, such as backyards or rooftops. The designer should compute the maximum runoff velocity for both the six-month and two-year storms from each overland flow path, based on the slope, soil and vegetative cover. If the calculations indicate that velocities will be erosive under either condition (greater than three feet per second (fps) for a six-month storm, five fps for a two-year storm), the allowable length of contributing flow should be reduced.

When the buffer receives flow directly from an impervious area, the designer should include curb cuts or spacers so that runoff can spread evenly over the filter strip.

The stream buffer can be accepted as a stormwater filtering system if basic maintenance can be assured, such as routine mowing of the grass filter and annual removal of accumulated sediments at the edge of the impervious areas and the grass filter. The existence of an enforceable maintenance agreement that allows for public maintenance inspection is also helpful.

Location of stormwater ponds and wetlands within buffer. A particularly difficult management issue involves locating stormwater ponds and wetland in relation to the buffer. Several arguments can be made for locating ponds and wetlands within the buffer or on the stream itself. Constructing ponds on or near the stream allows the greatest possible drainage area to be treated at one topographic point. Also, ponds and wetlands require the dry weather flow of a stream to maintain water levels and prevent nuisance

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conditions. Lastly, ponds and wetlands add a greater diversity of habitat types and structure and can add to the total buffer width in some cases.

Given the effectiveness of stormwater ponds and wetlands in removing pollutants, one should not completely prohibit their use within the buffer.

Plan Review and Construction

The limits and uses of stream buffer systems should be well defined during each stage of the development process, from initial plan review through construction. The following steps are helpful during the planning stage:

- Require that the buffer be delineated on preliminary and final concept plans;
- Verify the stream delineation in the field;
- Check that buffer expansions are computed and mapped properly;
- Check suitability of use of buffer for stormwater treatment;
- Ensure other best management practices (BMPs) are properly integrated in the buffer; and
- Examine any buffer crossings for problems.

Buffer Flexibility

The courts have generally found that buffer ordinances avoid the taking issue, by proving that buffer strips provide compelling public safety, welfare, and environmental benefits to the community to justify restriction of land use. In order to limit the hardship on developments the following planning methods can be utilized to mitigate any negative impacts associated with the creation of stream buffer strips.

Buffer averaging. Here a community provides some flexibility in the buffer width, permitting the buffer to become narrower at some points along the stream as long as the average width meets the minimum requirement.

Density compensation. This scheme grants a developer credit for additional density elsewhere on the site to compensate for developable land lost to the buffer. Developable land is defined as the buffer area remaining after the 100-year floodplain, wetland and steep slope areas have been subtracted. Credits are granted when more than five percent of developable land is consumed, using the approach shown in Table 6.2. The density credit is accommodated by allowing greater flexibility in setbacks, frontage distances, or minimum lot sizes. Cluster development also allows the developer to recover lots that are taken out of production due to buffers and other requirements.

Conservation easements. Landowners should be afforded the option of protecting lands within the buffer with a perpetual conservation easement.

Variances. The buffer ordinance should have provisions that enable an existing property owner to be granted a variance, if the owner can demonstrate severe economic hardship or unique circumstances that make it impossible to meet some or all buffer requirements.

Table 6.2: Example of the Use of Density Credits <i>(To compensate developers for excessive land consumption by buffers.)</i>	
Percentage of Site Lost to Buffers	Density Credit*
1 to 10%	1.0
11 to 20%	1.1
21 to 30%	1.2
31 to 40%	1.3
41 to 50%	1.4
51 to 60%**	1.5
61 to 70%**	1.6
71 to 80%**	1.7
81 to 90%**	1.8
91 to 99%**	1.9

Adapted from Burns, 1992.

*Additional dwelling units allowed over base density (1.0)

**Credit may be transferred to a different parcel

STAFFING AND TRAINING

As indicated in Chapters 4 and 5, additional professional staff is recommended to implement the desired goals and objectives of the Plan. The County has already taken a positive step by engaging a consulting engineer to help review development proposals and enforce new development standards and traffic control standards. Also, additional training may be required regarding the implementation of the Plan.

Zoning Text Amendments

The Warren County Master Plan must be implemented in part through amendments to the County Zoning Order. Recommended amendments include:

- Updated definitions.
- New standards for off-street parking that apply to non-residential developments.
- New zoning districts (for consideration):
 - o A new "C-1" HIGHWAY BUSINESS DISTRICT: : The intent of this district is to provide a zone for commercial uses that accommodate highway-oriented retail, services, and office commercial activities while minimizing their impacts on residential and institutional uses.
 - o New "C-2" GENERAL BUSINESS DISTRICT: The intent of this district is to provide a zone which will accommodate the broad range of retail shopping activities and office uses that are normally found in the core area of a city or at the intersection of major streets; and where development is allowed up to the property lot line.
 - o New "I-1" LIGHT INDUSTRIAL DISTRICT: Limited-intensity industrial allowed, usually by conditional use permit.

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- o New "I-2" HEAVY INDUSTRIAL DISTRICT: The broadest range of industrial uses allowed.
 - o New "R-2" Residential District: The intent of this district is to provide for low-density residential development, on one acre lots or larger, located on a central sewer system if in the "Urban or Suburban Tiers" where municipal sewers are planned to be extended.
- Establishing "Salvage Yards" as a conditional use in the new I-2 District.
- Updating the non-conforming use section.
- Amending zoning district requirements to expressly allow a broader range of uses (with standards) rather than as conditional uses. Conditional Use Permits (CUPs) should be approved by the Planning and Zoning Commission.
- Adopting new procedures and standards by which zoning map amendments are proposed and reviewed.

APPENDIX A: HOUSING STUDY

A telephone survey of rural Warren County residents was conducted in fall 2001. A total of 49 responses were tallied. The following summary lists the questions asked and the answers given.

1. "APPROXIMATELY HOW LARGE IS YOUR LOT?"

6.6 acres (average) 4.8 acres (median) The range was between 2.0 acres and 21.0 acres
9 lots were 2.0 to 3.0 acres
23 lots were 3.1 to 5.0 acres
17 lots were more than 5.0 acres

2. "HOW LONG HAVE YOU LIVED AT YOUR CURRENT ADDRESS?"

8.9 years (average) 8 years (median)
The range was between "less than 1 year" to 21 years.
15 respondents lived at their current address 5.0 years or less
16 respondents lived at their current address between 5.1 years and 10 years.
18 respondents lived at their current address more than 10.1 years

The phenomena of moving to, or relocating within, Warren County in order to live on a "large lot" is not one of recent vintage, but evidently a continuation of a long-standing trend. More than 35% of all respondents stated that they have lived at their current address more than 10 years, while approximately 70% have lived at their current address for more than 5 years.

3. "IS YOUR HOME...?"

41 a brick and mortar, or frame home
6 a manufactured or mobile home
2 no response / other

Respondents report overwhelmingly (more than 80%) that they live in a "brick and mortar, or frame home". While these responses would seem to be somewhat at odds with the information available to the County, this percentage may be due to respondents not wanting to identify themselves as living in a mobile or manufactured home.

4. "DID YOU BUY YOUR HOME NEW, OR WAS IT PURCHASED FROM THE PREVIOUS RESIDENT?"

32 bought new
16 purchased from the previous resident
1 addition

The desire to own a new home is evident among persons moving to large lots in Warren County. 65% of respondents said that they purchased a new home. Given the large amounts of undeveloped land in the

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County, it is likely that the potential to purchase a new home, as well as a home on a "large lot", is an important factor in the decision-making of many homebuyers in the County.

5. "WHERE DID YOU LIVE PRIOR TO MOVING TO YOUR CURRENT HOME?"

<u>15</u>	"St. Louis County" (most of these were from communities in north St. Louis County)
<u>15</u>	"St. Charles County"
<u>14</u>	"Warren County"
<u>5</u>	"Other"

The answer to this question show a clear movement westward from both St. Louis County and St. Charles County, with an equal percentage of respondents (both at 30%) moving from each County to Warren County. As both St. Louis and St. Charles Counties continue to urbanize and diversify demographically, and as development and new job opportunities become available in far west St. Louis County and throughout St. Charles County, Warren County can expect this influx from the east to continue.

6. "HOW LONG HAD YOU LIVED AT THIS PREVIOUS ADDRESS?"

11.8 years (average) 9 years (median)

The range was between "less than 1 year" to 21 years.

20 respondents lived at their previous address 5.0 years or less

9 respondents lived at their previous address between 5.1 years and 10 years.

20 respondents lived at their previous address more than 10.1 years.

Warren County has been able to attract both those who had "put down roots" at a previous address, as well as those who had not lived for a long period of time elsewhere.

7. "APPROXIMATELY HOW LARGE WAS THE LOT AT YOUR PREVIOUS ADDRESS?"

8.47 acres (average) Less than 0.5 acres (median)

The range was up to 127 acres

38 lots were less than 3.0 acres, this count includes residents then living in apartments, condos or mobile homes.

3 lots were 3.01 to 5.0 acres

8 lots were more than 5.0 acres

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8. **"WHEN YOU DECIDED TO MOVE TO YOUR CURRENT HOME, HOW IMPORTANT WAS THE FACT THAT THE LOT OF YOUR CURRENT HOME IS *LARGER* /*smaller* THAN THE LOT AT YOUR PREVIOUS HOME? WOULD YOU SAY IT WAS...**

FOR THE 40 RESPONDENTS WHO STATED THAT THEIR CURRENT LOT IS LARGER THAN THEIR PREVIOUS LOT

<u>23</u>	VERY IMPORTANT"
<u>11</u>	"SOMEWHAT IMPORTANT"
<u>6</u>	"NOT IMPORTANT"

FOR THE 9 RESPONDENTS WHO STATED THAT THEIR CURRENT LOT IS SMALLER THAN THEIR PREVIOUS LOT

<u>4</u>	"VERY IMPORTANT"
<u>2</u>	"SOMEWHAT IMPORTANT"
<u>3</u>	"NOT IMPORTANT"

The answers to both question 7 and 8 again show that the opportunity to live on a "large lot", particularly one which is larger than the lot of the respondents' previous residence, is very important when deciding to (re)locate to Warren County. Over 80% of all respondents moved to a lot that was larger than the one at their previous residence. Of those who responded that their current lot is larger than their previous lot, over 80% of these respondents noted that the larger lot at their current home was "very important" or "somewhat important" in their decision to move.

9. **"WHAT FACTORS INFLUENCED YOU TO MOVE TO WARREN COUNTY?"**

Respondents mentioned approximately 60 factors. About 27% noted the desire to live in the "country" or in "rural setting", or that it was "too crowded" elsewhere, *et. al.* In addition, 15% of the responses mentioned "family" reasons (life-long resident, family members living in the County). The "affordability of land and housing" was noted in 13% of responses, "employment/new job" accounted for 5% of responses, and "racial/ethnic" factors were mentioned in 3% to 4% of responses.

10. **"THE NEXT QUESTION CONCERNS YOUR AGE.... I WILL READ TO YOU A RANGE OF AGES, PLEASE STOP ME WHEN I READ THE RANGE WHICH INCLUDES YOUR AGE"**

<u>17</u>	25-44
<u>20</u>	45-64
<u>9</u>	65-74
<u>3</u>	75 and above

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Respondents were well represented in two categories, both the "family formation" cohort (25-44) and the "prime wage earning" cohort (45-64). Over 1/3 of respondents were in the "family formation" age group, with 40% in the "prime wage earning" years. This demonstrates that the County is attracting persons in these two important age cohorts.

11. "ONE FINAL QUESTION... I WILL READ TO YOU A RANGE OF ANNUAL HOUSEHOLD INCOMES, PLEASE STOP ME WHEN I READ THE RANGE INTO WHICH YOUR HOUSEHOLD INCOME FELL IN THE YEAR 2000"

<u>3</u>	"0-\$25,000 PER YEAR"
<u>11</u>	"\$25,000-\$50,000 PER YEAR"
<u>19</u>	"\$50,000-\$75,000 PER YEAR"
<u>4</u>	"\$75,000-\$100,000 PER YEAR"
<u>2</u>	"\$ 100,000-\$ 150,000 PER YEAR"
<u>0</u>	"MORE THAN \$ 150,000 PER YEAR"
<u>10</u>	NO RESPONSE

The County's consumers of "large lots" run the gamut of household incomes, but those who did respond demonstrated that homes on such lots are available to households of moderate means (28% of respondents reported a household income of less than \$50,000), as well to the more affluent.

APPENDIX B: ETHICAL PRINCIPLES

ETHICAL PRINCIPLES

The following principles should govern the conduct of the County Commissioners, Planning and Zoning Commission members and staff. These principles should be considered as advisory rather than mandatory. Should any questions arise about the interpretation and application of any of these principles, the County Attorney or planning staff should be consulted.

1. Serve the Public Interest. The primary obligation of the County Commissioners, Planning and Zoning Commission members and planning staff is to serve the public interest.
2. Support Citizen Participation in Planning. Because the definition of the public interest is modified continuously, the County Commissioners, Planning and Zoning Commission members and planning staff must recognize the right of citizens to seek to influence planning decisions that affect their well being. Members should encourage a forum for meaningful citizen participation and expression in the planning process and assist in clarifying community goals, objectives, and policies.
3. Recognize the Comprehensive and Long Range Nature of Planning Decisions. County Commissioners, Planning and Zoning Commission members and planning staff should recognize and give special consideration to the comprehensive and long-range nature of planning decisions. Planning and Zoning Commission members and planning staff must seek to balance and integrate physical (including historical, cultural, and natural), economic, and social characteristics of the community or area affected by those decisions. Planning and Zoning Commission members and the planning staff must gather all relevant facts, consider responsible alternative approaches, and evaluate the means of accomplishing them. Planning and Zoning Commission members and planning staff should expressly evaluate foreseeable consequences before making a recommendation or decision.
4. Expand Choice and Opportunity for All Persons. County Commissioners, Planning and Zoning Commission members and planning staff should strive to make decisions, which increase choice and opportunity for all persons; recognize a special responsibility to plan for the needs of disadvantaged people; and urge that policies, institutions, and decisions, which restrict choices and opportunities, be changed.
5. Facilities Coordination through the Planning Process. County Commissioners, Planning and Zoning Commission members and planning staff must encourage coordination of the planning process. The planning process should enable those concerned with an issue to learn what other participants are doing, thus permitting coordination of activities and efforts and accommodation of interests. Planning and Zoning Commission members and planning staff should strive to ensure that individuals and public and private agencies likely to be affected by a prospective planning decision receive adequate information far enough in advance of the decision to allow their meaningful participation.

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6. Avoid Conflict of Interest. To avoid conflict of interest and even the appearance of impropriety, County Commissioners, Planning and Zoning Commission members who may receive some private benefit from a public planning decision must not participate in that decision. The private benefit may be direct or indirect, create a material personal gain, or provide an advantage to an immediate relation. A member with a conflict of interest must make that interest public, abstain from voting on the matter, not participate in any deliberations on the matter, and step down from the Commission and not participate as a member of the public when such deliberations are to take place. The member must not discuss the matter privately with any other member voting on the matter.
7. Render Thorough and Diligent Planning Service. Planning and Zoning Commission members and planning staff must render thorough and diligent planning service. Should a Planning and Zoning Commission member or members of staff believe they can no longer render such service in a thorough and diligent manner, they should resign from the position. If a member has not sufficiently reviewed relevant facts and advice affecting a public planning decision, the member must not participate in that decision.
8. Not Seek or Offer Favors. County Commissioners, Planning and Zoning Commission members and members of staff must seek no favor. Commission members and planning staff must not directly or indirectly solicit any gift or accept or receive any gift (whether in money, services, loans, travel, entertainment, hospitality, promises, or in some other form) under circumstances in which it could be reasonably inferred that the gift was intended or could reasonably be expected to be intended to influence them in the performance of their duties; or that it was intended or could reasonably be construed to be intended as a reward for any recommendation or decision on their part. Individuals must not offer any gifts or favors intended to influence the recommendation or decision of Commission members or planning staff.
9. Not Disclose or Improperly Use Confidential Information for Financial Gain. Commission members and planning staff must not disclose or use confidential information obtained in the course of their planning duties for financial or other gain. Commission members or staff must not disclose to others confidential information acquired in the course of their duties or use it to further a personal interest. Exceptions to this requirement of non-disclosure may be made only when (a) required by process of law, (b) required to prevent a clear violation of law, or (c) required to prevent substantial injury to the public. Disclosure pursuant to (b) and (c) must not be made until after Commission members or member of staff has made reasonable efforts to verify the facts and issues involved, obtain reconsideration of the matter, and obtain separate opinions on the issue from other planners or officials.
10. Ensure Access to Public Planning Reports and Studies on an Equal Basis. Commission members and planning staff must ensure that reports and records of the public planning body are open equally to all members of the public. All non-confidential information available to a member or planning staff must be made available in the same form to the public in a timely manner at reasonable cost.

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11. Ensure Full Disclosure at Public Hearings. County Commissioners, Planning and Zoning Commission members and staff members must ensure that the presentation of information on behalf of any party to a planning question occurs only at the scheduled public hearing on the question, not in private, unofficially, or with other interested parties absent. The official must make partisan information regarding the question (received in the mail, by telephone or other communication) part of the public record. The Commissions Chairman at the commencement of each public hearing ask if any member of has received any exparte communication. If any member has received exparte communication concerning the application at hand, that member must describe the nature of the information received.
12. Maintain Public Confidence. Commission members and member of staff must conduct himself/herself publicly so as to maintain public confidence in the public planning body and the official's performance. In administering the zoning and Subdivision Regulations, it is crucial that the decisions be made fairly and that they have the appearance of fairness. The credibility of the Planning and Zoning Commission, the Board of Zoning Adjustment, the County Commissioners, and public support for zoning and Subdivision Regulations in general, will erode quickly if there is an appearance of unfairness or impropriety in members of these public bodies. For this reason, it is important that a code of conduct be established and followed as closely as possible.

PROCEDURES FOR ETHICAL CONDUCT

Conflicts of Interest

In making zoning and subdivision decisions, members of the Planning and Zoning Commission, Board of Zoning Adjustment, and the County Commission should be acting in the best interest of the entire County. Whenever a member of any of these bodies is acting on an issue in which he or she also has a personal interest, an important element of fairness is lost and the decision can be legally challenged. In general, a conflict of interest is any situation in which a member is in a position to act upon or influence a development request, which includes the potential for direct or indirect gain, financial or otherwise. In order to clarify this general rule, the following guidelines are recommended.

No member shall act on or attempt to influence any development request when:

1. The member has a potential for direct or indirect profit or financial gain from the development;
2. The member owns or is employed by any organization, which is an applicant, subdivider, developer or option holder;
3. The applicant, subdivider, developer or option holder is an established and regular client of the member or the member's place of employment;
4. One or more of a member's immediate family (parent, sibling, spouse or child) has a direct financial interest in the development or is an owner or officer of any organization which is an applicant, subdivider, developer or option holder; or

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5. The member has a potential for indirect financial gain or loss because of related property or business holdings.

Other situations not covered by these guidelines should be left to the judgment of the member involved. Again, the appearance of fairness and impartiality is as important as actual fairness and impartiality. When a conflict of interest does occur, however, the following steps should be taken:

1. The member should declare, and the record should show, that a conflict of interest exists with respect to a particular issue, and that the member will not participate in any discussion or action;
2. The member should step down from his or her regular seat and should not speak with any other members during the discussion of the issue at hand; and
3. The member should not represent or speak on behalf of the applicant, but may speak on his or her own behalf as a private citizen during the hearing if the application is for property which is the member's own place of residence.

Acknowledgment of Outside Information

During any public hearing, it is presumed that all sides will have the opportunity to hear the opposing side's information and arguments, and to offer rebuttal. This right is lost when discussions are held or information is provided outside the public hearing. The possibility exists that a decision could be based on information that was never discussed publicly. To avoid this situation, the County Commissioners, the Planning and Zoning Commission and Board of Zoning Adjustment members should not receive any information relating to a case or discuss a case with anyone who has an interest in the outcome. Where such a discussion or information is unavoidable, the member should declare during the hearing, and the record should show, the general nature and content of the discussion or information and the participants in the discussion or the source of the information.

These guidelines also apply to any personal knowledge, which is relevant to the issue. If a member has any personal knowledge, which will affect his or her decision, such information should be made public during the hearing and should be subject to rebuttal.

Informed Participation

All parties with an interest in a particular development issue have a right to a decision based on all of the available information. Any member who is not informed or aware of the available information should abstain from voting on that issue. This includes the following situations:

1. When a member has not reviewed the application or the information submitted with the application;
2. When a member has missed all or part of a public hearing and has not been able to review a transcript of the hearing; or
3. When a member has missed all or part of the discussion between members prior to the vote.

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As a corollary to this policy, it is the duty of each member to attend normally scheduled meetings as regularly as possible. Without regular attendance, informed decision-making and full participation in the regulatory process is unlikely.

APPENDIX C: ENVIRONMENTAL OVERVIEW

Federal laws govern environmental management by federal agencies. Certain laws such as the Floodplain Management Act are administered at the local level; others at the state level. This Appendix lists environmental laws that should be considered during the administration of the Warren County plan, by example only.

FLOODPLAIN MANAGEMENT

Warren County floodplains are protected under Executive Order 11988 - Floodplain Management, May 24, 1977. The purpose of the Order is to require federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, each agency is required to "take action to reduce the risk of flood loss, to minimize the impacts of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplain in carrying out its responsibilities."

As the State of Missouri participates in the National Flood Insurance Program (NFIP), any development located within a special flood hazard area as identified by the Federal Emergency Management Agency (FEMA) must obtain a flood development permit for the project. If the development is located within a regulatory floodway, a "no-rise" certificate/statement as to the effects of possible flooding is required before the development can be permitted.

The County Floodplain Order should ensure that impacts to the base floodplain will be minimized throughout the design procedures to insure that all development is in accordance with Federal Emergency Management Agency (FEMA) standards.

WETLANDS

Wetlands are defined as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient 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, marshes, bogs, and similar areas" (33 CFR 328.3. Wetlands are considered to be "waters of the U.S." and are regulated by the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. For County projects that are federally funded, Executive Order 11990 requires all federal agencies to minimize impacts to wetlands when conducting specific activities.

A Section 404 permit is required for construction activities that place fill material within wetlands and ponds that the USACE chooses to regulate as waters of the U.S., and/or below ordinary high water lines of regulated rivers and streams. Should the County project require the discharge of dredged or fill material in any waters of the U.S., including wetlands, a permit may be required. A jurisdictional wetland determination must be conducted and submitted to the USACE for the project following design and prior to the initiation of any construction on the project that is within the USACE regulatory jurisdiction.

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All County projects must consider the potential impacts to these isolated wetland systems, due to dredging operation, fill placement, or any alteration of the channel structure, and minimized the impacts to the extent possible.

EROSION CONTROL

The National Pollutant Discharge Elimination System (NPDES) requirements of the Clean Water Act (CWA) prohibit construction activities that cause erosion that may pollute adjacent rivers and streams. The County must consider whether the construction activities of a project will disturb soil and cause the off-site movement of soil particles. The Missouri Natural Resources Conservation Commission may be contacted for obtaining guidance for establishing County regulations and permit procedures, methods of erosion control, temporary erosion controls, and best management practices.

The State may offer recommendations, similar to the following, in order to minimize impacts to the aquatic environment.

- State Channel Modification Guidelines should be followed for any channel modification or stream relocation.
- Disturbed areas should be graded and seeded as soon as possible to minimize erosion. The State may have seeding and planting recommendations.
- Avoid disturbing stream banks and riparian areas.
- Stream flows should not be interrupted and all temporary in-channel fills that could impound water should be provided with a culvert.
- Working in channels between certain dates should be avoided to the extent possible.
- Take all necessary precautions to prevent petroleum products from entering streams.

HAZARDOUS WASTE SITES

The County shall endeavor to limit development at sites that have been encumbered by hazardous waste, and may elect to research the following databases available from the U.S. Environmental Protection Agency, Region VII (USEPA) and the Missouri Natural Resources Conservation Commission. The list includes locations of sites that have potential hazardous and solid waste concerns, and existing businesses and past businesses suspected of using or storing oil or hazardous substances.

PUBLIC LANDS

Public lands may be reserved for public recreational usage under a Section 4(f) or Section 6(f) designation. Section 4(f) is part of the Department of Transportation (DOT) Act of 1966 that was designed to preserve the natural beauty of the countryside. Property eligible for Section 4(f) must be publicly owned, except for historic sites, which could be either public or privately owned. Section 4(f) eligible sites cannot be impacted by federally funded actions unless there is no feasible and prudent alternative.

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Section 6(f) is part of the Land and Water Conservation Fund (LWCF) Act, which was designed to provide restrictions for public recreation facilities funded with LWCF money. The LWCF Act provides funds for the acquisition and development of public outdoor recreation facilities that could include community, County, and state parks, trails, fairgrounds, conservation areas, boat ramps, shooting ranges, etc. Facilities that are LWCF-assisted must be maintained for outdoor recreation in perpetuity and therefore require mitigation that includes replacement land of at least equal value and recreation utility for park, recreation, wildlife or waterfowl protection or use.

The definition of publicly owned lands may include properties within the County that were purchased under the following:

- National Wildlife Refuge System
- National Park System
- Bureau of Land Management
- Wild and Scenic Rivers
- U.S. Fish and Wildlife Service
- Forest Service
- Federal-Aid In Fish Restoration
- Federal-Aid In Wildlife Restoration Act
- Recreational Demonstration Projects
- Federal Property and Administrative Service (Surplus Property) Acts
- Land and Water Conservation Fund (LWCF) - Section 6(F)

FARMLAND

The County has adopted local policies that affect farmland. Federal programs must be undertaken in accordance with the following.

Farmland is protected under the federal Farmland Protection Policy Act (FPPA) as set forth in 1978 under 7 U.S.C. 4201 et seq., and the U.S. EPA Policy to Protect Environmentally Significant Agricultural Lands. The purpose of these regulations is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural use, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with state, local and private programs and policies to protect farmland. Additionally, the U.S. EPA's policy is to protect the Nation's significant/ important agricultural lands from conversions that are irreversible and result in the loss of an essential food or environmental resource. The U.S. Department of Agriculture (USDA) and the Natural Resource Conservation Service (NRCS) administers the FPPA.

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WILDLIFE

The County may wish to conduct what is referred to as a "Biological Survey," perhaps in association with a local university. The survey would identify wildlife areas and establish protection ordinances in accordance with the following.

The federal Fish and Wildlife Coordination Act (FWCA) was set forth in 1964 under 16 U.S.C. 661 et seq. The purpose is to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water. The statute requires federal agencies to consider the effect that water-related projects would have on fish and wildlife resources; take action to prevent loss or damage to these resources; and to provide for the development and improvement of these resources. The Department of Interior through the Fish and Wildlife Service (FWS) and the Department of Commerce through the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) administer the FWCA.

WILD & SCENIC RIVERS

Wild and scenic rivers are protected under the Wild and Scenic Rivers Act (WSRA), codified under 16 U.S.C. 1271, et seq. The intent of the WSRA is to preserve the free-flowing state of rivers that are listed in the National Wild and Scenic Rivers System (System) or under study for inclusion in the System because of their outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Rivers in the System are classified as wild river areas, scenic river areas, or recreational river areas. The WSRA establishes requirements applicable to water resource projects and protects both the river, and river segments, and the land immediately surrounding them. WSRA specifically prohibits federal agencies from providing assistance for the construction of any water resource projects that would adversely affect wild and scenic rivers. The U.S. Department of the Interior through the National Park Service (NPS), Bureau of Land Management (BLM), and Fish and Wildlife Service (FWS) and the Department of Agriculture through the Forest Service (FS), manage wild and scenic rivers within their jurisdiction and conduct the necessary studies to include additional river components into the System. Under Section 2(a) of the WSRA, states may also propose rivers to the System and manage them.

THREATENED & ENDANGERED SPECIES

The purpose of the federal Endangered Species Act as set forth under 16 U.S.C. 1531 et seq. is to ensure that federal agencies and departments review actions they take or support to determine whether they may affect endangered and threatened species or their habitats. If such a review indicates the potential for effects, the federal agency must consult with the Fish and Wildlife Service (FWS) of the U.S. Department of the Interior and the National Marine Fisheries Service (NMFS) of the U.S. Department of Commerce. The State of Missouri has also identified species that are imperiled in the state, and their habitat locations.

APPENDIX D: GLOSSARY OF ACRONYMS

AASHTO	American Association of State Highway Transportation Officials
CIP	Capital Improvement Program
ITE	Institute of Traffic Engineers
MSA	Metropolitan Statistical Area
MDNR	Missouri Department of Natural Resources
MoDOT	Missouri Department of Transportation
NID	Neighborhood Improvement District
NRPA	National Recreation and Parks Association
TDD	Transportation Development District
NPL	National Priorities List
SHWS	State Hazardous Waste
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
FCERCLIS	Federal Comprehensive Environmental Response, Compensation, and Liability Information System
USEPA	United States Environmental Protection Agency
ERNS	Emergency Response Notification System