

STONE COUNTY COMPREHENSIVE PLAN
Adopted October 8 2013

INTRODUCTION
STONE COUNTY PLAN PROCESS

The 2013 Stone County Comprehensive Plan is an update of the original Stone County Comprehensive Plan adopted by the County Commission on March 1 1995. The original Plan was developed by the Stone County Planning Commission, which included participatory meetings with county residents and public hearings. This update to the Plan was developed through a process that included a special working group formed by the County Commission, the Stone County Planning and Zoning Board, and several public hearings. The goal of the Plan is to provide a framework for guiding Stone County decisions for orderly development, and to provide a foundation for continued future development and enforcement of zoning and subdivision regulations.

To be comprehensive, the Plan was originally developed by a process that involved the entire community in producing the outcome. Thus, the Plan addressed the following necessary elements:

Values: The community defines what is important to Stone County, for example, the protection of water quality, the natural beauty of the area, and promoting growth while preserving the environment.

Goals and Objectives: The community, through consensus and participation in the planning process, defines strategic goals and objectives in general and specific terms.

Direction of Land Use Changes: Areas of land use intensity, as well as growth and changing development patterns, shall be determined by the Planning and Zoning Board.

The Stone County Plan addressed these elements through a participatory process that identified community values, recommended goals and objectives, identified natural resources, hazard areas, existing development, public lands and public service areas. This process allowed the Planning Commission and other participants to visualize both development opportunities and constraints in Stone County.

Detailed policies for regulating growth are expressed in the Zoning and Subdivision Regulations, and are based on the goals and objectives of this Plan. This Plan provides the policy basis for administering the Zoning and Subdivision Regulations, and should be consulted when interpreting the standards and requirements of the regulations.

The Planning and Zoning procedures allow for continuation of change in Stone County, driven by private initiative, and shaped by a consensus about appropriate public policy. The Plan prepares the County to respond to changes in an orderly manner. Trends and changes in Stone County have been considered in the Comprehensive Plan approach.

CHAPTER ONE

ISSUES IDENTIFICATION

Issues Identification. This chapter identifies the top five issues facing Stone County in the future, organized by the following topics:

Natural Areas and Wildlife

Recreation

Water Resources

Economic Development

Agriculture

Natural Areas and Wildlife

Subdivision Regulations

Goal: Continue land subdivision regulations which consider preservation of natural vegetation, wildlife habitat and natural beauty, while addressing water and wastewater issues.

Objectives:

- Continue regulations that consider preserving natural vegetation in future development.
- Continue regulations that require development to connect to a sewer district where available. Encourage individual site development of wastewater plants.
- Enforce regulations that require septic tank improvements based on the following standards and land use densities: Densities no greater than one unit on 3 ½ acres, unless public water is available, in which case lots may be reduced to 2.5 acres for individual on-site wastewater treatment systems.

Zoning Regulations

Goal: Enforce zoning ordinances that require protection of the environment and the direction of land development, in order to direct and control harmonious growth.

Objectives:

- Consider existing and potential environmental problems facing Stone County.

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- Develop and apply practical solutions to these problems as they pertain to Planning and Zoning.
- Consider growth and development that will augment and coincide with environmental protection efforts.
- Continue green space practices for Site Plans.

Waste Management

Goal: Encourage and support proper means of waste management and encourage recycling.

Objectives:

- Address waste management issues facing Stone County.
- Develop long-term solutions to waste management for the County.

Recreation

Goal: Utilization of the natural beauty of the Ozarks for the common good, and promotion of the general beauty, serenity, and recreational opportunities of the area, in ways that do not adversely affect the environment.

Objectives:

- Encourage recreation with support for park trails, camping and picnic areas, etc.
- Work with the U.S. Army Corps of Engineers in support of the Table Rock Lake Master Plan.
- Work with organizations that promote shoreline cleanup and roadside pickup.
- Promote reforestation of developed areas for beautification purposes.
- Work with community groups to develop parks throughout the county.
- Assist organizations, and encourage public participation, in maintaining County facilities.
- Work with both public and private organizations to address boating issues, including the speed of boats and loud marine engines.
- Work with state and federal agencies to provide goods and services for the County's needs.
- Work with the U. S. Army Corps of Engineer's Shoreline Management Plan to provide consistent zoning on lake zoning areas, addressing such areas as boat dock parking lots and building next to the U.S. Army Corps of Engineers fee take line.
- Discourage the selling of public lands for private enterprise.

Water Resources

The quality of water in Stone County is not only important to human and ecosystem health, but it is also important to the economic growth of the County in terms of commerce in the Table Rock Lake area. According to the United States Geological

Survey (USGS), Stone County is located in the Ozark Highland area, which includes extensive areas of Karst terrain and is part of three USGS hydrologic units: the James River watershed, Beaver Reservoir/Upper White River watershed, and Bull Shoals watershed. Because of this underlying Karst geology, the issue of water quality is not easily separated into ground water and surface water. Therefore, any discussion on water quality must include both surface and ground water.

The Missouri Department of Natural Resources lists effluents from sewage treatment facilities, industry, septic tank seepage, cattle operations, poultry operations, sedimentation from erosion, runoff of urban areas, and sludge application as potential sources of pollution. They also note several problems such as lack of adequate riparian corridors, excessive nutrient loading, stream bank erosion, excessive run-off, and gravel mining as threats to water quality in the area. Therefore, it is important that, as a County and as individuals, we work to improve our community planning and ensure future decision-making is well rounded, and includes policies that safeguard, protect and improve water quality in Stone County.

Surface and Ground Water Quality Protection

Goal: To prevent degradation of Stone County water resources.

Objectives:

- Continue to protect and improve the water quality in Stone County, working with local, state and federal agencies, as well as with the general population.
- Educate people on environmental stewardship and protecting water quality.
- Encourage the creation of public water districts.
- Identify point and non-point sources of pollution, and implement pollution controls.
- Protect Table Rock Lake as a potential source of drinking water.
- Support policies for treatment of abandoned wells and for implementation of a wellhead protection plan.

Water Runoff and Erosion

Goal: To prevent storm water runoff and erosion from adversely affecting quality of life, quality of property, wildlife habitat, and aquatic habitat.

Objectives:

- Limit area and nature of surface clearing disturbance during construction, specific to the area.
- Maintain vegetated open spaces.
- Encourage riparian zones and zones of natural filtration.
- Preserve the natural meandering of streams.
- Promote wetland preservation and restoration.

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- Develop pre- and post-vegetation policy for disturbed areas.

Septic Tank Regulation

Goal: To prevent degradation of groundwater and surface water quality from inadequate or failing septic systems.

Objectives:

- Adopt septic tank standards pertaining to site-specific design, installation, and maintenance for all septic systems, based on basic soil condition and hydro-geological conditions of each site, and approve only those systems which promise acceptable effectiveness for the site.
- Maintain density guidelines for septic tanks.
- Seek to partner with non-government organizations, such as the James River Basin Partnership, the Upper White River Basin Foundation, or the Table Rock Lake Water Quality, Inc., to assist homeowners with septic improvements projects.
- Encourage innovative septic tank designs and technologies.

Landfills and Waste Handling Facilities

Goal: To prevent refuse, refuse handling and refuse storing from contaminating Stone County water resources.

Objectives:

- Prohibit new landfills in Karst regions and environmentally sensitive areas.
- Re-establish vegetation on existing landfills.
- Support controls on refuse collection, refuse handling and refuse storage facilities, and on new and existing landfills, which ensures environmentally responsible storage and handling of materials intended for recycling.
- Eliminate illegal dump sites.
- Work with the state to prohibit potentially hazardous substances from entering the waste stream and water resources.

Economic Development

During the first 75 years of Stone County's history, its economy was primarily based on agriculture, forestry, hunting and fishing. Starting in the early 1960's, with the damming of the White River, tourism became the primary economic engine for the county. The resulting population boom caused Stone County to establish Planning and Zoning Regulations.

Goal: Promote business growth.

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Objectives:

- Identify county strengths that project realistic growth potential, including commercial, residential and agricultural.
- Support incorporation (city) expansion with the resulting increase in retail businesses.
- The Commission should make business promotion an ongoing priority.

Goal: Apply and enforce applicable regulations with concern for duplication of efforts.

Objectives:

- Support agencies in the pursuit of rules that are their prerogative.
- Provide legislative support for revisions of state statutes in response to changing situations.

Goal: Orderly growth and management of land development.

Objectives:

- Zone portions of the County in accordance with the *Planning and Zoning Regulations*, with concern for people's property rights.
- Support business development by planning for supporting infrastructure that provides for sustainable water quality, sanitation, transportation, neighborhoods, etc.
- Cooperate with incorporated areas.

Goal: Encourage citizen support for community planning.

Objectives:

- Community water resources should be encouraged, as in community wells and multi-user wastewater treatment systems, in order to reduce dependence on individual wells and individual residential septic tanks, etc.
- The use of building codes is effective in protecting structural integrity, and should be in the future for the County.
- County employees should be sources for information as well as enforcers of regulation.

Agriculture

Agriculture is important to the economy of Stone County and Missouri. Stone County has a long, rich heritage of farming and agribusiness, stretching back to the original settlers in the nineteenth century. Table Rock Lake has dramatically changed the land use patterns and preferences of the County, particularly in the southern region. The historically rural agricultural land surrounding Table Rock Lake is rapidly developing away from agriculture and agribusiness.

Goal: Promote the orderly management of agriculture and agribusiness.

Objective: Continue to support the agencies that regulate agriculture and agribusiness.

CHAPTER TWO ENVIRONMENT

There are a number of environmental features in Stone County which help to determine land uses. This chapter addresses the most obvious environmental features affecting land use, and its implications for development.

Natural Features Inventory

A natural features inventory of Stone County was conducted by the Missouri Department of Conservation. The information was collected to help preserve outstanding natural features in Missouri. The inventory identifies both natural areas and special features. A natural area is defined by the Missouri Department of Conservation as “a tract of land or water that best reflects natural conditions in Missouri before the drastic changes brought about by European settlement”. These sites are relatively undisturbed today. A special feature site is one that “...may or may not have land or water of high natural quality, but may contain rare or endangered species, outstanding geologic formations, or other unusual features which add to the diversity of the natural landscape”.

These natural areas and special features were inventoried, classified, evaluated and ranked by the Missouri Department of Conservation. The type of natural features studied included:

- I. Relatively undisturbed terrestrial or wetland natural communities.
- II. Rare endangered species sites.
- III. Relic species sites.
- IV. Outstanding geologic features.
- V. Areas used for natural science studies.
- VI. Unique natural features.
- VII. Outstanding aquatic features.

Pre-settlement vegetation in Stone County is thought to have consisted of open forests, large treeless areas and more densely forested areas near major streams and tributaries. Today Stone County is characterized in much the same way, with a mixture of forests, glades, savanna and prairie. Most of the County is underlain with limestone and dolomite bedrock. This forms Karst features, including caves, sinkholes and streams. Rock outcrops are located throughout the County, especially in the Table Rock lake area, where scenic cliffs and bluffs border the lake.

The diverse geology of Stone County has contributed to the creation of a rich environment for many species of plants and animals. A total of 127 natural features were

identified in Stone County by the Department of Conservation survey. Among these, twelve are considered significant, and 43 are considered exceptional. Significant and exceptional natural communities are those undisturbed or lightly disturbed sites that have a good diversity of species. Significant features are considered of such high quality, size and/or rarity that they are of state-wide importance. Exceptional features are high quality natural communities, unusual geologic features, or rare species sites. These increase the preservation value of an area, but are of regional rather than state-wide importance. Of the 127 natural features identified by the Department of Conservation survey, 79 percent are rare and endangered species sites.

Many of the natural communities which once existed and dominated Stone County have been disturbed and altered by human activity, while some ecosystems have been lost. For example, open, grass-covered areas on uplands, known as glades or balds, were once very prevalent in the County. Many natural communities in the County have been lost due to overgrazing, logging and clearing, and cultivation of land. This has destroyed pre-settlement prairie vegetative cover of open areas. Natural occurring fires once helped to prevent woody invasions of glades and open areas. The suppression of these fires has helped to increase cedar invasion, which has destroyed the natural quality of many glade and balds. Although many high quality natural areas are still present in Stone County, rapid development in the County is a continuing threat to the preservation of these areas.

Soils and Geology

Stone County is located in an area known geographically and physiologically as the Ozarks. The Ozarks region can be further divided into geographic regions due to differences in geologic history, soils, topography, and plant and animal distribution. The extreme northwest and northeast corners of the County are included in the Springfield Plateau, which is in an area where the Osage Plains meet the Ozark forests. The rest of the County is located in the White River Section, which is characterized by steep ridges and bluffs bordering various rivers, streams and deep drainage channels.

Stone County is underlain with mostly dolomite and limestone. The weathering of this bedrock has left varying soil thicknesses. Steep slopes have little or no soil cover. Sparsely vegetated areas, known as balds and glades, have also been formed by geologic formations. These areas are underlain with dense bedrock, and once supported a variety of vegetation.

Stone County is characterized by Karst topography. Karst areas result from the action of water and other substances on limestone and dolomite. This causes dissolution of the bedrock. Karst features include permeable soil and rock, springs, sinkholes, losing streams, caverns, and irregular bedrock surface, and small openings that move water through underground natural conduits characteristic of Karst areas. Improperly installed or maintained septic systems can discharge poorly treated or untreated waste into excessively drained soil, and then into the groundwater.

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Fragipan, meaning hard, dense layers of soil near the surface and shallow depth to the underlying bedrock, can increase construction costs. Highly permeable soils can contribute to the contamination of underground drinking water. Continuous demand for underground water can increase the cost of constructing wells, because they have to be drilled deeper below the surface. Finally, erosion becomes a problem when development takes place on thin soils, and existing tree cover is removed.

Floodplains

Floodplains in Stone County are located on and near virtually every significant body of water in the County, including the James River, Table Rock Lake, Indian Creek and Crane Creek. The 100 year floodplain, as defined by the Federal Emergency Management Administration (FEMA) is accepted as the area with the greatest probability of flooding. These areas have a 1 in 100 chance of flooding in any given year. The decision by the County Commission to participate in the FEMA flood insurance program presents opportunities and responsibilities for effective floodplain regulation.

Water Quality

During the public meetings to identify issues, Stone County residents and landowners identified degradation of water quality as their ongoing, primary concern. The quality of surface water and groundwater is an integral part of the human and natural environment. The implications of not protecting water quality can be life-threatening for humans, plant and animal species. Poor water quality has serious consequences that can threaten the quality of life in Stone County.

Population increases and accelerating rates of change in land use continue to put significant demands on the land, and consequently, on natural resources. The unique topography and geology of the Ozarks region make Stone County especially susceptible to water quality threats, primarily as a result of improperly designed developments.

The major drainage basin in Stone County is the White River Basin, which eventually flows into the Mississippi River. Several minor watersheds in the County comprise the basin that drains into Table Rock Lake. These include Flat Creek, Dry Creek and Crane Creek, which drain into the James River, and then go into Table Rock Lake. Indian Creek, Little Indian Creek and Long Creek flow directly into Table Rock Lake. Table Rock Lake is the main body of water in Stone County, and is used for flood control and hydroelectric power. Other sources of surface water in the County include numerous springs and ponds that exist throughout the County.

Onsite Wastewater Treatment Systems

A large portion of groundwater which moves throughout Stone County is transported through the subsurface system of channels, caves and springs. In areas underlain with carbonate rock formations that form Karst features, environmental problems can occur. Shallow soils, steep slopes and limestone rock create problems for wastewater disposal,

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especially on-site wastewater disposal. The use of septic systems for wastewater disposal is the primary method of sewage disposal in Stone County.

Proper treatment and disposal of wastewater through the use of septic systems depends, to a large extent, on the suitability of the soil. Soils act to cleanse the wastewater discharged from septic systems.

Thin soils, and the presence of cherty soils in Stone County, limit the soil's ability to properly treat wastewater discharge and effluent. The porous underlying rock and thin soils also increase the potential for untreated contaminants to move throughout the system into the underground water.

Research on the quality of groundwater in Stone County suggests that the degradation of the shallow groundwater system increases as development increases. The Stone County Health department has adopted a Wastewater Treatment Systems Ordinance. This requires a permit to construct, install, modify or operate any sewage or wastewater treatment system. The permit process requires a site evaluation to determine the proper type of on-site system, and the length of the lateral field. The following factors affect the proper operation of on-site disposal systems:

Permeability: This is the capacity of a porous medium, such as soil or rock, to transmit a fluid without impairing its structure. Septic tank effluent is filtered by the soil through the absorption field, which is designed to remove odors, prevent pooling of effluent on the surface, and avert groundwater contamination. Ideal soil for the operation of septic systems is well-drained, but not excessively permeable.

Depth to rock: Ideally, there should be at least four feet between the bottom of the lateral trench and the underlying bedrock. Shallow bedrock does not allow septic system effluent sufficient distance to travel through the soil for proper absorption, filtration and purification. In Stone County, the depth to the bedrock is a serious consideration, because characteristic cracks and crevices in the bedrock provide passages for rapid movement of effluent into the groundwater. Alternative systems, or larger lateral fields, can sometimes be designed to correct these problems.

Groundwater level: The groundwater table should be at least four feet below the absorption field during the wettest months, to prevent groundwater from inundating the absorption field. When the water table is high, a drain field may begin to pond, resulting in failure of the septic system. Hard, dense layers of soil near the surface, called fragipans, can be found in Stone County. These can cause groundwater to become 'perched', again causing system failure. However, during dry periods, fragipans provide for slow percolation of effluent. This allows adequate treatment.

Slope: Soil cover is thinner on steep slopes than on ridge tops. Slopes exceeding 10%, which exist throughout Stone County, are not suitable for septic systems.

Proximity to Streams and Sinkholes: Floodplains and sinkholes are unsuitable for septic systems, because flooding prevents the continuous filtration necessary for the operation of the septic field.

The State of Missouri grants the authority to local governments to adopt wastewater regulations. However, there are no statewide regulations or standards for the construction of septic systems, unless a proposed subdivision will have more than 15 lots. At that time, Missouri statutes and regulations govern on-site wastewater treatment system standards. The prior lack of uniform construction standards for septic systems is thought to be one of the main reasons that an estimated two-thirds of all septic systems in the State of Missouri are failing. This has a profound effect on the quality of groundwater. The Stone County Health Department enacted an ordinance that should decrease the number of failing systems with a Property Transfer Certificate program. This ordinance addresses problems with septic systems in houses that are more than ten years old, and takes effect at the time of sale of the house.

Improper location, construction and maintenance of septic systems are the primary reasons for septic system failure. Many owners do not follow a preventive maintenance schedule. However, proper maintenance in and of itself will not ensure that a system will work effectively, because soils and geology must be considered.

Drinking Water

Stone County lies over the massive regional aquifer known as the Ozark Aquifer. Much of the drinking water provided in the County is from underground wells rather than surface water. Given the County's characteristic geologic features of cracks and crevices from the underlying limestone, most of the County can be considered a recharge area for the aquifer. Lower lying areas with more permeable rock contribute more water to recharging the underground water than do upland areas.

Water wells are located throughout the County. The use of well water for drinking water makes the threat of underground water contamination even more serious. The Missouri Department of Natural Resources will assist communities in administering a well-head protection program designed to prevent contamination of drinking water. They do this through land use protections, because most threats to groundwater are from human activity.

The Missouri Division of Natural Resources regulates the provision of public drinking water for community and commercial use. Private water wells on individual sites are not regulated. There are many public wells in Stone County which are registered with the Missouri Division of Natural Resources. While communities, major recreational and commercial industries have drilled large capacity supply wells, rural residences drilled many shallow wells. One consequence of the increased demand for water is a lowering of the aquifer which supplies almost all of the groundwater in the area. Because much of the increased water demand occurs during the summer tourist season, water levels are lowered substantially in the summer, and recover during the winter.

Potential sources of contamination in ground water are listed by the Missouri Division of Natural Resources as follows:

- Land Fills
- Pesticide Use
- Dumps
- Water Supply Wells
- Septic Tanks
- Dry Wells and Sumps
- Animal feedlots
- De-Icing Salt Usage
- Leaking Underground Storage Tanks
- Mining
- Leaking Underground Pipelines
- Graveyards
- Lagoons Improperly Abandoned
- Wells
- Accidental Spills along Transportation Corridors

Environmental Planning Recommendation

1. The County and its citizens should support and encourage efforts at the state and local level to implement a wellhead protection program. The purpose of this is to provide a mechanism for increased protection of groundwater supplied to public systems through efforts at the state and local levels. These programs usually involve a grassroots effort, as individuals and citizen groups become involved in identifying the known and potential sources of groundwater contamination in a wellhead protection area. Contingency plans in the event of well or well field contamination are prepared, and locations for future supply wells are determined. The Missouri Division of Natural Resources recommends the following elements of an effective wellhead protection plan:
 - Specify the roles and duties of local government entities.
 - Delineate a Wellhead Protection Area.
 - Identify potential sources of contamination within the Wellhead Protection Area.
 - Develop a management approach for the Wellhead Protection Area.
 - Develop a contingency plan for an emergency water supply.
 - Plan future well sites in accordance with the Wellhead Protection Plan
 - Ensure public participation.
2. The County and its citizens should support continued studies of environmental threat.
3. The Stone County Health Department should continually review environmental requirements in the Wastewater Treatment Systems ordinance. Because septic systems are designed for absorbent soils, the Karst topography of most areas of Stone County is

not conducive to effective on-site waste disposal. Alternative technologies, such as mound systems or sand-lined low pressure pipe systems (SLPP), offer improved mechanisms on rocky, low-absorptive soils.

4. The Stone County Health Department should consider requiring assurances from the owners of on-site systems that they will maintain the systems so that systems are checked routinely, and repaired when needed. As required by the Stone County Department of Health, septic tanks will be inspected at the time of sale of a property.
5. The Planning and Zoning Board should continually review Zoning and Subdivision Regulations, and consider requiring innovative and improved wastewater treatment procedures as they become available.

CHAPTER THREE SERVICES

Public Services. Public services in Stone County are provided through a number of municipalities and public service districts, including water, fire protection, schools, and private and cooperative utilities. Sanitary sewer service may one day be provided by other districts.

Emergency Services

Emergency services are provided by Cox Health Systems in the northern half of Stone County, and by Cox and Mercy Hospitals in the south. The E-911 emergency dispatch system, implemented in 2000, has been critical to effective response time for EMS personnel.

Fire Protection Districts

Fire protection in Stone County is provided by rural fire districts, which are set up under authority of Missouri Statutes. There are seven fire districts in Stone County, some of which extend into neighboring Christian, Barry and Lawrence Counties. Mutual aid agreements among fire districts are implemented so that neighboring fire districts can assist one another when extra equipment and fire fighters are needed. Most fire fighters are volunteers, although some fire districts have some paid employees.

Stone County is completely covered in the provision of fire protection almost exclusively through volunteer efforts. The stations in the Southern Stone District, combined with the Central Crossing District, provide a fairly even distribution of fire stations for the southern one-half of Stone County. Several of the districts in the northern one-half, including North Stone, North East Barry, Hurley, Western Highlandville, Nixa, Clever and Billings are either considering additional fire stations in Stone County, or are planning construction. Given some of the natural limitations to transportation, an even distribution of these facilities is needed to provide adequate protection throughout the County. The E-911 network in Stone County coordinates responses among districts.

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School Districts

There are 12 school districts in Stone County or partially in Stone County and neighboring counties. Development in the area has significantly impacted the County's schools. Some funding for the schools is based on the assessed property valuations.

Water Service

The incorporated cities in Stone County and rural water districts provide water service, but none are improved to an urban standard. For example, all municipal systems reported available fire flows of only 50 to 100 gallons per minute at certain locations. All water in the County is supplied through wells.

Sewer Service

Properly implemented and coordinated sewer systems are vital to the quality of life in Stone County. Stone County's periods of growth present many attractive opportunities to developers. It is preferable to allow private developers to supply wastewater treatment plants that follow accepted design standards, so that future coordination with public facilities will be facilitated.

To help Stone County develop in a proper, orderly manner, policies which encourage the creation of sewer districts to manage wastewater should be adopted. These sewer districts would be the continuing authority responsible for the operation, maintenance and modernization of private wastewater treatment plants. Additionally, Stone County should encourage municipalities to become continuing authorities, and should require coordination of private wastewater treatment plants with public continuing authorities.

Missouri Statutes Concerning the Creation of Sewer Districts

Missouri Statutes empower counties to create sewer districts and govern how sewer districts are created within counties. As a county of the third classification, Stone County must follow certain procedures in order to create sewer districts within its boundaries.

Because water quality has emerged as a critical issue in the Stone County Comprehensive Plan, it is important to plan for the provision of public sewer systems where urban growth is projected to develop.

Once sewer districts are created, the Statutes provide for methods to fund them. Sewer districts may contract with a participating community, such as a city, for the payment of its proportioned share of treatment costs. Sewer districts may make general legislations concerning the right to connect to buildings or houses with any of said sewers, and can require that a permit must be obtained from the sewer engineer before connection is allowed. All costs of making such connections should be paid by the person requesting such a permit.

A sewer district has the authority to levy special assessment taxes upon lots, tracts, or parcels of land for the maintenance, repair and administrative expenses of the sewer in a sewer district. However, no assessment for maintenance should be made against any land that has not been platted and such plat finally approved by the Stone County Planning and Zoning Board, unless the owner or owners of such land have petitioned for sewer service.

Joint sewer districts may be created if the County Commission deems it necessary that a sewer should be constructed in any part of a sewer district extending into two or more districts. The districts may cooperate and coordinate with neighboring jurisdictions or with districts already established.

Issues Concerning Common Sewer Districts

Because Stone County contains several different watersheds and several different municipalities, it may be advisable to establish a common sewer district. The sewer districts discussed previously are only applicable to areas in the same watershed. A common sewer district is appropriate in a county if its natural drainage area contains all or portions of several drainage basins, several municipalities, or several sewer districts, and if a common sewer district encompassing the entire area may be eligible for federal aid and assistance. It may be advisable for the County to form a common sewer district so that there will be greater coordination of services, and a possible reduction of costs.

If a common sewer district is created in Stone County, a board of trustees would be responsible for the control and operation of the sewer district. Additionally, an advisory board would be formed, consisting of the mayor (or authorized representative) of each municipality, and an authorized representative of each sub-district. The advisory board would make recommendations concerning the construction and operation of sewers and facilities within the district to the board of trustees of the common sewer district, and the board of trustees would keep the advisory board informed as to all phases of the planning and operation of the district.

The costs accrued by a common sewer district in acquiring, constructing, improving or extending a sewerage system may be met from the issuance of revenue bonds. Sub-districts may be created which would have the power to contract with a common sewer district, or with other sub-districts, for the collection, transportation and treatment of sewage, or any other associated function.

Existing Public and Municipal Wastewater Treatment Services

Several municipalities in Stone County are organized in municipal sewer treatment districts, some of which have plans for expansion to accommodate growth. Companies have been established, and operate in Stone County, which contract with individual residential owners, subdivisions, villages and commercial operations, to operate their wastewater treatment systems. Development and enforcement of wastewater treatment is controlled by the Missouri Department of Natural Resources. The Stone County Health Department is responsible for permitting and controlling septic tanks in the County.

Planning for Expansion and Future Wastewater Treatment Systems

Future wastewater treatment systems, be they public or private, will be developed and/or expanded so as to be compliant with any and all statues and regulations governing such systems.

Stone County should encourage that future systems be developed to accommodate growth and expansion, which could have the effect of reducing the number of individual septic systems in the County. As appropriate, Stone County should offer guidance and /or assistance in the development and/or expansion of wastewater treatments systems.

Missouri Department of Natural Resources Regulations Pertaining to Sewer Districts

This subsection discusses how sewer districts can use regulations provided by the Missouri Department of Natural Resources to ensure that wastewater treatment plants follow desired design standards.

A Missouri Department of Natural Resources Regulation currently requires that sewers serving subdivisions or other properties, which might become incorporated into an existing or proposed comprehensive sewerage system at some future date, be designed and constructed in accordance with the Regulations and with established public wastewater treatment plant design standards. A sewer district should follow the necessary steps to enforce the Regulations.

Enforcement of the Missouri Department of Natural Resources Regulations could be achieved if the sewer district, as a continuing authority, administers a permit program that has been approved by the Missouri Department of Natural Resources.

To receive approval from the Missouri Department of Natural Resources to administer the current permit approval program, the sewer district must submit, along with other items, the standard specifications for all construction, and proof that the sewer district will provide the resources and manpower needed to operate such a program. In consideration of Stone County's explosive growth, it is strongly advised that, at some time in the future, a permit program be implemented by the sewer district. In this manner, the sewer district, through construction observation and monitoring, can ensure that the construction of private wastewater treatment plants follows Missouri Department of Natural Resources Regulations.

Potential Funding for the Creation of Wastewater Facilities

A goal of the State of Missouri Department of Natural Resources is to provide a complete funding source for financing needed wastewater facilities by small communities or counties. Currently, the State has two such programs.

- **Missouri Revolving Fund/The Clean Water State Revolving Fund.** The Missouri Revolving Fund provides low interest loans for sewer facility construction. Missouri has an SRF program that offers low interest loans for wastewater treatment improvements. The Missouri Department of Natural Resources prepares an intended use plan that allocates the anticipated SRF loan, matching grant funds, and repayments for the upcoming fiscal year.
- **Missouri 40 Percent Grant Program and Rural Sewer Grant Program.** This is a program that provides cost sharing for higher risk projects. It was developed to provide assistance to the communities with higher credit risks. A grant is awarded based on the financial information submitted by the community and the

Missouri Department of Natural Resources credit evaluation. State grant funds for this program are limited.

The Missouri Department of Natural Resources reviews each community's application and directs it to the appropriate program. After the projects are divided between the two assistance programs, they are prioritized and granted assistance accordingly, until funding is depleted.

Missouri Department of Natural Resources Regulations Pertaining to Rural Sewer Districts

The Missouri Department of Natural Resources has regulations that impact the implementation of a sewer district. The current regulations require:

- **Construction Permits**
- **Continuing Authorities:** All applicants for construction permits should show, as part of their application, that a permanent organization exists which will serve as the continuing authority that will operate and maintain the facility for which the application is made.
- **Operating Permits:** To obtain an operating permit, it is required that a licensed professional engineer certify, in writing, that the project has been completed in accordance with its approved plans and specifications.
- **Sewer Extensions:** Persons who connect a sewer's extension to an existing system operated by a continuing authority will be exempt from construction permit requirements for sewers, if the continuing authority administers a permit program approved by the Missouri Department of Natural Resources.
- **Schedules of Compliance:** Permits may contain schedules of compliance, requiring specific steps to achieve compliance with applicable standards and limitations.
- **Other Applicable Regulations of the Missouri Department of Natural Resources** such as those imposing fees.

Transportation

Missouri's Statewide Transportation Improvement Program (STIP) is prepared annually. It sets forth the specific construction projects the Missouri Highway and Transportation Department will undertake in the next five years. It encompasses highways and bridges, transit, aviation, rail, waterways, enhancements and other projects. This program should always be consulted for any potential impact in the county. The Missouri Highway and Transportation Department publishes an annual Highway Right-of-Way and Construction Program.

Major Thoroughfare Classification

For purposes of planning and zoning administration, all highways and all county roads should be designated as arterial roads. Other roads proposed as part of a subdivision to

be dedicated to the public may be designated as an arterial road by the Planning and Zoning Board before approval of a subdivision plat is given.

Area Airports

Branson Airport opened in May 2009, offering both regional and national flights. It is located in Taney County, eight miles south of Branson.

Branson West Airport opened in December 2009, offering general airport services to private and corporate aviation customers. It is located in Stone County, two miles west of the City of Branson West.

Also, in Taney County, there is a general aviation airport, next to the College of the Ozarks in Branson.

CHAPTER FOUR LAND USE PLAN

Existing Land Use

Stone County continues to be an area of enormous transition with regard to its increasingly urban population, its economy, its historical link to tourism, and the use of its water and forests. While there are competing visions regarding what Stone County will become, there is agreement—through a public vote in 1993, which was reaffirmed in 2011—that land use regulation is needed. The changes are inevitable, and the question is how these changes will occur, not whether.

The continuing challenge for the Planning and Zoning Board is to balance the effects of regulation on both private land owners and the public at large. The public interest must be met by implementing sound public policy, while at the same time protecting private property rights. The Land Use Plan permits new development and changes in use, according to updated zoning guidelines.

Regulations

The intent of the regulatory plan is to allow continuation of uses while assuring land use changes are compatible. A property owner can apply for a Conditional Use Permit from the Planning and Zoning Board to develop a new use, or an alternative use of the land. The permit could be granted if the development:

- is compatible with adjacent and nearby existing uses,
- complies with Conditional Use Permit standards, and
- meets Site Plan standards.

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It is the policy and objective of the Stone County Comprehensive Plan to prevent or mitigate adverse impacts, while allowing continuation of existing uses, expansion of existing uses, and new development under certain conditions.

Stone County Subdivision Regulations

The intent of these regulations is to provide for the harmonious development of land in the unincorporated areas of the County; to provide for the proper location and width of streets, building lines, open spaces, safety and recreation areas, utilities, and drainage; to provide for the avoidance of congestion of population through requirements of minimum lot width, depth and area and the compatibility of design; to require and fix the extent and the manner in which streets shall be graded and improved, and water, sewer, drainage, and other utility mains and piping or connections or other physical improvements shall be installed; and to provide for and secure, to the governing body, the actual construction of such physical improvements. Subdividing said land into two or more lots and blocks or tracts or parcels, for the purpose of laying out any subdivisions, suburban lots, building lots, tracts or parcels shall cause a plat to be made in accordance with the Subdivision Regulations, unless specifically exempted.

Planning for Stone County's Natural Environment

Natural features, such as topography, floodplains, lakes, rivers, soils, forests and drainage areas, combined with developed areas, roads, utility service areas, and planned new developments, are considered to determine the net effect of continued development in the County. This process tries to balance the carrying capacity of the environment against the pressure and extent of growth that the County must support.

The planning process is intended to result in a Land Use Plan that makes a series of recommendations for planning development in a manner that is compatible with both private rights and public environmental needs.

Recommendations for Public Facilities

Fire Services and Land Use Regulations The County should ensure that *Stone County Zoning Regulations* and *Stone County Subdivision Regulations* are compatible with fire safety codes, such as in the regulation of the size and setbacks of multifamily residential, commercial and industrial structures.

School and Land Planning Services The County should work with the various school districts that have identified a need for expansion, and identify preliminary school site plans in the unincorporated areas.

Recommendations for Water and Wastewater Treatment

Water Service Municipal water system authorities and rural water district boards should plan to accommodate projected growth, to:

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- Discourage the proliferation of private, on-site wells.
- Minimize the numbers of sites susceptible to non-point source contamination of water.
- Encourage the improvement of the delivery of proper volumes of water, in stored capacity, and in gallons per minute under proper pressure for fire safety, to urbanizing areas of the County.

Wastewater Treatment Service. Municipal providers and developers should be encouraged to form joint sewer districts, to serve development which is settling at urban densities.

Stormwater Management Planning. In order to effectively review and regulate land development at urban intensities, the County should consider storm water management regulations and standards.

Regulating Land Use in Stone County

Stone County continues to experience growth and development that have a profound effect on the landscape and on our quality of life. The process outlined for the Stone County Comprehensive Plan has allowed the countywide community to identify and illustrate issues affecting growth and development. The *Stone County Zoning Regulations* and the *Stone County Subdivision Regulations* control development and land use change in areas of the County that lie outside the County's incorporated cities and villages.

The *Stone County Zoning Regulations* establish a simple yet comprehensive means of regulating future land use change, while supporting objectives for the natural environment. The zoning regulations:

- Allow for continuation of existing uses.
- Achieve wise use, conservation, development and protection of the County's water, soil, wetland, woodland, and wildlife resources, and attain a balance between land uses and the ability of the natural resource base to support and sustain such uses.
- Provide for agricultural uses in rural areas of the County, while allowing for more intense land uses near the incorporated places and where standards are met as prescribed in these regulations.
- Provide for urban uses outside incorporated places in response to market demand, provided development standards are met and do not create a burden for the public.
- Regulate lot coverage, population density and distribution, and the location and size of all structures.
- Secure safety from catastrophes such as fire, flooding and other dangers, and provide adequate light, air, sanitation and drainage.
- Stabilize and protect the natural beauty of the area.

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- Encourage orderly growth, while integrating new urban areas into the fabric of the entire unincorporated areas of the Stone County community; maintaining a high quality environment; and promoting fiscal responsibility.
- Lessen congestion in, and promote the safety and efficiency of, streets, roads and highways.
- Facilitate the adequate provision of public facilities and utilities.
- Bring about the gradual conformity of uses of land to the *Stone County Comprehensive Plan* and *Stone County Zoning Regulations*, and minimize the conflicts among uses of land and buildings.

Conditional Use Permits

Before any Conditional Use Permit is granted, the Planning and Zoning Board shall require that adequate provision has been made for the following:

- The location and size of the proposed use, in relation to the site and to adjacent sites and uses of property, and the nature and intensity of operations proposed thereon.
- Accessibility of the property to police, fire, refuse collection and other municipal services; adequacy of ingress and egress to and within the site; traffic flow and control; and the adequacy of off-street parking and loading areas.
- Utilities and services, including water, sewer, drainage, gas and electricity, with particular reference to location, availability, capacity and compatibility.
- The location, nature and height of structures, walls, fences and other improvements; their relation to adjacent property and uses; and the need for buffering or screening.
- The adequacy of required yard and open space requirements and sign provisions.
- The general compatibility with adjacent properties, with other properties in the district, and with the general safety, health, comfort and welfare of the community; compatibility with the standards for development with the regulations in the *Stone County Zoning Regulations* and the *Stone County Subdivision Regulations*.

Site Plan Review

Site Plan Review includes standards to be met. The review of the Planning and Zoning Director, and the decision of the Planning and Zoning Board, shall be based on the following standards:

- The extent to which the proposal, if implemented, would be compatible with the surrounding area.
- The extent to which the proposal conforms to the provisions of the *Stone County Zoning Regulations*, the *Stone County Subdivision Regulations*, the Stone County Health Department's Wastewater Treatment Systems Ordinance, and other all other regulations of the Stone County Health Department.

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- The extent to which the proposal conforms to customary engineering standards used in the County.
- The extent to which the location of streets, paths, walkways and driveways are located so as to enhance safety, and minimize any adverse traffic impact, on the surrounding area.
- The extent to which the buildings, structures, walkways, roads, driveways, open spaces (if any), and parking lots have been located to achieve the following objectives:
 - Conserve natural resources and amenities available on the site.-
 - Minimize any adverse flood impact.-
 - Minimize any adverse social or environmental impact.-
 - Minimize any present or future cost to the county and private providers of utilities, in order to adequately provide utility services to the site.

Regulating Development

The *Stone County Zoning Regulations* demonstrate environmental awareness; provide regulatory intent to allow continuation of use of existing development in the County; permit new uses found to be compatible under the standards of these regulations; prevent or mitigate the resultant adverse impacts of development; prevent polluting the County's natural environmental quality, including the air, water, and general serenity; prevent challenges to the non-urban character and the quality of life enjoyed by its residents; prevent destruction of its scenic beauty; prevent disturbance of the ecology and natural habitat; avoid or relieve traffic congestion; avoid hazards related to geology, fire and flood; minimize the costs of providing necessary public services and infrastructure to accommodate isolated and dispersed pockets of denser development.

Open Space Requirements

Provision of open space should be made and designated on all site plans. The Planning and Zoning Board may require the provision of open space to buffer dissimilar uses; to counterbalance any reduction in lot area, yard size or building size limitations; to protect natural areas and other environmentally sensitive areas; to implement the objectives of preserving wildlife habitat in Stone County.

A developer should provide for an association to maintain required open spaces. Such agreement should include provision for default. An association so established should not be allowed to dissolve or dispose of any public open space by sale or otherwise, without first offering to dedicate the same to the County.

Land Clearance for Development

For development on a parcel of land greater than 20 contiguous acres under single ownership, the regulations should require security in an amount that will guarantee the reclamation of the entire area which is being significantly altered, to provide for

restoration to its natural or pre-development state. Such security should be properly executed before any grading or construction.

Protection of Unique Lands

These regulations protect certain unique lands, such as land owned by the U. S. Forest Service. Upon transfer of ownership of any land parcel from the U.S. Forest Service to another public agency, or to a private owner, the following conditions should be met before approval of a Conditional Use Permit:

- Residential uses should be allowed at a density no greater than one dwelling unit per 20 acres.
- A change in use should be only by the Conditional Use Permit procedure.

Specialized Operations

Auto Wrecking Yards, Junk Yards, Salvage Yards, and Scrap Processing Yards

The regulations impose development standards for auto wrecking yards, junk yards, salvage yards, and scrap processing yards:

- Development should be located a designated distance from an existing residence on a neighboring parcel.
- The operation should be conducted wholly within a non-combustible structure, or within an area completely enclosed by a solid fence or wall.
- No junk or salvaged material should be loaded, unloaded or stored, either temporarily or permanently, outside the enclosed structure, fence or wall.
- Burning of paper, trash, junk or other waste materials should only be permitted with the approval of appropriate authorities.

Livestock Confinement Operations

The County protects against water contamination from livestock confinement operations. A Conditional Use Permit is required before developing or expanding a Livestock Confinement Operation (also known as a Concentrated Animal Feeding Operation). The County's Livestock Confinement Operation Ordinance, adopted under authority of Section 192.300 (the public health statute), gives the County Commission the authority to establish additional health rules to enhance the public health, and prevent the entrance of dangerous diseases into the County.

Although not adopted under the authority of the Planning and Zoning Statutes, for convenience the County Commission has directed that the Livestock Confinement Operation Ordinance be codified as *Stone County Zoning Regulations, Special Provisions, Article 4, Section 28*, and that it be enforced by the Planning and Zoning Department.

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All wastes from a concentrated animal feeding operation should be controlled so that there is no discharge of waste (including storm water runoff that comes in contact with animal waste) from the property; and no discharge of wastes, directly or indirectly, to surface or subsurface waters, including sinkholes, dry stream beds, flowing streams, wet weather tributaries, and drainage ditches.

The no-discharge requirements of the Missouri Division of Natural Resources, Division of Environmental Quality, under the Missouri Clean Water Law, should be met.

Site Plan Review

The regulations should provide for Site Plan Review, in part to protect the environment.

The very nature of intensive land development creates potential for traffic congestion, overcrowding, adverse environmental impacts, and health related problems. Any location within the County that has a potential for such problems should be subject to a Site Plan Review by the Planning and Zoning Director, or the Planning and Zoning Board. Site Plan Reviews should help ensure that the meaning and intent of the zoning regulations, and all portions thereof, are fully complied with.

The Site Plan Review regulates the development of structures and sites in a manner that considers the following concerns:

- Balancing landowner's rights to use their land with the corresponding rights of abutting and neighboring landowners to live without undue disturbances (such as noise, smoke, fumes, dust, odor, glare and storm water runoff).
- Convenience and safety of vehicular and pedestrian movement within the site, and in relation to adjacent areas or roads.
- Protection of, and continuation of, low-intensity use of publicly owned forested lands in order to retain the rural character of the Ozarks region.
- Adequacy of waste disposal methods and protection from pollution of surface or groundwater.
- Protection of historic and natural environmental features on the site under review, and in adjacent areas.

Site Plan Review Requirements

- Description of location, height, size, materials and design of all proposed signage.
- A landscape plan showing all existing open space, natural features, trees, forest cover, water sources and all proposed changes to these features, including size and type of plant material. Water sources will include ponds, lakes, brooks, streams, wetlands, floodplains and drainage retention areas.
- The location of all present and proposed utility systems including:
 - Sewage or septic system
 - Water supply system

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- Telephone, cable and electrical system
- Storm drainage system, including existing and proposed drain lines, culverts, catch basins, headwalls, end walls, hydrants, manholes and drainage swales.
- Plans to prevent the pollution of surface or groundwater, erosion of soil both during and after construction, excessive run-off, excessive raising or lowering of the water table, and flooding of other properties, as applicable.
- Existing and proposed topography at a ten (10) foot contour interval. All elevations should refer to the nearest United States Coastal and Geodetic Bench Mark. If any portion of the parcel is within the 100 year floodplain, the area will be shown and base flood elevations given. Indicate areas within the proposed site, and within fifty (50) feet of the proposed site, where ground removal or filling is required, and give its approximate volume in cubic yards.
- Traffic flow patterns within the site, entrances and exits, loading and unloading areas, and curb cuts on the site and within one hundred (100) feet of the site. The Planning and Zoning Board may require a detailed traffic study for large developments, or for those in heavy traffic areas. This may include:
 - The projected number of motor vehicle trips to enter or leave the site, estimated for daily and peak hour traffic levels.
 - The projected traffic flow patterns, including vehicle movements at all major intersections likely to be affected by the proposed use of the site.
 - The impact of the projected traffic on existing abutting public and private ways, in relation to existing road capacities.
 - Existing and proposed daily and peak hour traffic levels, as well as road capacity levels, should also be given.

Buffers and Screens for Compatible Development

The Site Plan Review should require appropriate incorporation of buffers and screens for compatible development. Proper use of buffers and screens should be incorporated into Site Plans in order to lessen the differences between land uses, and diminish the visual impact of undesirable elements. The key issues include:

- Unified character
- High quality construction
- Longevity of system
- Disparity between land uses
- Visibility of undesirable elements

The Site Plan Review provides for development standards and compatibility guidelines for buffers and screens:

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- For developments subject to Site Plan Review, and in excess of 2.5 acres, a minimum of 15 percent of the land area should be reserved as open space. Open space reservation should be dedicated.
- Architectural screens should be an extension of the development's architectural treatment, and be consistent in color and design.
- Screening walls should be constructed of low maintenance, high quality materials which are consistent with the building's façade material.
- Painted or coated screening walls should be avoided.
- Landscape screens (typically 18" to 36" in height) should be provided between all parking areas and streets.
- Landscape screens may include a combination of plant massing, earth berming, and walls.
- A 10 foot to 15 foot wide landscape buffer should be provided to separate high-density residential use, commercial or industrial uses from single-family residential land uses.

Landscaping

The Site Plan Review requires landscaping. The location and design of landscaped areas, entrances and edges should be identified on site plans and planned effectively to reinforce a development's character and quality identify its entry points, and break the massiveness of a commercial or industrial center parking area. Key issues include:

- Unified development image and character
- Parkway treatment
- Identifiable entrances
- Visual dominance of parking area
- Existing mature trees

Landscaping Compatibility

The Site Plan Review provides landscaping development standards and compatibility guidelines:

- For a development in excess of 2.5 acres, a landscaped planting plan of the entire project should be submitted with the Site Plan Review
- Approximately 15% of the area between the main building face and the front property lines should be of a permeable landscaped surface. (Secondary buildings located between the main building and the front property line should not be included in the area calculation.)
- Landscape areas should generally consist of a combination of trees, shrubs and ground cover.
- Use landscape areas for transition and integration between pad sites and surrounding land uses.
- Minimum 4" diameter trees are recommended.

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- Preserve existing mature trees where possible.
- Special landscape treatment should be employed to highlight and identify entrances.
- Landscape areas should be regularly spaced in parking lots to break up massiveness of pavement.
- Mechanical irrigation systems are typically required to ensure maintenance of plant materials.
- Landscaping should be used in conjunction with screening walls when multi-story buildings abut an adjacent property, where topography lessens the effect of a wall alone.

Summary

In summation, Land Use Planning and Regulation are not processes imposed on citizens by outside bureaucrats insensitive to local concerns and issues. They are a powerful way for Stone County residents to have an active voice, and participate in shaping their lives and communities.

This Stone County Comprehensive Plan provides a basis for Zoning and Subdivision Regulations. This is not only to protect the quality of life and the ecological integrity of the region, but to also provide a level of consumer protection and to demonstrate a responsible climate for business, agriculture, tourism, recreation, and all the other industries that choose to make Stone County their home.

This Plan supports the regulatory process as the public responds to continued changes in Stone County.