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Natural Resources

VISION

Our natural resources are preserved and well managed to maintain a balance between development and the environment.

SUMMARY

The natural environment places both opportunities and constraints on the way land is utilized. Soil characteristics, the slope of the land and flooding frequency are a few of the many factors which affect land development. Other environmental considerations include wetlands, vegetative cover, and sensitive environmental areas.

Approximately 70 percent of St. Charles County drains into the Mississippi River, while the remaining southern 30 percent drains into the Missouri River. Approximately 43 percent of the county is within 100-year floodplains. Other areas of the county having 100-year floodplain designations are along the Cuivre River, Dardenne Creek, Perouque Creek, Femme Osage Creek, and Big Creek.

St. Charles County, being part of the St. Louis Region, has been designated as a moderate non-attainment area for the eight-hour ozone standard of the U.S. Environmental Protection Agency. Current ozone modeling and forecasting indicate that the St. Louis Region will be able to meet the eight-hour ozone standard by 2009. The attainment deadline for the St. Louis Region is June 10, 2010.

The St. Louis Region also does not meet EPA regulations relating to fine particles (less than 2.5 microns in diameter). Particle matter (PM) is a mix of solid particles and liquid droplets suspended in air. Fine PM is made up of a variety of components including acid, organic chemicals, metals, dirt, and dust particles. New strategies resulting in additional reductions in emissions will likely be necessary to achieve new national air quality standards. These strategies are currently being formulated by air pollution officials.

There are three areas of prime agricultural lands within St. Charles County. The first is the area between the Mississippi and Missouri Rivers north of Highway 370 and east of Highway 79. The second prime agricultural area is north of the city of O'Fallon between U.S. Highway 61 and Highway 79. The third lies along the bottom lands parallel to the Missouri River.

There is a great diversity of plant and animal life in the county due to the varieties of climate, soil, and topography. The six major physical habitat communities found in the county are: oak hickory, forest, floodplain forest, glades, prairie, stream and gravel bar.



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SUMMARY

Wetlands are located principally along the Mississippi and Missouri Rivers and in various areas of northern St. Charles County east of Highway 79. Areas of wetlands are also found along creeks and lakes throughout the county. St. Charles County primarily has grasslands as vegetative cover. Forested areas are predominately in the southwestern section of the county. Cropland is located primarily in north St. Charles County, along the west side of Highway 79, and in the Greens Bottom, Darst Bottoms, and Augusta Bottoms areas along the Missouri River.

The impacts of wastewater and storm water runoff are considerable environmental concerns for St. Charles County residents. As more homes are built and commercial sites are developed, great care must be taken to protect water quality in our watersheds and to reduce storm water damage to property and human life.

The Highway 94 corridor between U.S. Highway 40/61 and the Warren County line contains a unique set of scenic features. In a study of this area prepared in 2002, approximately 30 scenic vistas or view sheds were identified along this 21-mile section of highway.

Development constraints within St. Charles County include areas within the 100-year floodplain, wetlands, extreme slopes, and soils not conducive for septic tank installation. Any structure constructed within the floodplain is mandated by county floodplain regulations to elevate the lowest floor (including basement) a minimum of one foot above the 100-year flood elevation. Slopes in excess of 33 percent are generally precluded from development. Soils in many areas of the county are not conducive for septic tank installation. The installation of a private sewage treatment system in the wrong type of soil may lead to contamination of ground water resources.



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ISSUES

- Storm water management authority is needed as development continues and additional impervious surfaces are created to increase storm water runoff.
- Protection of prime agricultural land, wetlands, and other natural resources is needed to reduce problems with storm water management and protect habitat for wildlife.
- Air and water quality needs to be protected for human health.
- Large floodplain will face increased pressure to be developed.

GOALS & STRATEGIES

GOAL Preserve, protect and manage the watersheds in the county.

STRATEGIES

- Create a list of Best Management Practices to ensure land development follows proper storm water management principals.
- Develop a coordinated, countywide storm water management plan on a watershed specific basis.
- Incorporate low impact site design techniques to reduce the amount and velocity of surface water runoff.

GOAL Lead and promote the use of alternative/renewable energy sources by taking advantage of current and future legislation.

STRATEGIES

- County leads by example efforts to promote the use of alternative/renewable energy sources and the conservation of fossil fuel energy (e.g., replace conventional light bulbs with compact fluorescent light (CFL) bulbs in all county buildings).
- County officials to meet with public utility officials and private sector representatives to explore the feasibility and economic viability of installing solar energy systems on county public buildings to promote the use of cleaner, environmentally friendly renewable energy sources.
- County officials to determine the feasibility of converting county government vehicle fleet to a mix of hybrid vehicles and vehicles powered by alternative energy sources (biofuels).
- Determine and take advantage of all incentives available to install alternative/renewable energy systems on public buildings and convert vehicle fleet to a mix of hybrid/biofuel vehicles.



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GOALS & STRATEGIES

GOAL Protect human life and property while reducing public and private expenditures through floodplain management.

STRATEGIES

- Increase public awareness of risks associated with building in a floodplain.
- Implement the use of structural and non-structural measures to alleviate flood losses.
- Continue to implement the county's flood risk mitigation plan – Protecting Our Resources: St. Charles County's Strategy for Floodplain Management.

GOAL St. Charles County will strive to meet or exceed ambient air quality standards.

STRATEGIES

- Provide public education to promote and increase the awareness of air quality issues including personal, institutional and business practices that impact air quality such as carpooling, reduction of open burning, vehicle maintenance, alternative modes of transportation and energy conservation methods.

GOAL Protect and manage natural resources to retain the benefits they provide.

STRATEGIES

- Minimize the impacts of development encroaching on natural resource areas.
- Prohibit and/or minimize development in and adjacent to environmentally sensitive areas such as wetlands and floodplains.
- Adjust zoning districts in the floodplains to reflect the intent of the land use plan.

