

Natural Environment

“As a community, we do not accept environmental degradation as the inevitable outcome of growth.”

Barbara Lucks,
Missouri Environmental Education Association

Overview

Southwest Missouri’s forests, rolling hills, limestone bluffs, springs, streams, and lakes offer a remarkable range of recreational opportunities. Rapid population growth provides exceptional economic development opportunities, but also brings intense pressure to bear on these irreplaceable natural resources.

Proactive Efforts. The community has proactively addressed the region’s challenges, with groups such as Ozark Greenways, Watershed Committee of the Ozarks, and the James River Basin Partnership collaborating with public agencies to promote a clean and healthy environment. Conservation/environmental education is a priority, with several programs devoted to raising awareness:

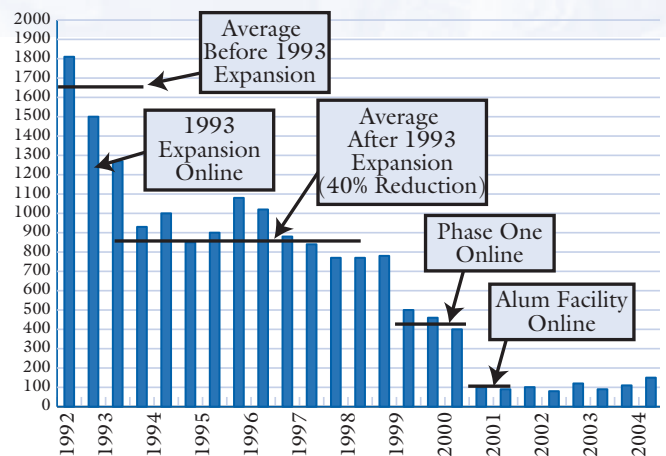
- The Watershed Committee’s Watershed Center will be a state-of-the-art education/demonstration facility.
- Springfield/Greene County Parks Department offers a full array of outdoor experiences and education through its Outdoor Initiatives Program.
- Missouri State University’s Ozarks Environmental and Water Resources Institute conducts research and educational activities about environmental resources, including water, for the entire Ozarks region.
- The Springfield Conservation Nature Center, owned/operated by the Missouri Department of Conservation and Dickerson Park Zoo, offers a wide range of educational experiences.
- The Discovery Center of Springfield will have the First LEED-certified Green Building to be constructed in Springfield and will use both the process and the building in their environmental education activities.

Air Quality. Springfield’s air is cleaner than Environmental Protection Agency standards. However, concentration of ozone and fine particles approach unacceptable levels. Ozone forms when sunlight acts on hydrocarbons (emitted by motor vehicles; oil and chemical storage and handling facilities;

commercial and industrial sources such as gas stations, dry cleaners and degreasing operations). Particulates are fine solids (dirt, soil, dust, pollens, molds, ashes, and soot) and aerosols from combustion by-products. Of special concern: fine particles less than 2.5 microns in diameter are easily inhaled and absorbed into the bloodstream.

Water Quality. Springfield’s drinking water supply is largely surface water. Groundwater, through private wells, is a primary source for many people. Trend lines suggest that community stewardship has been effective. The Springfield Southwest Wastewater Treatment Plant recently upgraded its facility, which has improved water clarity and lowered phosphorus content at Table Rock Lake (James River arm).

Water Quality
Phosphorus Discharged to Wilson Creek



- Springfield must meet stringent water quality requirements for storm water run-off management. Posted reports for the city's storm water management activities are online at www.springfieldmogov.org/stormwater.
- The City and County engage in numerous efforts, including stream and runoff sampling, illicit discharge prevention, GIS mapping, review and revision of developers design standards and on-site management practices, Show-Me Yards & Neighborhoods (urban lawn care educational program), revised internal maintenance standards for street sweeping, covering of salt storage areas, and regulation of erosion control on construction sites.
- Phosphorus reduction has been exemplary. The City’s Southwest Wastewater Treatment Plant reduced phosphorus entering the James River from over 1,600 pounds/day (pre-1993 expansion) to about 150 pounds/day (2004), two years ahead of the state-required deadline. A \$24 million expansion to that plant,

completed in late summer 2005, will provide the capability to remove nitrogen, for which there are no state regulations in place or planned. An expansion of the Northwest Wastewater Treatment Plant, to be completed in Fall 2006, will allow both phosphorus and nitrogen to be removed.

- Springfield was ahead of its time with the floodplain acquisition program, begun in 1994, which has made a significant impact. Funded by the Level Property Tax, Public Works has spent more than \$9 million to acquire over 100 flood prone properties totaling about 200 acres of land along waterways and in sinkholes. This land has been reclaimed as green space, including the Galloway, Wilson Creek and South Creek Greenway Trails.
- The Springfield-Greene County Health Department offers free water testing to private well owners. Testing, usually requested because of odor, turbidity or illness, accounts for about 40% of wells that test unsafe annually.

Solid Waste Management. Springfield is one of only three Missouri communities offering the full range of services for managing solid waste (trash) and the only community to include an award-winning Market Development Program. Springfield/Greene County’s Integrated Solid Waste Management System (ISWMS), approved by voters in 1991, includes Curbside Recycling (provided by private trash haulers), the Household Chemical Collection Center, Yardwaste Recycling Center, Recycling (Drop-off) Centers, Springfield Sanitary Landfill, Market Development Program, and Information and Education Program. About 200 to 300 tons of trash per day of the 1,500 tons Springfield generates go into the Springfield Sanitary Landfill.

Storm Water Management Program Funding and Maintenance. Springfield faces funding shortages to address increasing storm water runoff provisions of the national Clean Water Act. Experiences of places such as Seattle, Portland, Florida, and Maryland suggest the wisdom of staying ahead of coming demands. In addition, the city’s 600 miles of storm water infrastructure are aging and deteriorating; this, with rapid growth pressures in the county, make maintenance and replacement essential.

Solid Waste Management Funding. Tax money or general city revenues do not fund the ISWMS, which is funded primarily from revenues from the Springfield Sanitary Landfill tipping fees. National trash companies operate their own landfills outside Springfield, which reduced revenue available for ISWMS. At some point, a permanent, and stable source of funding is needed to secure the sustainability of Springfield’s ISWMS.

Water Quantity. Water quantity is emerging as a future challenge as the area experiences rapid and steady growth. About 60,000 people outside Springfield’s Urban Services Area depend on groundwater for their primary drinking source; heavy pumping is causing falling water tables.

Electric	Fiscal Year			
	2000	2001	2002	2003
Average Number Customers				
Residential	78,334	78,974	82,066	83,739
Commercial	12,429	12,534	12,868	13,068
Industrial	146	144	141	149
Kilowatt Hrs Used per Customer per Year				
Residential	10,499	10,893	10,555	10,716
Commercial	100,427	100,407	110,396	109,626
Industrial	3,294,102	3,319,999	3,217,585	3,100,322
Natural Gas				
	2000	2001	2002	2003
Average Number Customers				
Residential	66,071	66,737	68,682	69,733
Commercial	7,325	7,428	7,575	7,695
Industrial	101	100	96	101
Therms Used per Customer per Year				
Residential	780	950	815	890
Commercial	4,390	5,100	5,205	5,570
Industrial	20,692	19,398	20,055	191,940
Water				
	2000	2001	2002	2003
Average Number Customers				
Residential	62,477	62,923	65,403	66,543
Commercial	7,030	7,015	7,072	7,179
Industrial	94	93	82	89
Thousand Gallons Used per Customer per Year				
Residential	74	70	69	70
Commercial	526	518	563	550
Industrial	9,866	9,534	11,631	9,820
Energy Usage:				
	2000	2001	2002	2003
Electric, per Capita Kilowatt Hrs/Day	11.5	11.9	11.6	11.7
Gas, per Capita Therms/Day	.85	1.0	.89	.98
Water, per Capita Gallons/Day	81.1	76.7	76.7	76.7

SOLID WASTE MANAGEMENT

	2004	5 Year Mean	Trend
Household Hazardous Waste (HHW) (pounds Recycled)	93,000	88,000	up
Percent of HHW Recycled	83%	83%	n/c
Recycled Material Received (tons)	3,800	3,400	up