

Utilities (2007)

Purpose

A key factor in determining the development potential of an area is the capacity and accessibility of utilities to service that area. The City of Overland Park is not a full-service city and is therefore required to coordinate and cooperate with the public and private utility providers for the City. This Element provides an overview of existing utilities, including water supply, wastewater treatment, electricity, natural gas supply, and solid waste disposal as of fall 2006.

Water Supply

Provider: Water District #1 of Johnson County
(www.waterone.org)

- Quasi-municipal agency operating independently of city and county governments

Service Area:

- Approximately 270 square miles in Johnson, Miami, and Wyandotte Counties
- Provides water to more than 390,000 people in 14 cities in Johnson County including all of Overland Park
- Residential customers make up approximately 90% of all accounts.

Facts:

- 180 mgd (million gallons per day) treatment and pumping capacity
- Average daily consumption of 55 mgd in 2006
- Usage record on August 24, 2003 of 148 mgd
- 69.5 mgd storage capacity
- Maintenance history records of infrastructure updated to help identify problematic areas and plan for replacement or upgrade

Sources:

- Separate water sources prevents the possibility of a pollution episode from shutting down the entire system
- Surface supply from the Missouri and Kansas Rivers
- Wells in the Kansas River floodplain alluvium
- Ability to tap into the cities of Olathe, Kansas City, Kansas, and Kansas City, Missouri water supply systems in emergency situations only

Treatment:

- Presedimentation; primary disinfection; secondary and final clarification; softening; filtration post disinfection

Future:

- Planned expansion to increase the treatment capacity to 205 mgd in 2007

- Planning and constructing additional main lines to help service developing areas and insure adequate water pressure for fire protection
- Pumping stations and reservoirs at 131st Street and Quivira Road and 143rd Street and U. S. 69 Highway for continuing growth in the southern areas of Overland Park
- Phase V of WaterOne's Master Plan calls for a new treatment plant to be built near the Missouri River with construction scheduled to begin in 2007 and be completed in 2009.
- A 17-mile 60" transmission main will also be installed as part of the Phase V project in Wyandotte County. Construction on the transmission main will also begin in 2007 and be completed in 2009.

Conservation

- Comprehensive Conservation Program
 - Department dedicated to conservation education
 - Conservation oriented water rates wherein those customers whose water use creates the greatest demands on the system pay a higher rate

Wastewater Treatment

Provider: Johnson County Wastewater (www.jcw.org)

- A county department operating under the direction of the Board of County Commissioners and the County Manager
- Three organizational divisions:
 - Administration
 - Engineering

- Operations and Maintenance

Service Area:

- Most of Northeastern portion of Johnson County, including most of the area within Overland Park
 - Serving over 90,000 properties in approximately 1,027 sewer districts

Treatment:

- Eight sewage treatment facilities
- Treatment process:
 - Collection and transportation of wastewater to a treatment plant
 - ◆ Using pump or lift stations to carry wastewater to a geographic high point.
 - Preliminary Treatment
 - ◆ Bar screening
 - ◆ Grit removal chamber
 - Primary Treatment
 - ◆ Sedimentation
 - Secondary Treatment
 - ◆ Trickling filter method, or
 - ◆ Activated sludge method

- Tertiary Treatment
 - ◆ Disinfection by chlorine or ultraviolet (UV) light
- See Table UT-1 for wastewater plant capacity and flow rates

Future:

- New sewer districts required for complete development of the county and the future development of Overland Park
- Improvements, upgrades, and expansions are in the works for two wastewater treatment facilities
 - Indian Creek Middle Basin plant's capacity to be increased to 14 mgd
 - Blue River Main plant's capacity to be increased to 10.5 mgd
- See Table UT-2 for Vacant Acreage by Future Development Plan Land Use and by Sewer Availability
- See Planning Commission Research Topic No. 3 "How much sewered, but undeveloped, land remains available for development in the city?" in the Comprehensive Plan Implementation text for more information

Electricity

Provider: Kansas City Power & Light (www.kcpl.com), a wholly owned subsidiary of Great Plains Energy Company

Service Area:

- 24 western Missouri and eastern Kansas counties, including a majority of the Kansas City metropolitan area and all of Overland Park (approximately 4,600 square miles)

Sources:

- Over 4,000 megawatts of generating capacity, and transmission and distribution facilities that provide electricity to approximately 500,000 customers
 - Eight stations with 25 generating units spread throughout the service area (none in Overland Park)
 - ◆ Seven substations within Overland Park city limits
 - 1,700 miles of transmission lines
 - More than 10,000 miles of overhead distribution lines
 - Approximately 3,400 miles of underground distribution lines
- Purchases capacity from other utilities and nonutility suppliers to provide the option to purchase energy if needed

Future:

- KCPLs Comprehensive Energy Plan, a long-term plan to the future energy, economic, and environmental needs was approved by the Kansas Corporation Commission in August 2005.
- Elements of the plan:
 - New electricity generation from coal and wind
 - ◆ The new 100.5 megawatt Spearville Wind Energy Facility became fully operational in October 2006.
 - ◆ KCPL will own 465 megawatts of a new 850-megawatt coal-fire plant, in Platte County, Missouri, projected to go in service in 2010
 - ◆ Potential to add an additional 100 megawatts at a future date

- Environmental upgrades at existing power plants
 - ◆ More than \$420 million will be invested over 5 years in technologies to reduce certain air emissions
- Transmission and distribution network facilities' improvements
 - ◆ Constructing, replacing, and/or upgrading existing transmission and distribution facilities to accommodate new generation
 - ◆ Incorporate new technologies for faster diagnosis and repair of service interruptions
- Investment in affordability, efficiency, and demand response programs:
 - ◆ For low-income families
 - ◆ Weatherization
 - ◆ High-efficiency lighting and appliance systems
 - ◆ Online energy analysis tools
 - ◆ Energy training for customers

Natural Gas

Provider #1: Kansas Gas Service, a division of ONEOK, Inc. a diversified energy company (www.kansasgasservice.com or www.oneok.com)

Service Area:

- Provides service to nearly all of Overland Park, except in the area south of 99th Street to the City's southern boundary and approximately 600 feet west of Antioch to the City's western boundary

Sources:

- 19,000 miles of pipeline
- Seven interstate pipeline connections
- Three intrastate pipeline connections

Maintenance:

- Fully complies with all state and federal mandates to ensure customer safety and system integrity

Provider #2: Atmos Energy Corporation (www.atmosenergy.com)

Service Area:

- Over 125,000 customers in Kansas including the area south of 99th Street to the City's southern boundary and approximately 600 feet west of Antioch to the City's western boundary

Sources:

- Kansas, Oklahoma, and Wyoming; storage facilities in Southeast Kansas
- Southern Star Central Gas Pipeline (www.sscgp.com)

- A natural gas transmission system spanning approximately 6,000 miles in the Midwest and mid-continent regions of the United States

Maintenance:

- Constant monitoring and evaluating equipment in accordance with State Regulations (monthly and annual requirements)
- Replacement of worn or damaged equipment as needed

Future:

- Companies in close contact with City personnel to plan for future development; ensure adequate mains and pipeline exist for future demands
- Adequate supply for future growth exists

Solid Waste

Provider: Overland Park permits private trash haulers after reviewing their insurance and inspecting their trucks.

- 5 permitted residential trash haulers
- 8 permitted commercial trash haulers

Service Area:

- Private trash haulers serve all of Johnson County except the City of Olathe

Municipal Solid Waste Disposal: Johnson County Landfill, owned and operated by Deffenbaugh Industries, Inc., Shawnee, Kansas

- Subtitle D landfill on 700 acres in Shawnee, Kansas

- Only Subtitle D landfill in Johnson County (Subtitle D of Resource Conservation and Recovery Act, effective 1993)
 - ◆ Stringent landfill design, construction, and operation procedures
 - ◆ Groundwater monitoring, corrective action, financial assurance, and closure and post-closure care requirements
 - ◆ Inspected quarterly by the Johnson County Environmental Department and semi-annually by the Kansas Department of Health and Environment
 - ◆ Inspected by the Johnson County Environmental Department for compliance with the Clear Air Act, which restricts gas emissions from landfills
- Largest landfill in greater Kansas City area and the State of Kansas
- Landfill took 1.8 million tons of trash in 2005
- Expected closing by 2027

Construction/ demolition (C&D) Disposal:

- Seven C&D landfills are located in Johnson County, two of which are in Overland Park
 - APAC-Reno Construction landfill
 - City of Overland Park (used for disposal of clean rubble from their public works facilities)

Yard Waste Composting Facilities:

- Johnson County Landfill

- APAC-Reno Construction's C&D landfill

Hazardous Waste Collection Facility:

- County operated facility in Mission
- By appointment except for special events
- Materials include lead acid batteries, motor oil, antifreeze, pesticides, herbicides, oil based and latex paint, waste tires, and flammables

Recycling:

- Recycling started in Overland Park in 1990 and since then almost 250 million pounds of recyclables have been collected.
- Two recycling programs (curbside and drop-off) and a special Electronics Recycling Day
- Processing centers
 - Mid America Recycling in Overland Park for aluminum, copper, stainless steel, and brass
 - Security Shred - a mobile pickup operation specializing in on-site document shredding
 - Tire Town - tire recycling at their Shawnee facility
 - Deffenbaugh Materials Recovery Center, Kansas City, KS - most curbside collected recyclables and white goods (items with electric motors, capacitors, compressors, and CFCs)
 - ◆ Approximately 10,000 tons per month

Future:

- New Johnson County Solid Waste Management Plan due in 2007
 - Options to consider:
 - ◆ New regional landfill
 - ◆ New transfer station
 - ◆ Waste reduction

Summary

Overland Park recognizes increasing demands placed upon utility systems by virtue of growth and development. If not properly planned, the continuous development of the City could put a strain on the existing utility systems. Currently the public and private utilities servicing the City have the capacity to handle continued growth in Overland Park.

Table UT-1
Johnson County Wastewater
2005 Treatment Facilities Summary

Facility Name	Watershed	Process Type	Designed Plant Capacity (MGD)	Average Daily Dry Weather Flow* (MGD)	Average Daily Flow (MGD)
Turkey Creek MSD #1	Turkey Creek	Trickling Filter	8.00	6.10	8.56
Mission Main MSD #1	Brush Creek	Trickling Filter	7.00	4.93	7.32
Tomahawk Creek MSD #1	Indian Creek	Trickling Filter	4.00	N/A**	4.30
Indian Creek Middle Basin	Indian Creek	Activated Sludge	12.00	8.95	9.70
Blue River MSD #1	Blue River	Activated Sludge	3.00	2.88	3.55
Blue River SSD #4	Blue River	Stabilization Lagoon	0.02	N/A***	N/A***
Little Bull Creek SSD #2	Bull Creek	Activated Sludge	0.55	0.372	0.48
Mill Creek Regional	Mill Creek	Aerated Lagoon	9.00	7.54	9.05
Totals			43.57	30.77	42.96

Notes:

MGD = Millions of Gallons per Day

* Estimated using the lowest monthly average flow for each facility

** Flows are controlled between 4 and 6 MGD to allow for seasonal nitrification. Flows above these limits were diverted to Kansas City, Missouri (KCMO) for treatment. Average dry weather flow to KCMO was 12.3 MGD. Annual average flow to KCMO was 16.5 MGD.

*** Flow measurements are not collected at the waste stabilization lagoon facilities

Table UT-2
Vacant Acreage* South of 119th Street by
Future Development Plan Land Use
and by Sewer Availability in 2005

Sewer Status	Very-Low Density Residential		Low-Density Residential		Medium-Density Residential		Total Residential		Commercial		Office		Light Industrial/ Business Park		Total Nonresidential	
	Acres	% of Type	Acres	% of Type	Acres	% of Type	Acres	% of Type	Acres	% of Type	Acres	% of Type	Acres	% of Type	Acres	% of Type
Existing	133	20.8%	279	10.3%	178	64.5%	590	16.3%	280	67.8%	289	81.9%	110	60.1%	679	71.6%
District Created - Construction Pending	8	1.3%	439	16.3%	0	0.0%	447	12.4%	39	9.4%	0	0%	41	22.4%	80	8.4%
Petitions Circulating	377	59.1%	662	24.5%	0	0.0%	1,039	28.8%	25	6.1%	6	1.7%	0	0%	31	3.3%
Insufficient Interest to Start Petition Process	71	11.1%	443	16.4%	21	7.6%	535	14.8%	9	2.2%	29	8.2%	29	15.8%	67	7.0%
Not in Jo. Co. Wastewater Area	49	7.7%	876	32.5%	77	27.9%	1,002	27.7%	60	14.5%	29	8.2%	3	1.6%	92	9.7%
Total	638	100%	2,699	100%	276	100%	3,613	100%	413	100%	353	100%	183	100%	949	100%

Note: * Only acreage within Overland Park city limits
Residential categories not included in detail in this table include Rural Policy Area and Medium-High-Density Residential
Nonresidential categories not included in detail in this table include Hotels and Motels