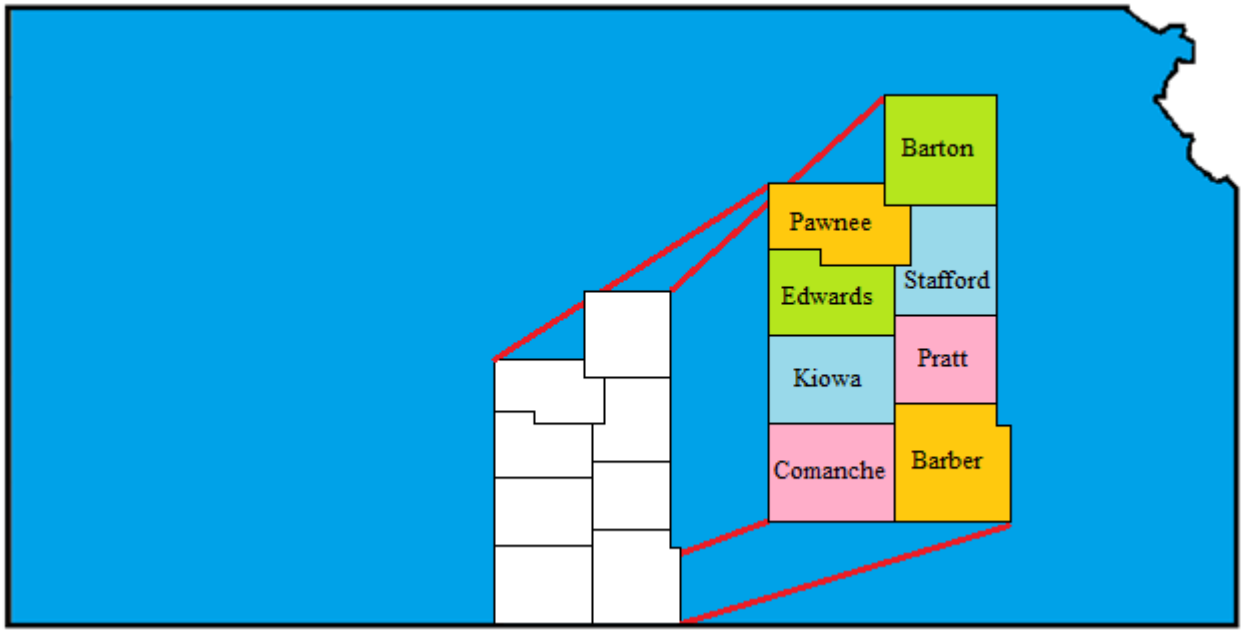
2.0 REGIONAL PROFILE

2.1 PLANNING REGION

The south Kansas planning region includes Barber, Barton, Comanche, Edwards, Pawnee, Pratt and Stafford counties, as well as the cities and towns located within these counties. The counties and majority of the cities participating in the 2014 hazard mitigation plan update plan are briefly summarized in the following two sections.



2.2 COUNTY AND TRIBE PROFILES

The following includes a general discussion of participating counties.

Barber County

Barber County is located in south Kansas, along the state border with Oklahoma, and encompasses 1,134 square miles, with approximately 2.1 square miles being covered by water. It is bound to the north by Pratt and Kingman Counties, to the south by Alfalfa and Woods Counties, Oklahoma, to the east by Harper and Kingman Counties and to the west by Comanche and Kiowa Counties. The County seat is the City of Medicine Lodge.

Barber County was organized in 1873 with Medicine Lodge as the county seat. The county was named for Thomas Barber, an abolitionist who was killed in 1855 during the Wakarusa War.

Rivers and streams within Barber County include Cave Creek, Big Sandy Creek, Mule Creek, Spring Creek, East Branch Little Sandy Creek, Brush Creek, Wilson Slough, Antelope Creek, and Cedar Creek. Lakes in Barber County include Spicer Lake, Harqis Lake, Cook Lake, Lake Arrowshead, and Barber County State Lake.

Major roads include U.S. Highway 281, a north-south route that travels through the city of Medicine Lodge and U.S. Highway 160, an east-west route that passes south of Medicine Lodge.

According to the 2013 United States Census (Census), the population estimate for Barber County was 4,937 (a 7.0% decrease from a 2000 Census population of 5,307), with a population density of 4 people per square mile.

Barton County

Barton County is located in south Kansas and encompasses approximately 894 square miles, with approximately 6.5 square miles being covered by water. It is bound to the north by Russell County, to the south by Pawnee and Stafford Counties, to the east by Ellsworth and Rice Counties, and to the west by Pawnee and Rush Counties.

West Side 1400 Block, Main Street, Great Bend, Kansas

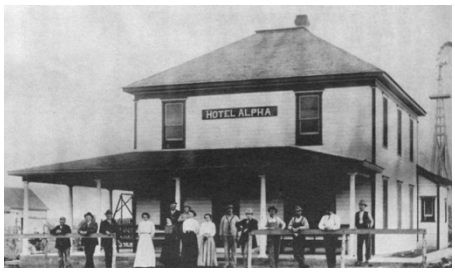
Barton County was organized in 1872 with Great Bend as the county seat. The county was named for Clara Barton, the founder of the American Red Cross, and is the only Kansas county named for a woman.

The main water course is the Arkansas River, which cuts across the southern third of the county. Walnut Creek and Dry Walnut Creek enter the western border of the county and form the Lower Walnut Creek drainage basin. The Cow River drainage basin includes Blood Creek, Deception Creek, Little Cheyenne Creek, and the Cow River. In northern Barton County streams include Landon Creek, Sellens Creek, Goose Creek, Beaver Creek, Coal Creek, and Blood Creek. Major bodies of water s include Lake Barton and Cheyenne Bottoms, a natural basin in which contributing creeks form a shallow lake and a large expanse of wetlands and marsh.

Major roads include U.S. Highway 281, a north-south route that travels through the cities of Great Bend and Hoisington and U.S. Highway 56, an east-west route that passes south of Great Bend and Ellinwood. State Highways include K-96, an east-west route passing through Albert, K-156, a northeast-southwest route passing through Great Bend, and K-4, an east-west route that passes through Hoisington.

According to 2013 Census data, the population estimate for Barton County was 27,509 (a 2.5% decrease from a 2000 Census population of 28,205), with a population density of 21 people per square mile.

Comanche County



Comanche County is located in south Kansas, along the state border with Oklahoma and encompasses 790 square miles, with approximately 1.4 square miles being covered by water. It is bound to the north by Kiowa County, to the south by Woods and Harper Counties, Oklahoma, to the east by Barber County, and to the west by Clark County.

Comanche County was organized in 1885, with the county seat as the City of Coldwater. The county was named in honor of the Comanche Indians.

Major rivers and streams include the Cimarron River, which flows southeast across the southwest corner of the county, the Salt Fork of the Arkansas River in the southwest corner of the county, Calvary Creek, which flows south through the western part of the county, Bluff Creek, Mustang Creek, Nescatonga, Creek, Indian Creek and Big Mule Creek. Lake Coldwater is the only major lake within the county.

Major roads include U.S. Highway 183, a north-south route that travels through the city of Coldwater and U.S. Highway 160, an east-west route that passes through the City of Coldwater.

According to 2013 Census data, the population estimate for Comanche County was 1,955 (a 0.6% decrease from a 2000 Census population of 1,967), with a population density of 2 people per square mile.

Edwards County

Edwards County is located in south Kansas. The county encompasses 622 square miles, with approximately 0.08 square mile being covered by water. It is bound to the north by Pawnee County, to the south by Kiowa County, to the east by Stafford and Pratt Counties, and to the west by Hodgeman and Ford Counties.

Edwards County was organized in 1874 with Kinsley as the county seat. The county was named for W.C. Edwards, an early settler. Edwards County was historically known as a stop along the Santa Fe Trail.

Major rivers include the Arkansas River, which runs in a northeasterly direction near the northwestern part of the county. The head waters of the Little Coon and the Big Coon creeks are in Trenton and Jackson townships. The Little Coon enters the Big Coon midway between Kinsley and Nettleton, and the Big Coon empties into the Arkansas at Garfield, Pawnee County. No major lakes were identified in Edwards County.

Major roads include Highway 50/56, an east-west route passing through the cities of Offerle and Kinsley, where the highways diverge, and Highway 183, a north-south route passing through the city of Kinsley.

According to 2013 Census data, the population estimate for Edwards County was 2,945 (a 15% decrease from a 2000 Census population of 3,449), with a population density of 5 people per square mile.

Kiowa County

Kiowa County is located in south Kansas. The county encompasses 723 square miles, with approximately 0.23 square miles being covered by water. It is bound to the north by Edwards County, to the south by Comanche County, to the east by Pratt and Barber Counties, and to the west by Ford and Clark Counties.

Kiowa County was established in 1874 with Greensburg as the county seat. The county was named in honor of the Kiowa Indians.

Major rivers and streams include the Medicine Lodge River in the southeastern part of the county, Rattlesnake Creek and its tributaries, Mule Creek, Wiggins Creek and East Kiowa Creek. The Kiowa State Fishing Lake is the only major lake within the county.

Major roads include Highway 400/54, an east-west route passing through the cities of Greensburg and Mullinville, where the Highways diverge, and Highway 183, a north-south route passing to the west of the city of Greensburg.

According to the 2013 United States Census, the population estimate for Kiowa County was 2,523 (a 23% decrease from a 2000 Census population of 3,278), with a population density of 3 people per square mile.

Pawnee County

Pawnee County is located in south Kansas. The county encompasses 755 square miles, with approximately 0.38 square miles being covered by water. It is bound to the north by Barton and Rush Counties, to the south by Edwards and Stafford Counties, to the east by Stafford and Barton Counties, and to the west by Hodgeman and Ness Counties.

Pawnee County was established in 1872 with Larned as the county seat. The county was named in honor of the Pawnee Indians who used the area as traditional hunting grounds.

The main water courses for Pawnee County include the Pawnee River, which enters the county from Hodgeman County to the west and flows in an easterly direction until connecting with the Arkansas River near Larned, and the Arkansas River, which enters Pawnee County from Edwards County to the southwest and flows in a general northeast direction. Named creeks include Sawmill Creek, Cocklebur Creek, Ash Creek, Dry Walnut Creek, Pickle Creek, Coon Creek, Hubbard Creek, and Wild Horse Creek. No major lakes were identified in Pawnee County.

Major roads include State Highway 156, an east-west route passing south of the cities of Burdett and Rozell and through the City of Larned where it merges with Highway 56, a northeast-southwest route that passes through Garfield, and Highway 183, a north-south route passing to the center of the county.

According to 2013 Census data, the population estimate for Pawnee County was 6,971 (a 3.6% decrease from a 2000 Census population of 7,233), with a population density of 9 people per square mile.

Pratt County

Pratt County is located in south Kansas. The county encompasses 736 square miles, with approximately 0.76 square miles being covered by water. It is bound to the north by Stafford County, to the south by Barber County, to the east by Kingman and Reno Counties, and to the west by Edwards and Kiowa Counties.

Pratt County was established in 1873, with Iuka as the county seat. The county seat was later changed to Pratt. The county was named in honor of Caleb Pratt, a Second Lieutenant of the First Kansas Infantry killed in action August 10, 1861 at Wilson's Creek, Missouri.

The main water courses are the South Fork of the Ninnescah River which flows generally eastward through the county, and the Chikaskia River which is located in the southeast corner of the county and flows eastward into Kingman County. Numerous Named creeks include Anderson Creek, Coon Creek, Hackberry Creek, Keno Creek, Little Driftwood Creek, and Yellowstone Creek. Major lakes include Pratt County Lake and Pratt Centennial Pond.

Major roads include Highway 281, a north-south route passing through the cities of Pratt and Sawyer, Highway 400/54, an east-west route passing through the city of Pratt, and State Highway 61, a northeast-southwest route originating in the city of Pratt.

According to 2013 Census data, the population estimate for Pratt County was 9,878 (a 2.4% increase from a 2000 Census population of 9,647), with a population density of 13 people per square mile.

Stafford County

Stafford County is located in south Kansas. The county encompasses 795 square miles, with approximately 2.7 square miles being covered by water. It is bound to the north by Barton County, to the south by Pratt County, to the east by Reno and Rice Counties, and to the west by Pawnee and Edwards Counties.

Stafford County was established in 1879 with the City of St. John as the county seat. The county was named in honor of the Lewis Stafford, a Captain in the First Kansas Infantry killed in at Young's Point Louisiana in 1863.

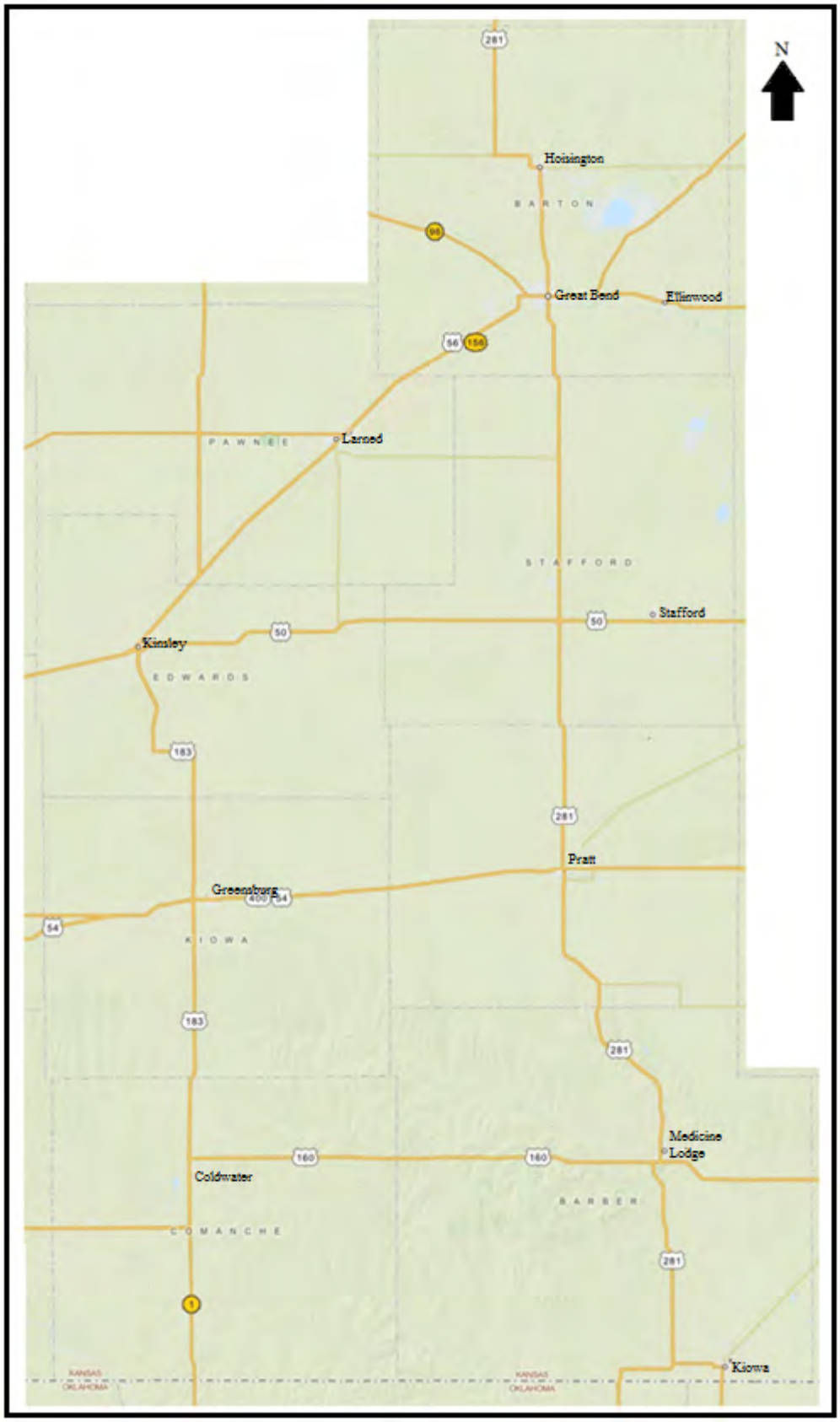
The main water course is the Ninnescah River, which flows in a generally northeast direction. Major lakes include Allens Lake, a reservoir around Stafford, Eppely Lake, a reservoir north of St. John, Gilmore, a reservoir north of Saint John, Lake Darrynane, a reservoir northwest of Alden, Park Smith Lake, a reservoir northwest of Alden, and Stafford Lake, a reservoir in Stafford. In addition, the Quivira National Wildlife Refuge was started in 1955 and for over 50 years has given migratory birds a stopover habitat along the Central Flyway of North America. There are approximately 7,000 acres of wetlands, large and small, scattered throughout the Refuge.

Major roads include Highway 281, an north-south route passing through the center of the county, Highway 50, an east-west route passing through the city of Macksville and south of the City of Stafford, and State Highway 19, a east-west route in the northwest of the county.

According to 2013 Census data, the population estimate for Stafford County was 4,359 (a 9.0% decrease from a 2000 Census population of 4,789), with a population density of 6 people per square mile.

2.3 CITY PROFILES

The following includes a brief discussion of participating cities, broken down by county.


N
Hoisington
BARTON
Great Bend
Ellinwood
Larned
PAWNEE
STAFFORD
Stafford
Kinsley
EDWARDS
Pratt
Greensburg
KIOWA
Medicine Lodge
Coldwater
BARBER
COMANCHE
Kiowa
KANSAS
OKLAHOMA

Barber County

Hardtner, founded in 1887 and named for Dr. John Hardtner, is located on the southern boundary of the county along Highway 169. The 2010 census indicates the city has a total area of 0.30 square miles a population of 281.

Hazelton, founded in 1883 and named for Reverend J.H. Hazelton, is located in the southeast corner of the county, along State Highway 14/2. The 2010 census indicates the city has a total area of 0.57 square miles and a population of 93.

Isabel is located northern boundary of the county. The 2010 census indicates the city has a total area of 0.20 square miles and a population of 90.

Kiowa, founded in 1872 and named for the Kiowa Indians, is located in the southeast corner of the county at the intersection of State Highways 14/2 and 8. The 2010 census indicates the city has a total area of 1.07 square miles and a population of 1,026.

Medicine Lodge, founded in 1873, is a located near the center of the county along Highway 281 and the Medicine Lodge River. The 2010 census indicates the city has a total area of 1.21 square miles and a population of 2,009. Medicine lodge is the county seat for Butler County.

Sharon, founded in 1883, is located near the eastern border of the county along Highway 160. The 2010 census indicates the city has a total area of 0.30 square miles and a population of 158.

Sun City is located in the northwest corner of the county. The 2010 census indicates the city has a total area of 0.14 square miles and a population of 53.

Barton County

Albert is located western boundary of the county along State Highway 96. The 2010 census indicates the city has a total area of 0.24 square miles and a population of 81.

Claflin, settled in 1887, is located near the western boundary of the county along State Highway 4. The 2010 census indicates the city has a total area of 0.30 square miles and a population of 645.

Ellinwood, settled in 1871, is located in the southeast corner of the county along State Highway 56. The 2010 census indicates the city has a total area of 1.14 square miles and a population of 2,131.

Galatia is located in the northwest corner of the county. The 2010 census indicates the city has a total area of 0.38 square miles and a population of 39.

Great Bend, founded in 1871 and named for its location along the Arkansas River, is located near the center of the county along Highways 56 and 281. The 2010 census indicates the city has a total area of 10.71 square miles, with 0.011 square miles of water, and a population of 15,995. Great Bend is the county seat of Barton County.

Hoisington, founded in 1886 and named after Andrew Hoisington, is located near the center of the county along Highway 281 and State Highway 4. The 2010 census indicates the city has a total area of 0.72 square miles, with 0.01 square miles of water, and a population of 2,706.

Olmitz is located near the western border of the county, just south of State Highway 4. The 2010 census indicates the city has a total area of 0.17 square miles and a population of 114.

Pawnee Rock, founded in 1874, is located in the southwest corner of the county along Highway 56. The 2010 census indicates the city has a total area of 0.28 square miles and a population of 252.

Susank is located near the northern border of the county. The 2010 census indicates the city has a total area of 0.10 square miles and a population of 34.

Comanche County

Coldwater, organized in 1885, is located near the center of the county, at the intersection of Highways 160 and 183. The 2010 census indicates the city has a total area of 2.98 square miles, with 0.34 square miles of water, and a population of 828. Coldwater is the county seat of Comanche County.

Protection, founded in 1884, is located near the western border of the county just north of Highway 160 . The 2010 census indicates the city has a total area of 0.95 square miles and a population of 514.

Wilmore, founded in 1883, is located near the northern border of the county along Highway 68/268. The 2010 census indicates the city has a total area of 0.20 square miles and a population of 53.

Edwards County

Belpre, founded in 1879, is located in the northeast corner of the county along Highway 50. The name Belpre comes from the French word for "beautiful meadow." The 2010 census indicates the city has a total area of 0.41 square miles and a population of 84.

Kinsley, laid out in 1873, is located near the center of the county, at the intersection of Highways 50, 56 and 183. The 2010 census indicates the city has a total area of 1.29 square miles and a population of 1,457. Kinsley is the county seat of Edwards County.

Lewis, founded in 1885, is located near the northern border of the county along Highway 50. The 2010 census indicates the city has a total area of 0.33 square miles and a population of 451.

Offerle, established in 1876, is located on the western border of the county along Highway 50/56. The 2010 census indicates the city has a total area of 0.26 square miles and a population of 199.

Kiowa County

Greensburg, settled in 1885, is located in the center of the county along Highway 400/54. The 2010 census indicates the city has a total area of 1.48 square miles and a population of 777. In the evening of May 4, 2007, Greensburg was devastated by an EF5 tornado that leveled at least 95 percent of the city and killed eleven people. Greensburg is the county seat of Kiowa County.

Haviland, settled in 1885, is located near the western border of the county along Highway 400/54. The 2010 census indicates the city has a total area of 0.45 square miles and a population of 701.

Mullinville, founded in 1886, is located near the western border of the county at the intersection of Highways 54 and 400. The 2010 census indicates the city has a total area of 0.60 square miles and a population of 255.

Pawnee County

Burdett is located on the western border of the county along State Highway 156. The 2010 census indicates the city has a total area of 0.27 square miles and a population of 247.

Garfield, named for President James Garfield, is located near the southern border the county along Highway 56. The 2010 census indicates the city has a total area of 0.54 square miles and a population of 190.

Larned, founded in 1873, is located near the center of the county along Highway 56/156. The 2010 census indicates the city has a total area of 2.39 square miles and a population of 4,054. Larned is the county seat of Pawnee County.

Rozel is located in the western half of the county along State Highway 156. The 2010 census indicates the city has a total area of 0.17 square miles and a population of 156.

Pratt County

Byers, founded in 1914, is located in the northwest corner of the county. The 2010 census indicates the city has a total area of 0.19 square miles and a population of 35.

Coats, founded in 1887, is located near the southwest corner of the county. The 2010 census indicates the city has a total area of 0.21 square miles and a population of 83.

Cullison is located near the western border of the county along Highway 400/54. The 2010 census indicates the city has a total area of 0.17 square miles and a population of 101.

Iuka, settled in 1877, is located near the northern border of the county along Highway 281. The 2010 census indicates the city has a total area of 0.60 square miles and a population of 163.

Pratt, founded in 1884, is located in the center of the county at the intersection of Highways 400/54 and 281. The 2010 census indicates the city has a total area of 7.49 square miles, with 0.12 square miles of water, and a population of 6,835. Pratt is the county seat of Pratt County

Preston, founded in 1887, is located near the northeast corner of the county along Highway 61. The 2010 census indicates the city has a total area of 0.47 square miles and a population of 158.

Sawyer, founded in 1886, is located on the southern border of the county along Highway 281. The 2010 census indicates the city has a total area of 0.14 square miles and a population of 124.

Stafford County

Hudson, incorporated in 1908, is located near the center of the county. The 2010 census indicates the city has a total area of 0.13 square miles and a population of 129.

Macksville, founded in 1885, is located near the western border of the county along Highway 50. The 2010 census indicates the city has a total area of 1.00 square miles and a population of 549.

Radium is located near the western border of the county just north of State Highway 19. The 2010 census indicates the city has a total area of 0.04 square miles and a population of 25.

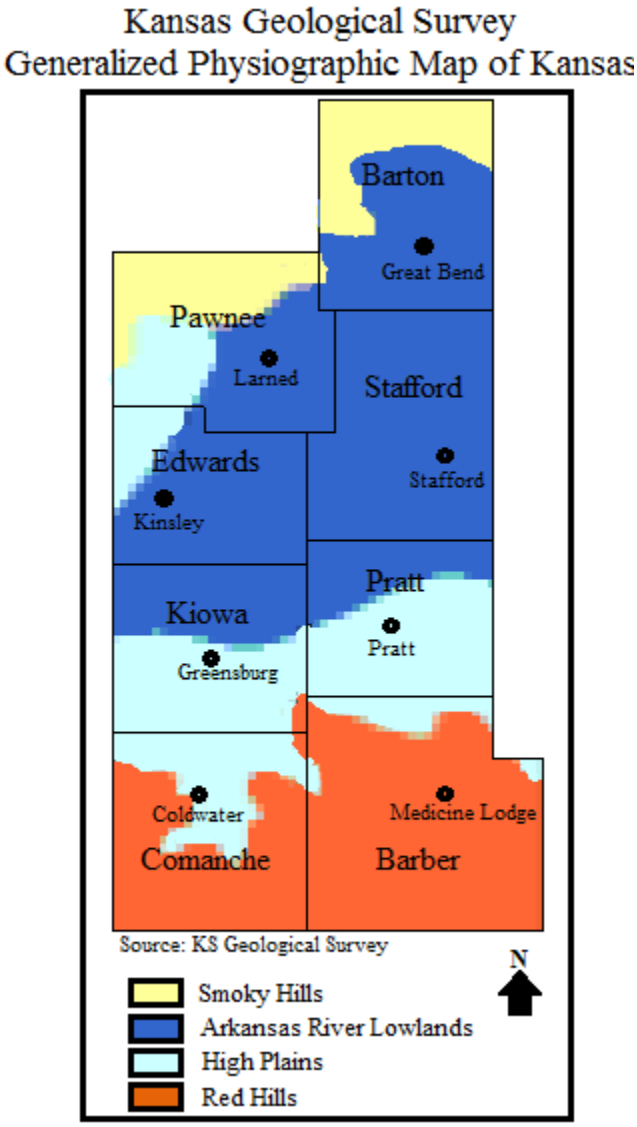
Seward is located near in the northern part of the county just north of State Highway 19. The 2010 census indicates the city has a total area of 0.25 square miles and a population of 64.

St. John, settled in 1875 and named after Governor John St. John, is located in the center of the county along Highway 281. The 2010 census indicates the city has a total area of 1.88 square miles and a population of 1,295. St. John is the county seat of Stafford County.

Stafford, founded in 1878, is located near the southeast corner of the county along State Highway 50. The 2010 census indicates the city has a total area of 0.92 square miles and a population of 1,042.

2.4 REGIONAL GEOLOGY AND HYDROLOGY

The Kansas landscape was formed by alternating periods of deposition and erosion. The southern region of Kansas contains four distinct physiographic regions. Each region is differentiated by underlying rock formations, overlying soil types, and land use suitability. The following physiographic regions are found within southern Kansas.



The **Arkansas River Lowlands** follows the course of the Arkansas River through south-central Kansas. The broad floodplain contains large quantities of sand and silt carried from the Rocky Mountains by the river. A significant area of sand dunes occur on the south side of the plain formed by the prevailing winds from the glaciers to the north during the Pleistocene.

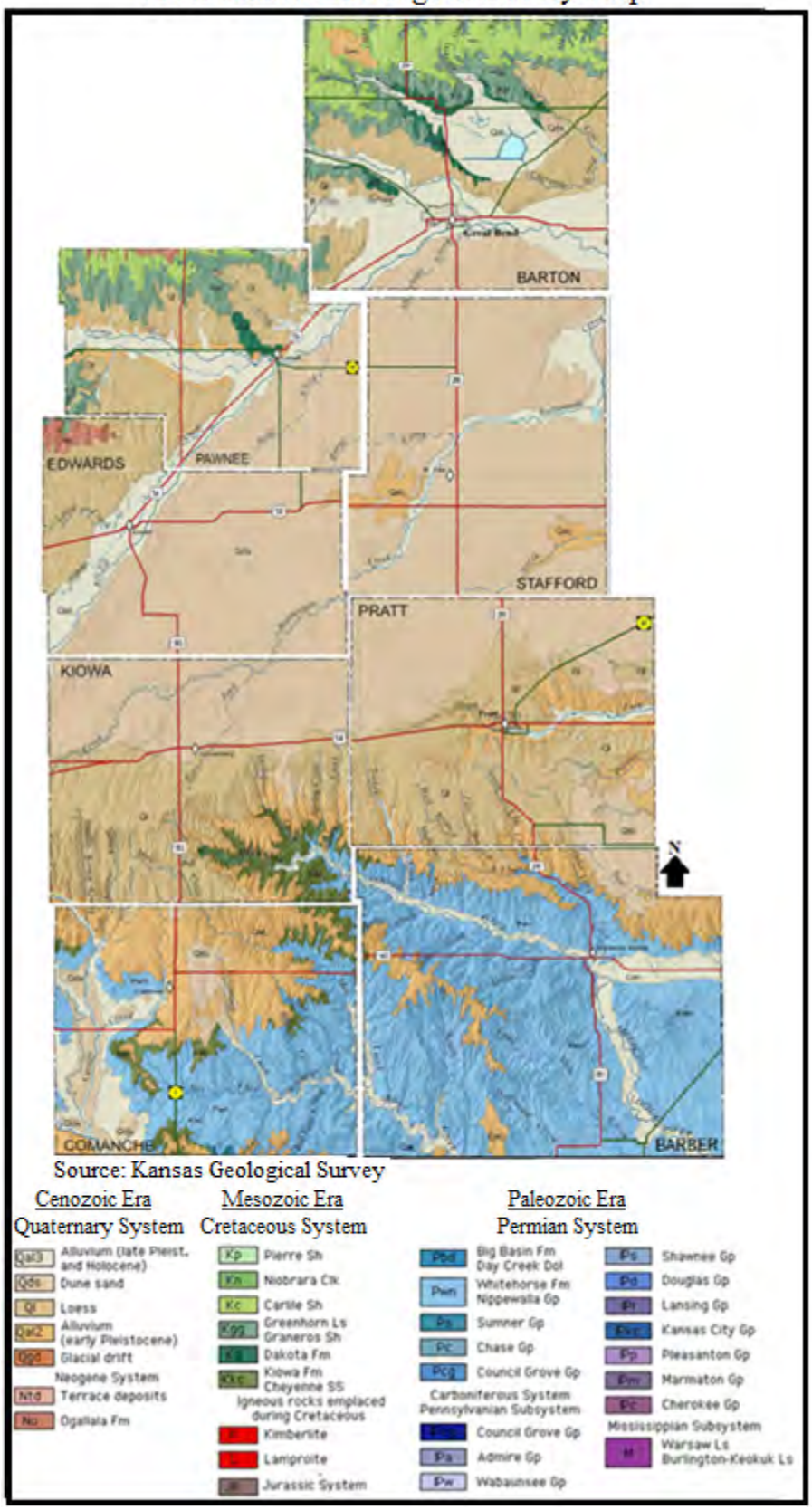
The **High Plains** area physiographic region is a result of the uplift of the Rocky Mountains during the Tertiary period. This event resulted in erosion and deposition of vast quantities of non-marine sediments eastward across the High Plains. The Ogallala Formation consists of a large wedge of unconsolidated sands and silts that is a significant aquifer under the plains. The Ogallala contains a sandstone layer cemented with opal.

The **Red Hills** cover the southwest corner of Harper County along the Oklahoma border. The Red Hills are named for their color derived from the Permian red beds which outcrop and underlie the region. The red color is produced by abundant iron oxides in the weathering sediments. The region is underlain by red shales, siltstones, and sandstones along with interbedded dolomites and gypsum evaporite layers. The soluble gypsum, anhydrite and dolomite have produce caves in the area.

The region known as the **Smoky Hills** occupies the northern part of the region. It is delineated by outcrops of Cretaceous-age rocks and takes its name from the early morning haze that often gathers in the valleys. The sandstones of the Dakota Formation crop out in a wide belt from Rice and McPherson counties. They are the remains of beach sands and sediments dumped by rivers draining into the early Cretaceous seas. The hills and buttes in this part of the Smoky Hills are capped by this sandstone and rise sharply above the surrounding plains.

The soils of Kansas are very diverse, with over 300 different soil types across 52 million-acres. In general, the soils of south-central Kansas are weathered, shallow clay-pan soils. The following map shows the predominant soils types identified in south Kansas.

South Kansas Geological Survey Map



Kansas soils are known around the world for their exceptional qualities. But even though Kansas has abundant and productive soils, erosion by wind and water continue to diminish this resource. According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service about 190 million tons of topsoil are degraded each year through human activities. Unfortunately, soils are not easily renewed and it takes about 500 years for an inch of topsoil to develop under prairie grasses.

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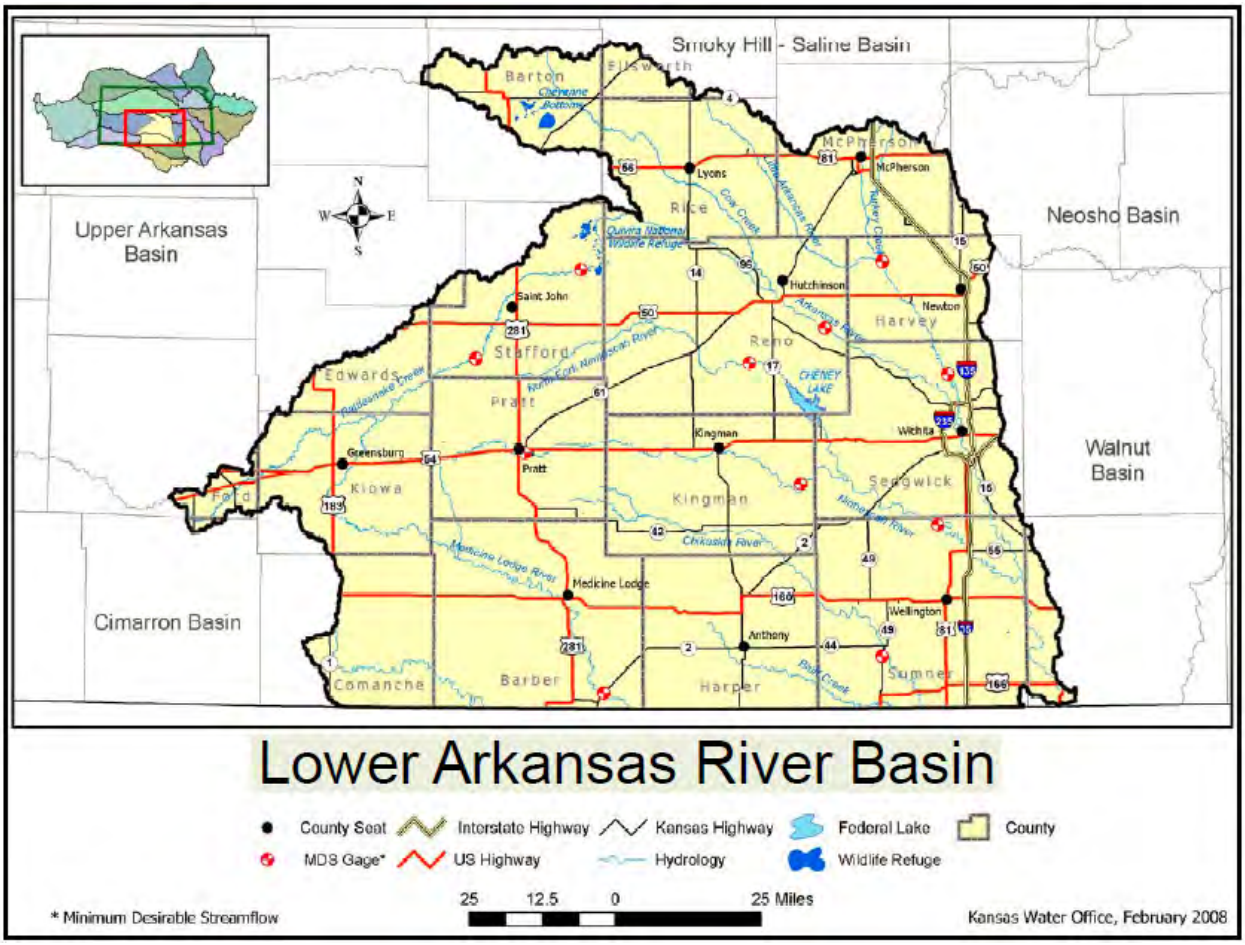
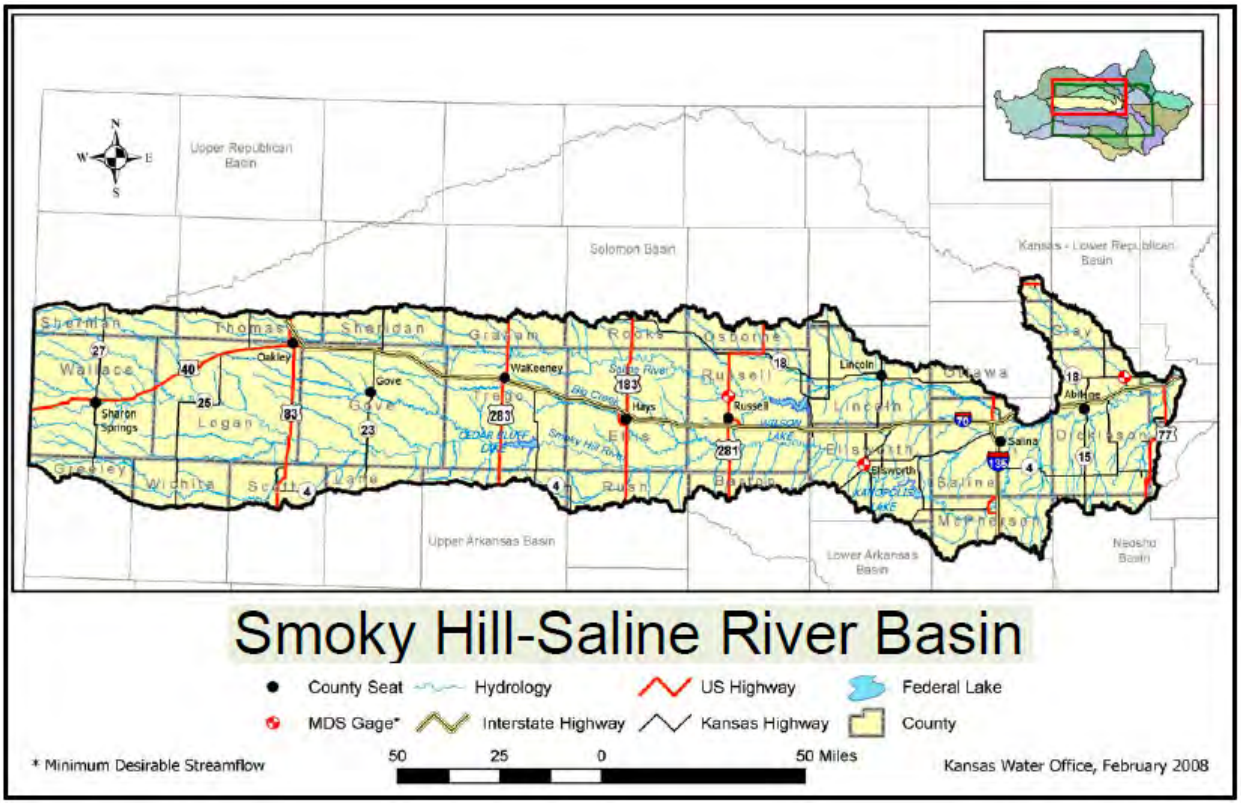
Four river basins cover south Kansas, the Cimarron, Lower Arkansas, Smoky Hills - Saline River, and Upper Arkansas Basins. Brief descriptions of each of these basins are presented below.

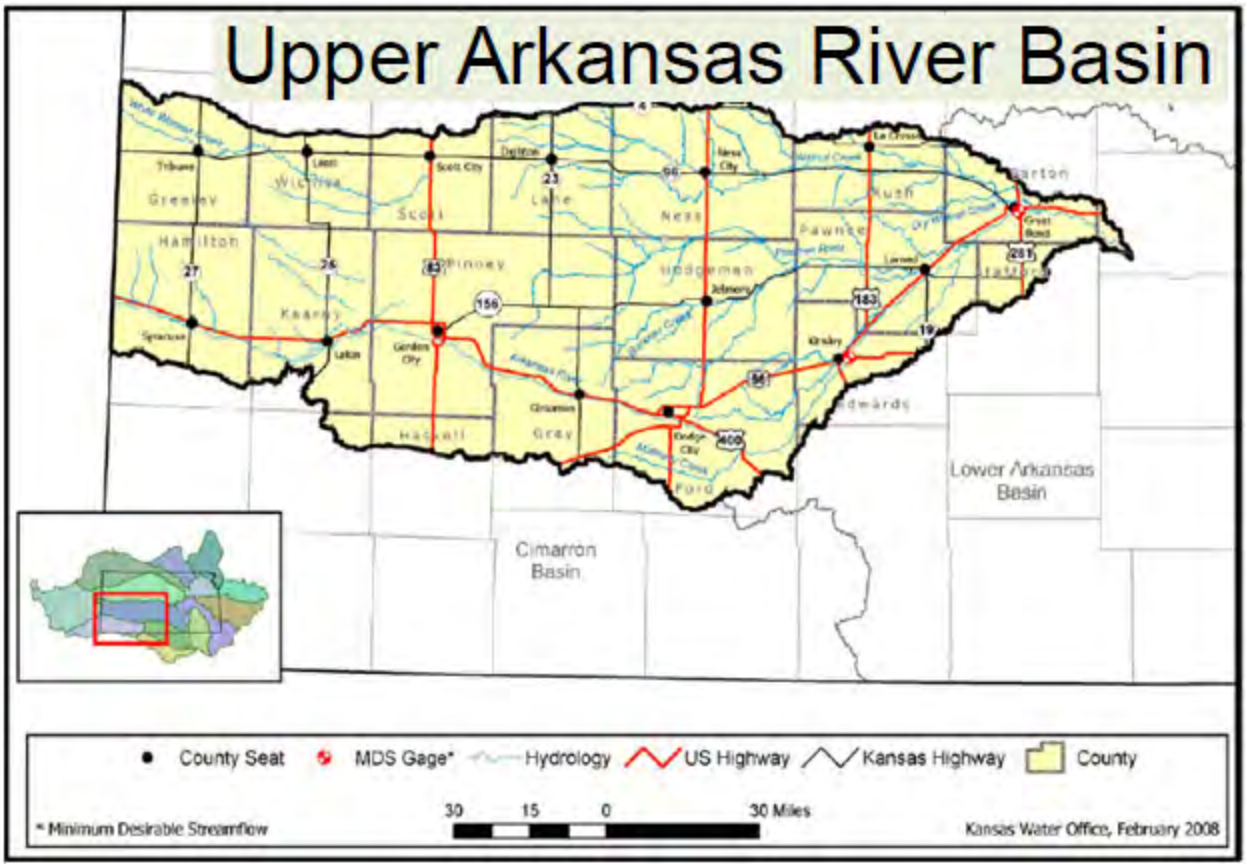


The **Lower Arkansas River Basin** is part of the Arkansas River basin. The Arkansas River originates in central Colorado, where it flows southeast into and across southern Kansas. The Arkansas River crosses the Kansas-Oklahoma border south of Arkansas City in Cowley County.

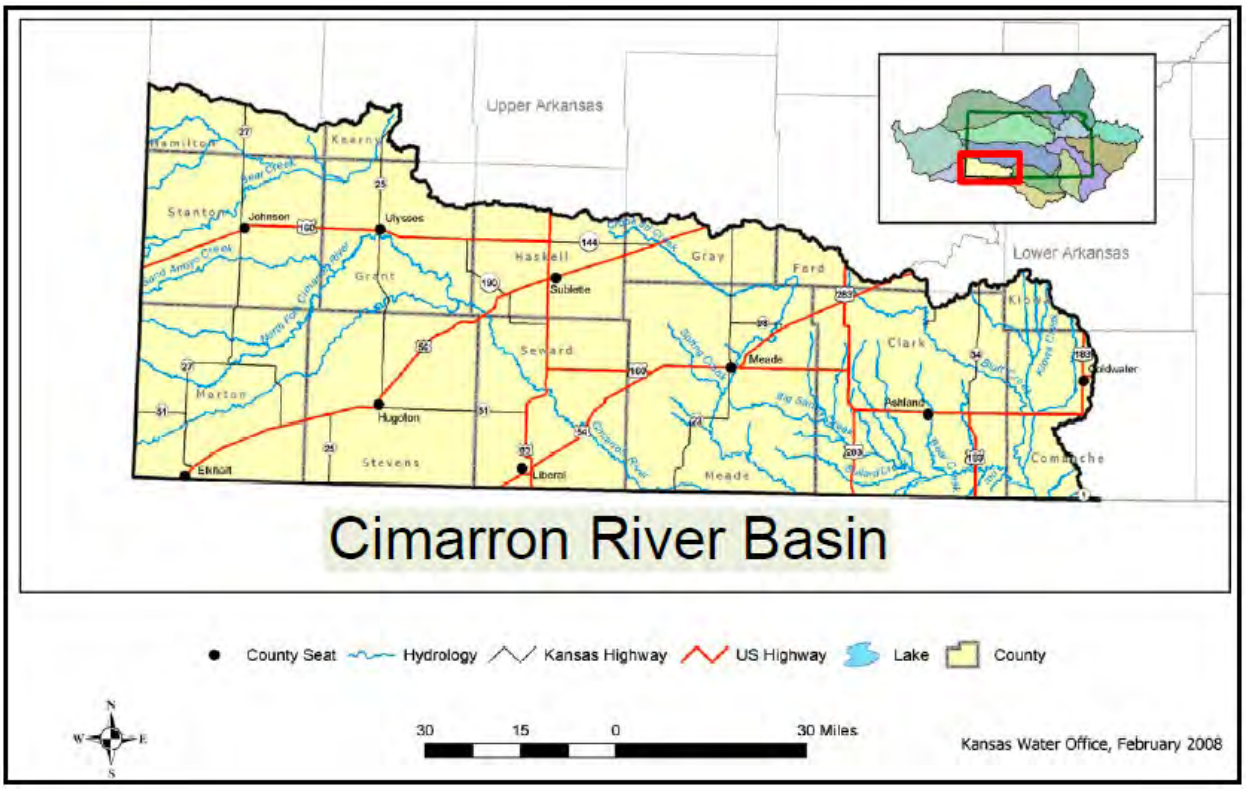
The Lower Arkansas basin begins where Rattlesnake Creek confluences with the Arkansas River in southwestern Rice County. Major tributaries entering the river along its course through the basin are Rattlesnake Creek, Cow Creek, Little Arkansas River, Ninnescah River and Slate Creek. Other major streams in the basin that join the Arkansas River in Oklahoma are the Chikaskia River, Medicine Lodge River and Salt Fork. The only major federal reservoir in the basin is Cheney Reservoir. The Lower Arkansas basin covers 11,500 square miles of south central Kansas and includes all or part of Barber, Barton, Comanche, Edwards, Kiowa, Pawnee, and Stafford counties. The basin has the second largest population of the twelve major river basins, with an estimated 641,000 residents in the year 2000.



The **Smoky Hill-Saline River Basin** is an elongated drainage area, which extends eastward from the Colorado border approximately 250 miles to the vicinity of Junction City, and covers the extreme northern border of Barton County. The entire Smoky Hill-Saline basin in Kansas has a drainage area of about 12,229 square miles. Topography within the basin is flat to gently rolling, with narrow, shallow valleys and low relief.



The **Upper Arkansas Basin** covers nearly 10,300 square miles of west central Kansas. The Upper Arkansas basin contains 13,165 miles of intermittent and 843 miles of perennial streams for a total of 14,008 stream miles. The Arkansas River is the dominant river. It receives water from snow and rain runoff resulting in periodic high flows with the Pawnee River, Walnut Creek and Coon Creek as major tributaries. There are no major federal reservoirs in the basin. The basin includes all or part of Barton, Edwards, Pawnee and Stafford counties. The basin had an estimated 128,500 residents in the year 2000.



The **Cimarron Basin** covers nearly 6,800 square miles of the southwest corner of Kansas. The Cimarron basin contains 6,421 miles of intermittent and 432 miles of perennial streams for a total of 6,853 stream miles. The major river in the basin is the Cimarron, with principal tributaries including the North Fork Cimarron, Crooked Creek, Bluff Creek and, on occasions of high runoff, Bear Creek. The Cimarron River has its source in Union County, New Mexico. It flows across the Oklahoma panhandle and the southeast corner of Colorado and enters Kansas nine miles northwest of Elkhart in Morton County. The Cimarron River leaves the state in the south-central portion of Meade County and reenters 30 miles east in Clark County. The river leaves the state for the last time in Comanche County and eventually joins the Arkansas River near Tulsa, Oklahoma. There are no major federal reservoirs in the basin. The basin includes all or part of Comanche and Kiowa counties. The basin had an estimated 54,300 residents in the year 2000.

2.5 REGIONAL CLIMATE

The Midwest climate region is known for extremes in both temperature and precipitation. In particular, Kansas lacks any mountain ranges that could act as a barrier to cold air masses from the north or hot, humid air masses from the south or any oceans or large bodies of water that could provide a moderating effect on the climate. The polar jet stream is often located over the region during the winter, bringing frequent storms and precipitation. In the summer the jet stream migrates north, resulting in the collision of air masses with differing temperatures and moisture levels. The result if this is often severe thunderstorms, high winds and tornados, with peak severe weather season from May to June.

Kansas summers are generally warm and humid due to the clockwise air rotation caused by Atlantic high pressure systems bringing warm humid air up from the Gulf of Mexico. In general, summer also tends to have the most rain. Historically, precipitation has been reasonably predicable and adequate, however the region is noted for severe droughts such as is occurring now. Winter months can bring severe weather in the form of snow and ice storms. All seasons are noted for damaging high winds.

Data from the following High Plains Regional Climate Center weather stations from the first available date (in parenthesis) to 2013 was obtained to create a regional average:

- Medicine Lodge, Barber County (1893)
- Great Bend, Barton County (1909)
- Coldwater, Comanche County (1893)
- Kinsley, Edwards County (1935)
- Greensburg, Kiowa County (1893)
- Larned, Pawnee County (1903)
- Pratt, Pratt County (1895)
- Hudson, Stafford County (1922)

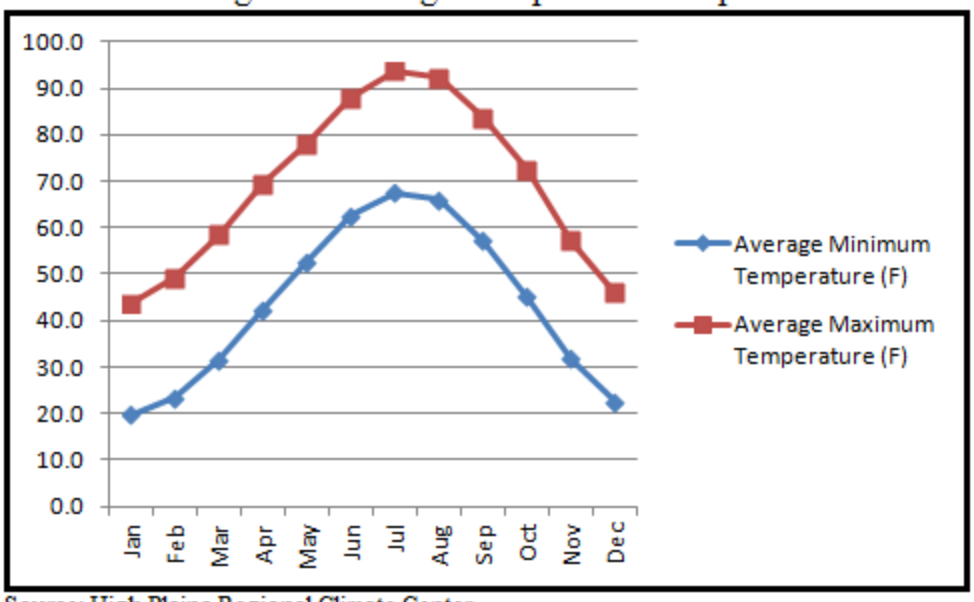
The following tables and charts present average climate data for South Kansas.

Regional Average Temperatures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Minimum Temperature (F)	19.8	23.6	31.7	42.4	52.8	62.6	67.5	66.1	57.2	45.1	31.8	22.6	43.6
Average Maximum Temperature (F)	43.8	49.2	58.5	69.5	78.1	88.2	93.8	92.5	83.9	72.4	57.3	46.1	69.4

Source: High Plains Regional Climate Center

Regional Average Temperature Graph



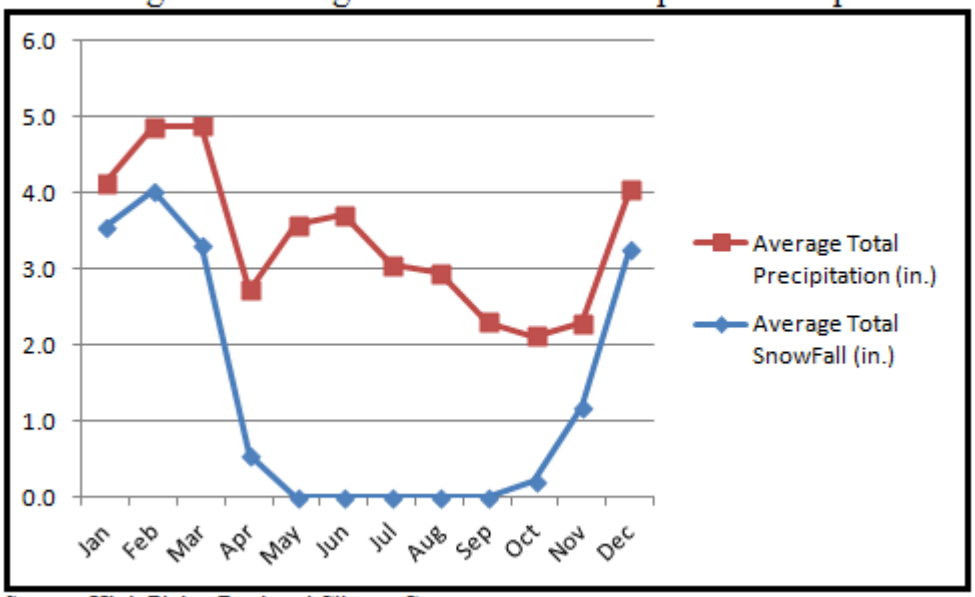
Source: High Plains Regional Climate Center

Regional Average Snowfall and Precipitation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Total Snowfall (in.)	3.6	4.0	3.3	0.6	0.0	0.0	0.0	0.0	0.0	0.2	1.2	3.3	16.1
Average Total Precipitation (in.)	0.6	0.8	1.6	2.2	3.6	3.7	3.0	3.0	2.3	1.9	1.1	0.8	24.5

Source: High Plains Regional Climate Center

Regional Average Snowfall and Precipitation Graph



Source: High Plains Regional Climate Center

When discussing weather patterns climate change should be taken into account as it may markedly change future weather related events. There is a scientific consensus that climate change is occurring, and recent climate modeling results indicate that extreme weather events may become more common. Rising average temperatures produce a more variable climate system which may result in an increase in the frequency and severity of some extreme weather events including longer and hotter heat waves (and by correlation, an increased risk of wildfires), higher wind speeds, greater rainfall intensity, and increased tornado activity. As climate modeling improves, future plan updates should include climate change as a factor in the ranking of natural hazards as these are expected to have a significant impact on southern Kansas communities.

2.6 REGIONAL POPULATION AND DEMOGRAPHICS

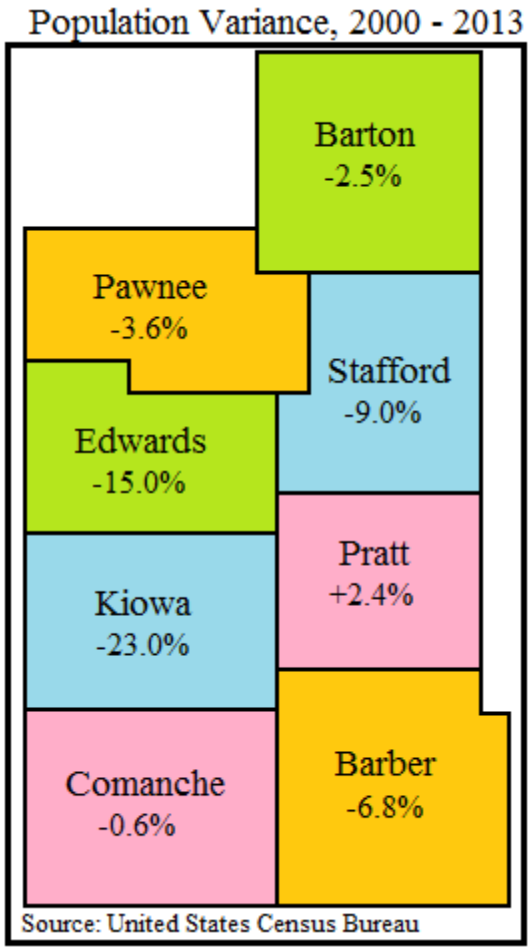
In general, south Kansas is a rural area with no larger metropolitan areas. According to the United States Census Bureau, the estimated regional population for 2013 is 61,087 persons. This represents a 4.37% regional decrease from the 2000 census of 63,875.

The region accounts for approximately 2.11% of the State of Kansas' 2013 estimated population of 2,893,957. Additionally, the region occupies approximately 6,499 square miles (representing 7.9% of the total land area of the state, at 81,759 square miles). The 2013 regional population density is calculated at 9 people per square mile.

Regional Population Data

County	Population (2000)	Population (2013 Estimate)	Percentage Change (2000-2013)	Population (2040 Projection)
Barber	5,307	4,947	-6.8%	3,201
Barton	28,205	27,509	-2.5%	21,685
Comanche	1,967	1,955	-0.6%	1,774
Edwards	3,449	2,945	-15.0%	1,894
Kiowa	3,278	2,523	-23.0%	613
Pawnee	7,233	6,971	-3.6%	4,063
Pratt	9,647	9,878	+2.4%	8,775
Stafford	4,789	4,359	-9.0%	3,245
Kansas	2,688,418	2,893,957	+7.65%	3,238,356

Source: United States Census Bureau and Wichita State University



The following table indicates the levels of education for citizens of the region.

Regional Educational Data

County	High school graduate or higher, age 25+ (2008-2012)	Bachelor's degree or higher, age 25+ (2008-2012)
Barber	92.80%	19.90%
Barton	85.40%	18.40%
Comanche	90.00%	24.10%
Edwards	83.80%	22.70%
Kiowa	90.80%	21.40%
Pawnee	90.10%	23.30%
Pratt	89.50%	23.90%
Stafford	87.90%	20.80%
Kansas	89.70%	30.00%

Source: United States Census Bureau

The following information provides a snapshot of regional housing trends. In general, the region enjoys a high percentage of home ownership. Additionally, available data indicates a small proportion of available housing units are in the form of multi-unit spaces.

Regional Housing Data

County	Housing Units (2000)	Housing Units (2012)	Multi Unit Percentage (2008-2012)	Homeownership Rate (2008-2012)	Households (2008-2012)	Persons per Household (2008-2012)	Issued Building Permits, All Categories (2012)
Barber	2,740	2,754	7.90%	75.10%	2,251	2.15	1
Barton	12,888	12,636	9.30%	72.40%	11,310	2.39	33
Comanche	1,088	1,039	7.60%	74.60%	811	2.26	0
Edwards	1,754	1,627	4.10%	77.80%	1,312	2.25	1
Kiowa	1,643	1,230	11.40%	67.70%	1,064	2.20	0
Pawnee	3,114	3,151	10.30%	73.70%	2,512	2.40	21
Pratt	4,633	4,499	10.80%	67.50%	4,026	2.30	0
Stafford	2,458	2,310	5.00%	79.90%	1,893	2.28	7
Kansas	1,131,200	1,238,719	17.60%	68.20%	1,109,391	2.50	6,252

Source: United States Census Bureau

2.7 REGIONAL ECONOMY

Data from the University of Kansas Institute for Policy and Social Research Kansas County Profile reports indicate that in general, the number of business establishments in south region are decreasing on a yearly basis. From 2000 to 2010 the average rate of decrease for the region was -4.9%. Major sources of employment include construction, manufacturing, retail, transportation, and utilities. The average regional unemployment rate of 4.45% in 2011 was lower than the average State of Kansas unemployment rate of 6.5%.

Regional Business and Unemployment Data

County	Total Number of Business (2000)	Total Number of Business (2010)	01 - 19 Staff (2010)	20 - 99 Staff (2010)	100+ Staff (2010)	Average Wage (2010)	Unemployment Rate (2011)
Barber	213	220	205	13	2	$27,176	4.00%
Barton	1029	962	861	89	12	$33,639	5.00%
Comanche	70	85	80	5	0	$22,440	4.20%
Edwards	107	99	92	7	0	$32,649	4.20%
Kiowa	114	89	77	12	0	$26,764	3.70%
Pawnee	184	177	162	13	2	$39,937	4.60%
Pratt	383	375	340	32	3	$31,733	4.60%
Stafford	153	135	130	5	0	$26,684	5.30%
Regional Total	2,253	2,142	1,947	176	19	$30,128	4.45%

Source: University of Kansas Institute for Policy and Social Research Kansas County Profile

2.8 REGIONAL AGRICULTURE AND LIVESTOCK

Agriculture is a major component of the economy of south Kansas. According to the Kansas Department of Agriculture:

- Kansas farmers typically produce more wheat than any other state in the nation
- In 2009, Kansas wheat accounted for more than 16 percent of all wheat produced
- Kansas ranks first in grain sorghum produced
- Kansas ranks second in cropland
- Kansas ranks sixth in hay produced
- One in five Kansans work in jobs related to agriculture and food production

The following tables present information from the USDA National Agricultural Statistics Service relating to farm totals, agricultural acreage and farm size for south Kansas.

Regional Farm Data, 2002 to 2012

County	Number of Farms, 2002	Number of Farms, 2007	Number of Farms, 2012	Percent Change	Farm Acreage, 2002	Farm Acreage, 2007	Farm Acreage, 2012	Percentage Change
Barber	471	427	378	-19.7%	696,850	611,493	590,678	-15.2%
Barton	772	678	694	-10.1%	650,065	558,977	566,088	-12.9%
Comanche	274	253	234	-14.6%	447,029	432,378	485,080	8.5%
Edwards	353	371	292	-17.3%	420,001	439,243	394,445	-6.1%
Kiowa	379	399	403	6.3%	434,783	440,473	455,235	4.7%
Pawnee	430	438	401	-6.7%	520,360	487,373	480,739	-7.6%
Pratt	591	538	543	-8.1%	501,168	480,162	464,527	-7.3%
Stafford	534	558	536	0.4%	472,714	502,229	498,769	5.5%
Regional	3,804	3,662	3,481	-8.5%	4,142,970	3,952,328	3,935,561	-5.0%

Source: United States Department of Agriculture National Agricultural Statistics Service

Regional Farm Size, 2012

County	1 to 9 acres	10 to 49 acres	50 to 179 acres	180 to 499 acres	500 to 999 acres	1,000 or more acres
Barber	12	26	65	85	58	132
Barton	28	72	168	154	103	169
Comanche	8	8	40	35	38	105
Edwards	7	16	66	71	33	99
Kiowa	10	16	109	92	68	108
Pawnee	13	42	77	87	52	130
Pratt	3	38	175	121	63	143
Stafford	6	42	144	103	80	161
Regional	87	260	844	748	495	1,047

Source: United States Department of Agriculture National Agricultural Statistics Service

Regional Cropland and Pastureland Information

County	Percentage Cropland	Cropland Acreage	Percentage Pastureland	Pasture Acres
Barber	32.0%	189,017	65.0%	383,941
Barton	73.0%	413,244	24.0%	135,861
Comanche	30.0%	145,524	68.0%	329,854
Edwards	75.0%	295,834	23.0%	90,722
Kiowa	52.0%	236,722	46.0%	209,408
Pawnee	78.0%	374,976	20.0%	96,148
Pratt	67.0%	311,233	31.0%	144,003
Stafford	77.0%	384,052	17.0%	84,791
Regional Average	60.5%	2,350,603	36.8%	1,474,729

Source: United States Department of Agriculture National Agricultural Statistics Service

The rearing of livestock play a major role in the regional economy. According to the Kansas Department of Agriculture (KDA):

- Kansas produces more than 19 percent of all U.S. beef
- Kansas ranks third in cattle and calves on farms and third in cattle and calves on grain feed
- Kansas ranks 16th in milk produced

Additionally, major production crops include corn, forage, soybeans, wheat, and sorghum.

The following table presents information relating to livestock and crop production in south Kansas. Information was obtained from the USDA National Agricultural Statistics Service for 2012, the latest year for which this data was available on a county basis.

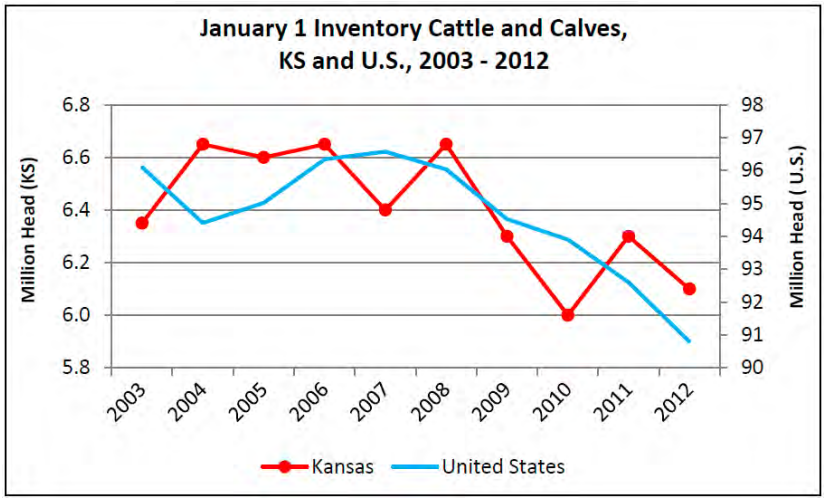
Top Livestock and Crop Items , 2012

County	Cattle and Calves (number of head)	Hogs and Pigs (number of head)	Sheep and Lambs (number of head)	Corn for Grain (acres)	Corn for Silage (acres)	Wheat (acres)
Barber	46,214	-	-	6,736	5,720	110,917
Barton	114,771	-	-	23286	3557	163,706
Comanche	35,030	-	-	1,921	8,945	66,671
Edwards	35,936	-	-	74,394	45,261	95,391
Kiowa	25,305	-	-	23,458	1,982	84,741
Pawnee	87,335	9	-	-	61,980	134,343
Pratt	58,323	-	-	56,145	799	163,371
Stafford	48,978	8,897	934	56,586	2,827	184,229
Regional	451,892	8,906	934	242,526	131,071	1,003,369

Source: United States Department of Agriculture National Agricultural Statistics Service
-: Data not reported

Regional data indicate that the number of cattle has been falling over the past five years, from 599,466 in 2007 to 451,892 in 2102, -24.6% decrease. In general, this follows a trend in the State

of Kansas and the United States as a whole. The following chart from the USDA National Agricultural Statistics Service Kansas Field Office produced in 2012 indicates this trend.



Source: US Department of Agriculture National Agricultural Statistics Service, Kansas Field Office, 2012

Regional data indicate that the number market value of agricultural products sold has increased dramatically over the past five years, following a trend in the State of Kansas. The following data from the USDA National Agricultural Statistics Service Kansas Field Office produced in 2012 indicates this trend.

Market Value of Agricultural Products Sold

County	Market Value of Products Sold (2002)	Market Value of Products Sold (2007)	Market Value of Products Sold (2012)	Percentage Change
Barber	$49,839,000	$64,475,000	$88,472,000	77.5%
Barton	$171,158,000	$282,786,000	$278,963,000	63.0%
Comanche	$25,755,000	$53,837,000	$48,680,000	89.0%
Edwards	$131,404,000	$172,990,000	$151,705,000	15.4%
Kiowa	$36,491,000	$50,462,000	$80,577,000	120.8%
Pawnee	$139,484,000	$320,071,000	$362,349,000	159.8%
Pratt	$130,667,000	$173,605,000	$273,462,000	109.3%
Stafford	$110,752,000	$167,828,000	$197,621,000	78.4%
Regional	$795,550,000	$1,286,054,000	$1,481,829,000	86.3%

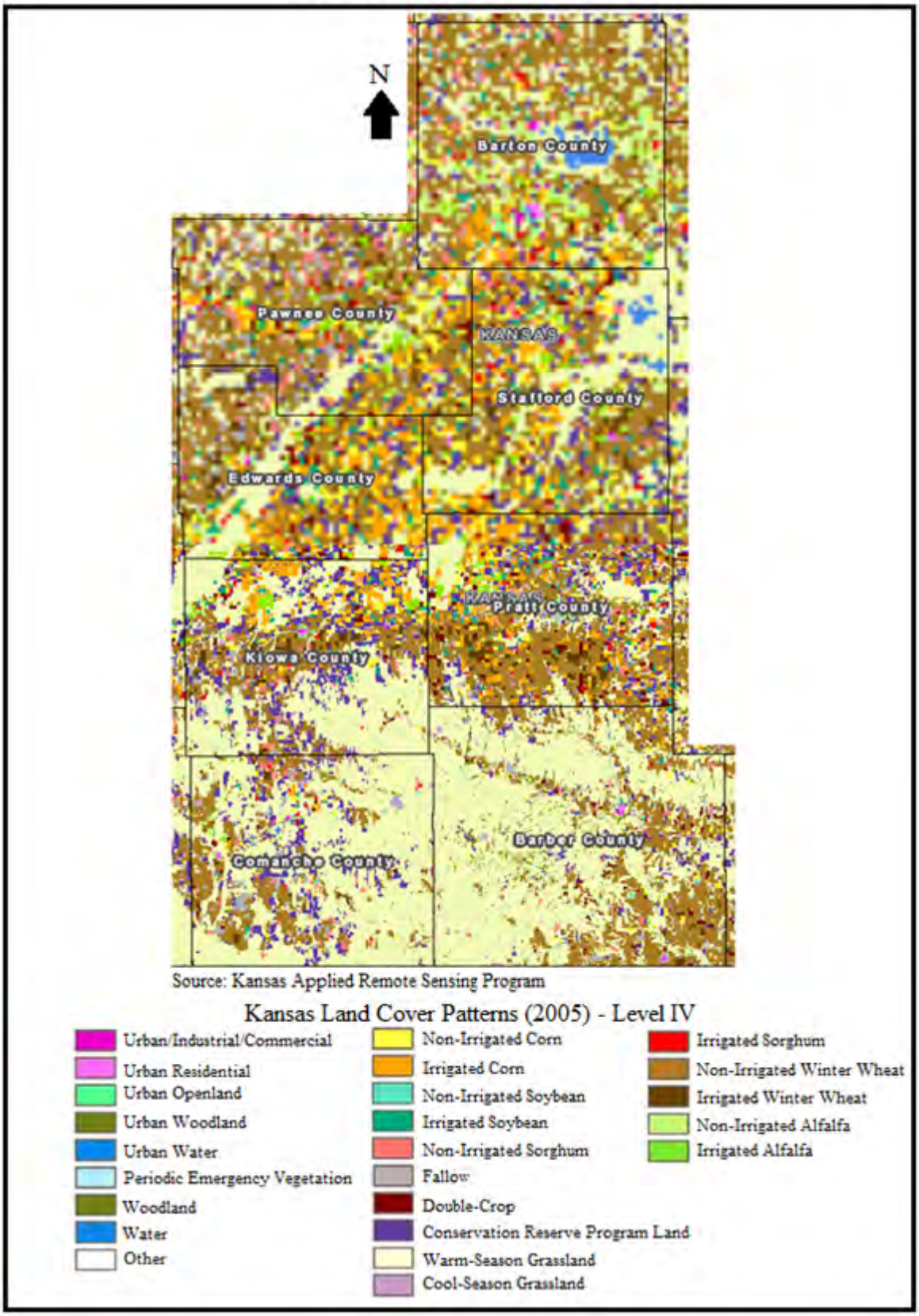
Source: USDA National Agricultural Statistics Service

2.9 REGIONAL LAND USE AND DEVELOPMENT TRENDS

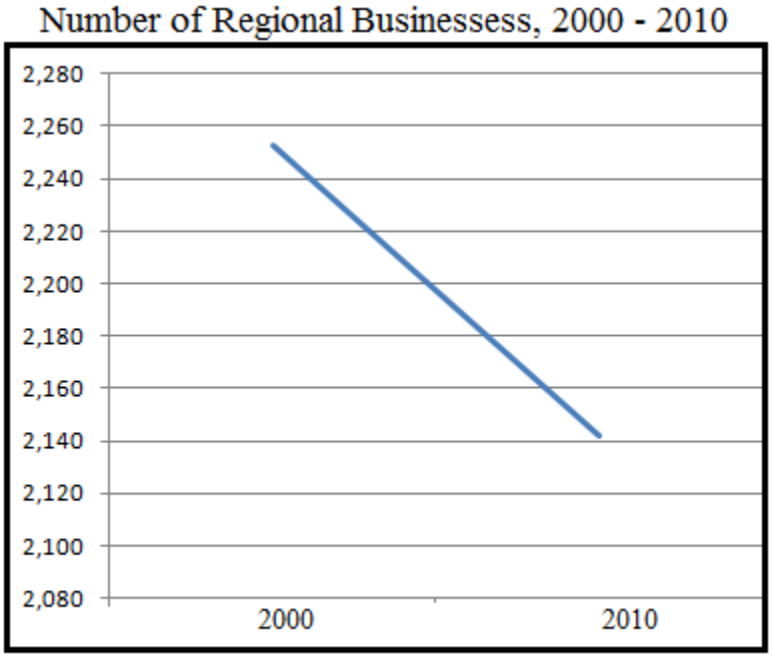
44 CFR 201.6 (C) Plan Content. The plan shall include the following: (2)(ii)(C) Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

Land use patterns in South Kansas have remained relatively stable over many years. The 2005 Kansas Applied Remote Sensing Kansas Land Cover Patterns map shows the majority of the region is covered by cropland and grassland. Urban, residential, commercial and industrial uses comprise a small percentage of the land cover and are primarily found around the major towns and cities. In general, most development is regulated by local entities. However, it should be noted that large sections of the region are unregulated as to building and development.

South Kansas Land Cover Map

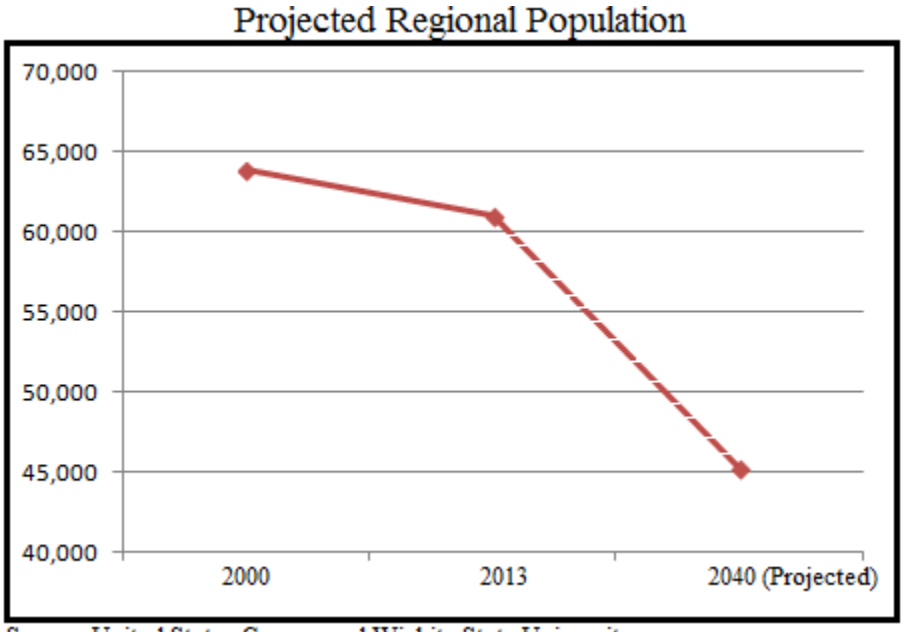


South Kansas has experienced an overall decrease in population, with a 4.37% regional decrease from the 2000 to estimated 2013 census. In addition, the region has seen the number of businesses decline from 2000 to 2010, as indicated by the following graph.



Source: University of Kansas Institute for Policy and Social Research
Kansas County Profile

While forecasting future population movement and growth is challenging, past trends can be used to assist in predicting future development. The following graph indicates trends regional population using data from the above referenced tables.



Source: United States Census and Wichita State University

Based on these historical rates, it is possible that that minor land use changes and minor land development initiatives will be completed.

Data was obtained from the Office of Local Government, Kansas State Research and Extension office concerning capital expenditures on infrastructure. The data indicates that there is a general regional increasing trend in infrastructure spending. However, where the capital expenditures have increased the data and general observations indicate that the increase is being spent on maintenance of aging infrastructure rather than new construction.

Regional Capital Infrastructure Expenditures, 2001 to 2011

County	Road & Bridge Expenditure (2001)	Road & Bridge Expenditure (2011)	Percent Change
Barber	$1,569,458	$2,028,930	29%
Barton	$3,215,564	$4,369,024	36%
Comanche	$907,101	$1,005,986	11%
Edwards	$891,857	$1,255,907	41%
Kiowa	$1,308,156	$1,594,761	22%
Pawnee	$1,654,888	$1,995,202	21%
Pratt	$2,787,578	$3,303,415	19%
Stafford	$1,780,585	$2,222,539	25%

Source: Office of Local Government, Kansas State Research and Extension

2.10 STRUCTURES EXPOSED TO POTENTIAL HAZARDS

This section quantifies the buildings exposed to potential hazards in south Kansas. The following tables provide the value of the region's built environment and contents, which in addition to the population information presented above, forms the basis of the vulnerability and risk assessment presented in this plan. This information was derived from inventory data associated with FEMA's loss estimation software HAZUS-MH 2.1 (February 2012). HAZUS-MH 2.1 classifies building stock types into seven categories: residential, commercial, industrial, agriculture, religion, government, and education. Values associated with each of these categories reflect 2006 valuations, published by R.S. Means Company (Means Square foot Costs", 2006) with replacement costs. According to the HAZUS-MH 2.1 inventory, the total estimated replacement value of buildings within the south Kansas region is $4,199,591 and the total buildings content's estimated value within the south Kansas region is $2,928,961. The exposure value of buildings is incorporated as a factor in vulnerability assessments for hailstorm, tornado, windstorm, and winter storm hazards that are profiled later in this plan.

Estimated Replacement Value of Buildings by Category (2006 Valuations)

County	Residential ($1,000s)	Commercial ($1,000s)	Industrial ($1,000s)	Agriculture ($1,000s)	Religion ($1,000s)	Government ($1,000s)	Education ($1,000s)
Barber	$266,528	$72,098	$13,008	$13,267	$11,273	$5,034	$6,928
Barton	$1,151,374	$331,999	$172,749	$29,202	$47,319	$13,122	$26,353
Comanche	$92,396	$18,993	$3,414	$6,385	$4,222	$1,175	$8,553
Edwards	$160,455	$37,428	$10,718	$7,531	$4,962	$5,398	$5,890
Kiowa	$170,579	$35,317	$4,938	$9,171	$9,614	$2,307	$5,729
Pawnee	$360,996	$52,604	$4,303	$8,340	$13,861	$3,513	$5,975
Pratt	$477,623	$119,524	$18,891	$14,891	$14,291	$7,428	$36,591
Stafford	$206,392	$47,655	$5,707	$14,240	$10,567	$1,933	$8,837
Regional Total	$2,886,343	$715,618	$233,728	$103,027	$116,109	$39,910	$104,856

Estimated Replacement Value of Building's Contents by Category (2006 Valuations)

County	Residential ($1,000s)	Commercial ($1,000s)	Industrial ($1,000s)	Agriculture ($1,000s)	Religion ($1,000s)	Government ($1,000s)	Education ($1,000s)
Barber	$133,698	$79,348	$17,854	$13,267	$11,273	$5,216	$7,074
Barton	$576,757	$358,032	$248,874	$29,202	$47,319	$14,623	$27,504
Comanche	$46,361	$20,796	$4,876	$6,385	$4,222	$1,213	$8,553
Edwards	$80,505	$40,323	$15,381	$7,531	$4,962	$6,335	$6,014
Kiowa	$85,629	$37,648	$6,639	$9,171	$9,614	$2,640	$5,743
Pawnee	$180,910	$55,825	$5,145	$8,340	$13,861	$3,869	$5,975
Pratt	$239,416	$123,775	$25,218	$14,891	$14,291	$8,413	$50,692
Stafford	$103,523	$50,964	$7,694	$14,240	$10,567	$1,933	$8,837
Regional Total	$1,446,799	$766,711	$331,681	$103,027	$116,109	$44,242	$120,392

2.11 REGIONAL CRITICAL FACILITIES

This section details the critical facilities and assets that may be at risk by county and available jurisdiction for the region. A critical facility is essential in providing utility or direction either during the response to an emergency or during the recovery operation. Facilities were determined from jurisdictional feedback, historic research, available data from the State of Kansas and HAZUS-MH 2.1. Critical assets are equipment or systems that may be needed during a response or recovery effort and may be at risk of damage or destruction from a hazard. In addition, jurisdictions considered facilities that, if damaged or destroyed, would result in a high economic, human, or societal losses. Finally, jurisdictions also considered transportation facilities and corridors that would provide critical lifelines in the event of a hazard event. The following are examples of critical facilities and assets:

- Hospitals and other medical facilities
- Police stations
- Fire stations
- Emergency operations centers

- Power plants
- Dams and levees
- Military installations
- Hazardous material sites
- Schools
- Shelters
- Day care centers
- Nursing homes
- Highways, bridges, and tunnels
- Railroads and facilities
- Airports
- Water treatment facilities
- Natural gas and oil facilities and pipelines
- Communications facilities
- Community facilities

Participating jurisdictions were given the option to supply as much information as possible relating to critical facilities, however they were not compelled to provide any information, up to and including name, address, replacement value and occupancy. A detailed list of critical facilities may be found in Appendix D. Appendix D has been deemed sensitive information, and as such is restricted and unavailable to the public.

2.12 HISTORICALLY SIGNIFICANT STRUCTURES AND LOCATIONS

The following sections detail structures that have local historical significance. Historic structure means any structure that is:

- Listed in the National Register of Historic Places or preliminarily determined as meeting the requirements for listing
- Certified as contributing to the historical significance of a registered historic district
- Listed on a state inventory of historic places
- Listed on a local inventory of historic places
- Deemed by the community as a locally historic structure

These structures may warrant a greater degree of protection due to their unique and irreplaceable nature. Additionally, the rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.

2.12.1 BARBER COUNTY

Name of Historic Property	Address or Location	City
Medicine Lodge Peace Treaty Site	SE of Medicine Lodge	Medicine Lodge
Nation, Carry A., House	211 W. Fowler Ave.	Medicine Lodge

2.12.2 BARTON COUNTY

Name of Historic Property	Address or Location	City
Beaver Creek Native Stone Bridge	NE. 50 Ave. S. & NE 230 Rd	Beaver
Bridge #218--Off System Bridge	NE. 60 Ave. S. & NE. 220 Rd.	Beaver
Bridge No. 222--Off System Bridge	NE 60 Ave S and NE 210 Rd, 1/8 mile East on 210 Rd	Beaver
Bridge No. 640 Federal Aid Highway System Bridge	NE 60 Ave, 1/8 mile north of NE 210 Rd	Beaver
Bridge No. 650--Federal Aid Highway System Bridge	NE 60 Ave, 1/12 mile south of NE 220 Rd	Beaver
Wolf Hotel	104 E. Santa Fe	Ellinwood
Wolf Park Band Shell	Lots 12 and 13, Block 2, 200 Blk of N. Main	Ellinwood
Abel House	2601 Passeo	Great Bend
Crest Theater	1905 Lakin Ave.	Great Bend
Nagel House	1411 Wilson St.	Great Bend
Walnut Creek Crossing	Address Restricted	Great Bend
Walnut Creek Bridge	Over Walnut Creek, NW of Heizer	Heizer
Hitschmann Cattle Underpass Bridge	NE. 110 Ave. S. & NE. 190 Rd.	Hitschmann
Hitschmann Double Arch Bridge	NE. 110 Ave. S. & NE 190 Rd.	Hitschmann
Hoisington High School	218 E 7th St.	Hoisington
Manweiler--Maupin Chevrolet	271 S. Main St.	Hoisington
US Post Office--Hoisington	121 E. 2nd St.	Hoisington
Pawnee Rock	0.2 mi. N of Pawnee Rock off U.S. 56	Pawnee Rock

2.12.3 COMANCHE COUNTY

Name of Historic Property	Address or Location	City
Chief Theater	122 E. Main St.	Coldwater
Comanche County Courthouse	201 S. New York Ave.	Coldwater
Protection High School	210 S. Jefferson	Protection
Archeological Site Number 14CM305	Address Restricted	Unknown

2.12.4 EDWARDS COUNTY

Name of Historic Property	Address or Location	City
Gano Grain Elevator and Scale House	Jct. of US 50 and Co. Rd 9	Kinsley
Kinsley Civil War Monument	L Rd., Hillside Cemetery	Kinsley
Palace Theater	222 E. 6th St.	Kinsley

2.12.5 KIOWA COUNTY

Name of Historic Property	Address or Location	City
Belvidere Medicine River Bridge	0.25 miles N of Belvidere	Belvidere
Archeological Site Number 14KW301	Address Restricted	Coldwater
Greensburg Well	Sycamore St.	Greensburg
Robinett, S.D., Building	148 S. Main	Greensburg
Archeological Site Number 14KW302	Address Restricted	Greensburg vicinity
Fromme-Birney Round Barn	SW of Mullinville	Mullinville

2.12.6 PAWNEE COUNTY

Name of Historic Property	Address or Location	City
Babbitt--Doerr House	423 W. 5th St.	Larned
Fort Larned National Historic Site	6 mi. W of Larned on U.S. 156	Larned
Lewis Site	Address Restricted	Larned
Ooten House	507 W 15th St.	Larned
Patterson House	841 W 8th St.	Larned
Township Line Bridge	Off US 156 3 mi. W of Rozel	Rozel

2.12.7 PRATT COUNTY

Name of Historic Property	Address or Location	City
Rice, J. R., Barn and Granary	N of US 54, NW of Cullison	Cullison
Rice, J.R., Farmstead	NE4, SE4, SE4, NE4, 3-28-15	Cullison
Thornton Adobe Barn	1 mi. E and 1.25 mi N of Isabel	Isabel
Ellis, Earl H., VFW Post #1362	701 E. 1st St.	Pratt
Gebhart, S. P., House	105 N. Iuka St.	Pratt
Norden Bombsight Storage Vaults	305 Flint Rd.	Pratt
Parachute Building	40131 Barker Ave.	Pratt
Pratt Archeological Site	Address Restricted	Pratt

2.12.8 STAFFORD COUNTY

Name of Historic Property	Address or Location	City
Gray, William R., Photography Studio and Residence	116 N. Main	St. John
Comanche Archeological Site	Address Restricted	Stafford
Convenanter Church	113 N. Green St.	Stafford
Farmers National Bank	100 N. Main	Stafford
First Methodist Episcopal Church	219 W. Stafford	Stafford
Henderson, Sarah L., House	518 W. Stafford St.	Stafford
Larabee, Nora E., Memorial Library	108 N. Union St.	Stafford
Spickard, Joseph L., House	201 N. Green St.	Stafford

2.13 REGIONAL AT RISK POPULATIONS

In general, at risk populations may have difficulty with medical issues, poverty, extremes in age, and communications due to language barriers. Several principles may be considered when discussing potentially at risk populations, including:

- Not all people who are considered at risk are at risk
- Outward appearance does not necessarily mark a person as at risk
- The hazard event will, in many cases, affect at risk population in differing ways

The National Response Framework defines at risk populations as "populations whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care."

The following tables present information on potential at risk populations within south Kansas.

Potential At Risk Population Data

County	2013 Population	Population 5 and Under (2013)	Population 18 and Under (2013)	Population 65+ (2013)	Population 85+ (2010)	Food Stamp Beneficiaries (2011)	Estimated People in Poverty (2013)	Person Speaking Language Other Than English At Home (2013)
Barber	4,937	311	1,081	1,027	152	301	459	99
Barton	28,205	1,918	6,910	4,710	768	3,334	4,203	3,582
Comanche	1,955	133	475	463	61	94	121	80
Edwards	2,945	171	677	571	94	248	474	492
Kiowa	2,523	141	515	495	88	180	338	116
Pawnee	6,971	397	1,485	1,290	197	487	620	328
Pratt	9,878	622	2,242	1,837	363	781	1,017	464
Stafford	4,359	253	1,020	902	164	336	532	471

Source: University of Kansas Institute for Policy and Social Research Kansas County Profile and the United States Census Bureau

Potential At Risk Population Data, Care Facilities

County	Number of Hospitals (2011)	Number of Hospital Beds (2011)	Adult Care Homes (2011)	Adult Care Beds (2011)	Assisted Living Homes (2011)	Assisted Living Beds (2011)	Child Care Facilities (2011)
Barber	2	86	1	36	0	0	9
Barton	3	81	3	236	4	131	87
Comanche	1	12	2	70	1	9	5
Edwards	1	22	1	42	1	6	8
Kiowa	1	15	1	50	1	32	6
Pawnee	2	493	1	80	2	41	20
Pratt	1	85	1	59	1	68	22
Stafford	1	25	2	65	2	39	13

Source: University of Kansas Institute for Policy and Social Research Kansas County Profile and the United States Census Bureau

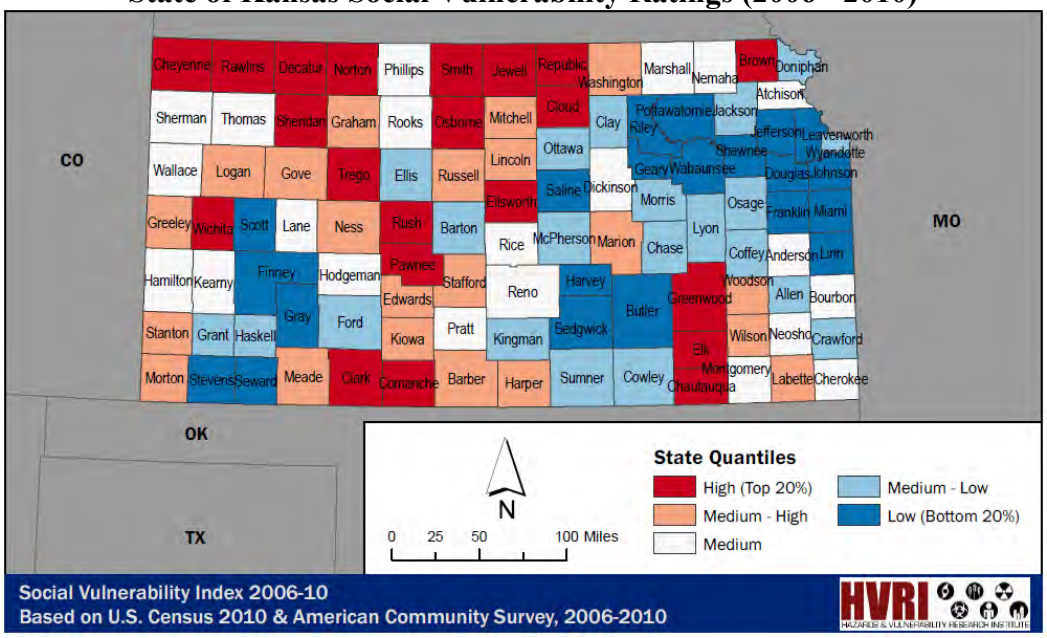
The Social Vulnerability Index (SoVI) 2006 - 2010 compiled by the Hazards and Vulnerability Research Institute in the Department of Geography at the University of South Carolina measures the social vulnerability of counties to environmental hazards. The index synthesizes 30 socioeconomic variables, including social, economic, demographic, and housing characteristics, which may contribute to reduction in a community's ability to prepare, respond and recover from a hazard. The major data source for this index is primarily the United States Census Bureau.

After obtaining the relevant data, a principle components analysis is used to reduce the data into set of components. All components are added together to determine a numerical value that represents the social vulnerability for each county. Scores in the top 20% of the United States are

more vulnerable counties (red) and scores in the bottom 20% of the United States indicate the least vulnerable counties (blue).

The following map illustrates social vulnerability ratings for Kansas counties.

State of Kansas Social Vulnerability Ratings (2006 - 2010)



The following table presents the SoVi rating and national percentile for each county. In general, the higher the national percentile the higher the vulnerability.

County Social Vulnerability Ratings

County	SoVI Score (2006 - 2010)	National Percentile (2006 - 2010)
Barber	1.806982	78.97%
Barton	-0.43506	42.14%
Comanche	2.67207	86.26%
Edwards	1.339632	73.69%
Kiowa	1.379736	74.29%
Pawnee	2.249619	82.82%
Pratt	-0.03142	51.61%
Stafford	1.840015	79.45%

Source: Hazards and Vulnerability Research Institute, University of South Carolina

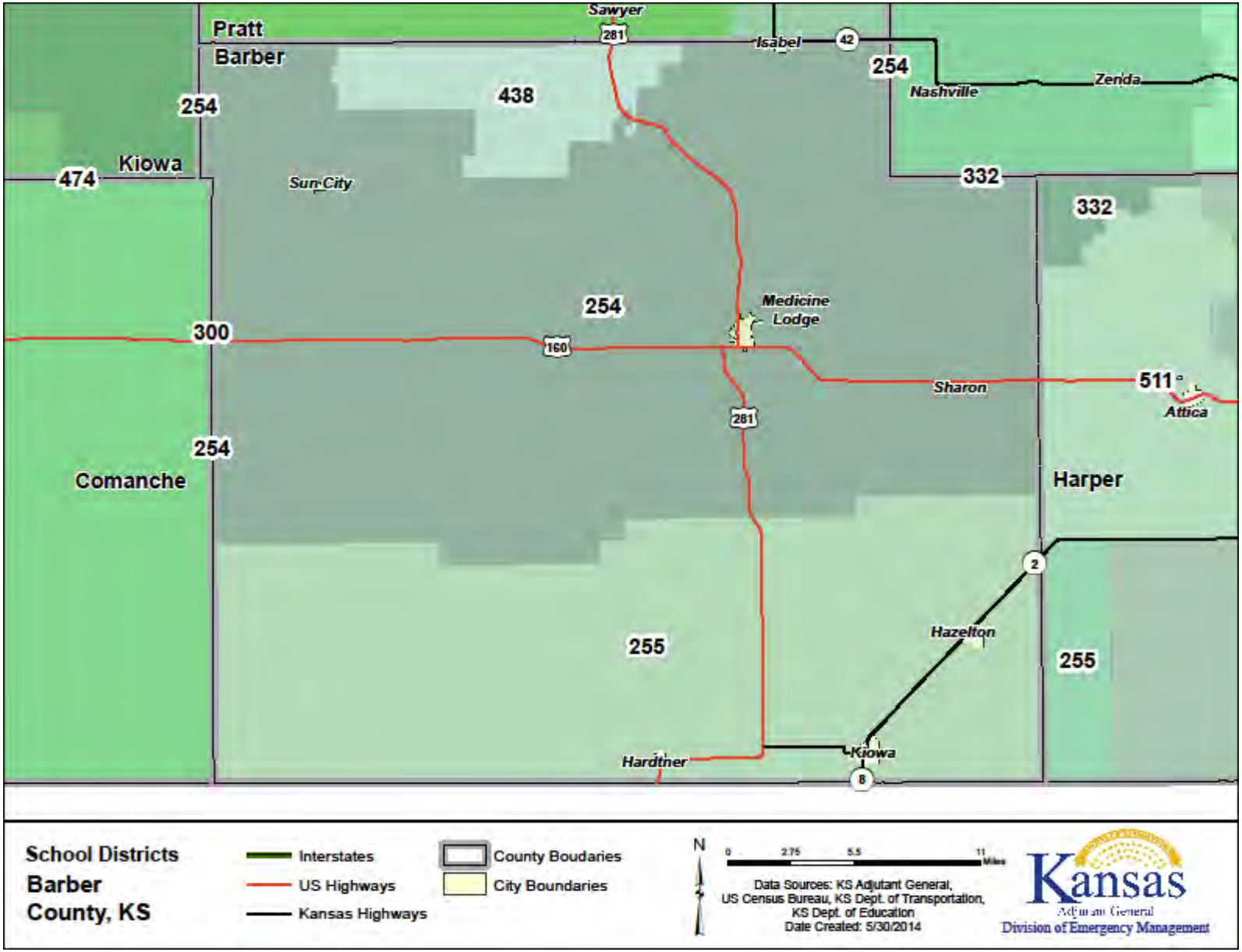
2.14 School District Information and Boundaries

The following tables present participating USD enrollment information, the number of staff and faculty, and the number of offices and schools.

Participating USD Information

School , College or University	Total Enrollment (2013-2014)	Staff and Faculty (2013-2012)	Number of Offices and Schools (2013)
Barber County			
USD #254 - Barber County North	489	47	6
USD #255 - South Barber County	269	32	6
Barton County			
USD #112 - Claflin	592	71	9
USD #355 - Ellinwood	485	41	8
USD #428 - Great Bend	3,209	301	16
USD #431 - Hosington	789	59	9
Comanche County			
USD #300 - Comanche County	364	29	7
Edwards County			
USD #347 - Kinsley / Offerle	384	33	7
USD #502 - Lewis	105	12	5
Kiowa County			
USD #422 - Kiowa County	480	41	7
USD #474 - Haviland	115	11	5
Pawnee County			
USD #495 - Fort Larned	990	105	13
USD #496 - Pawnee Heights	185	19	5
Pratt County			
USD #382 - Pratt	1,301	81	10
USD #438 - Skyline	432	38	7
Stafford County			
USD #349 - Stafford	306	27	8
USD #350 - St. John / Hudson	382	32	7
USD #351 - Macksville	282	31	6

The following maps present regional school district boundaries by county. Capability information for each participating district is presented Section 4.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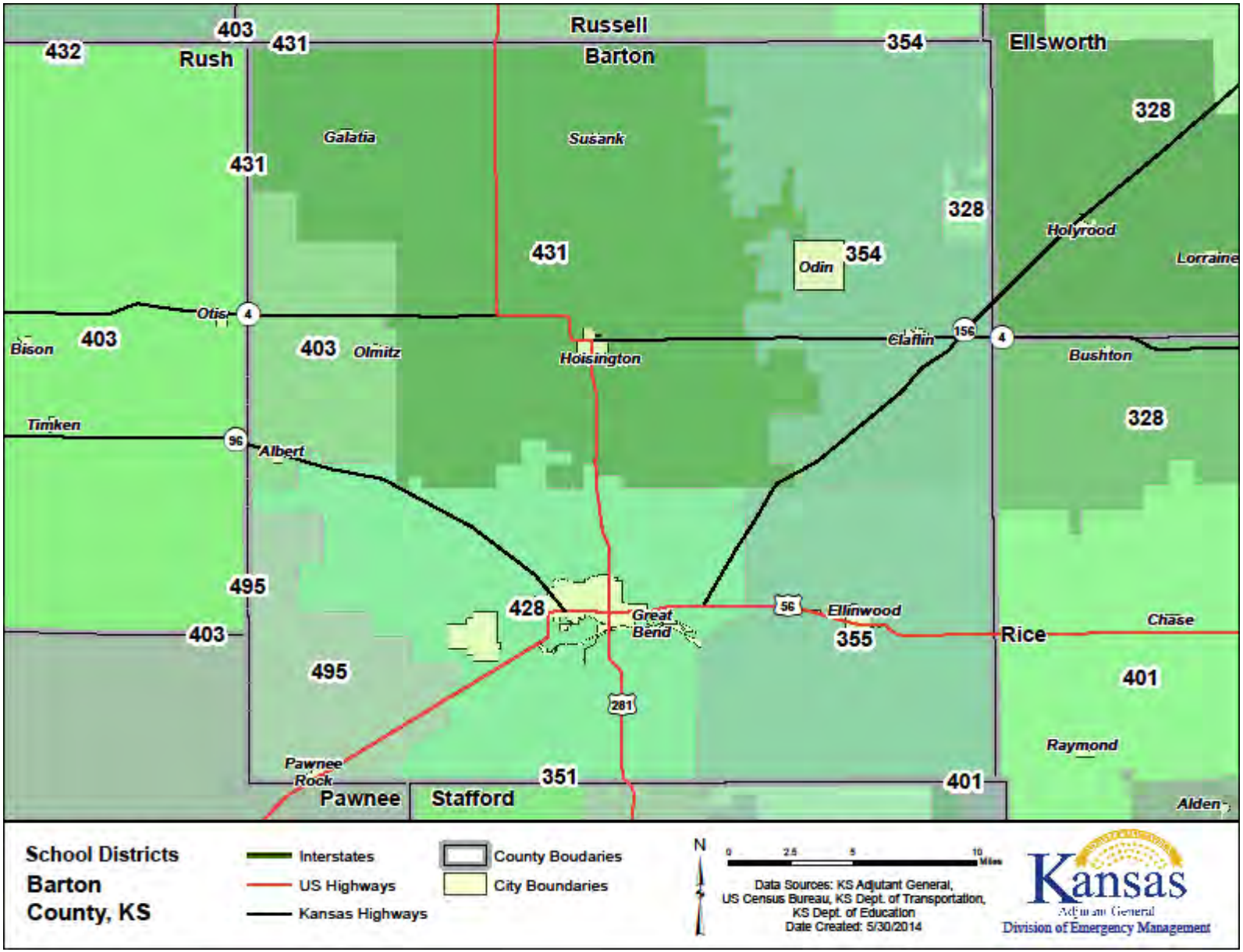
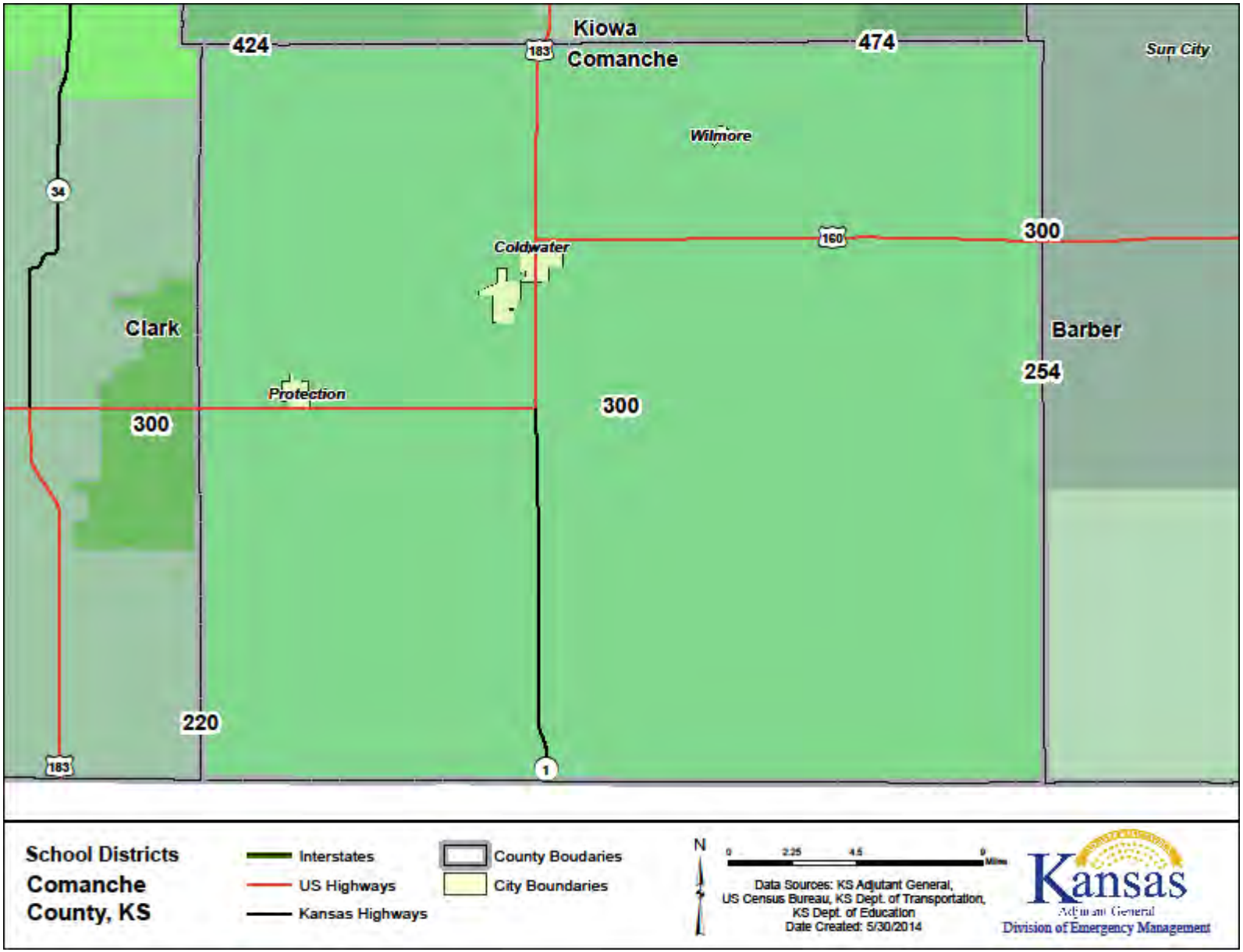
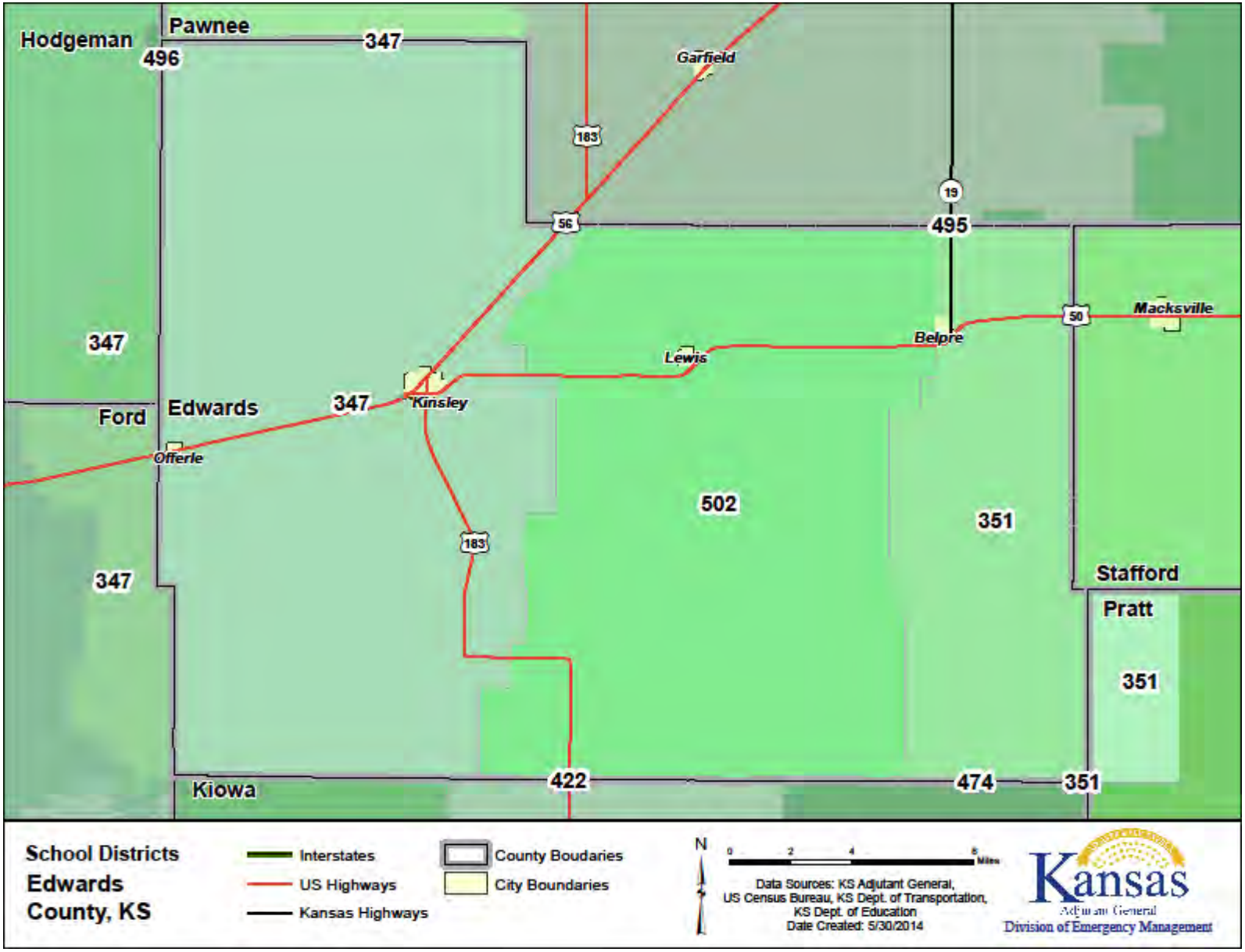
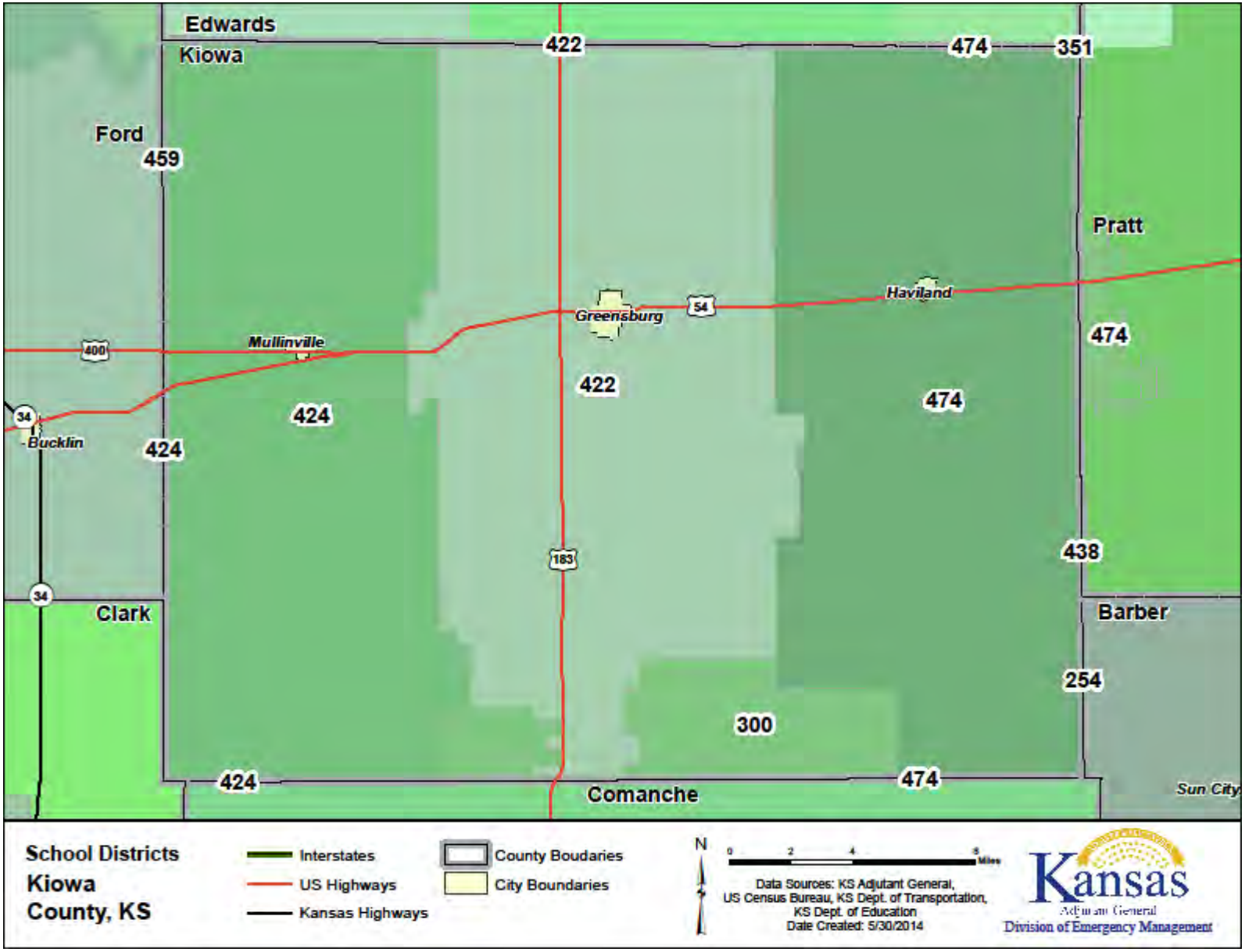
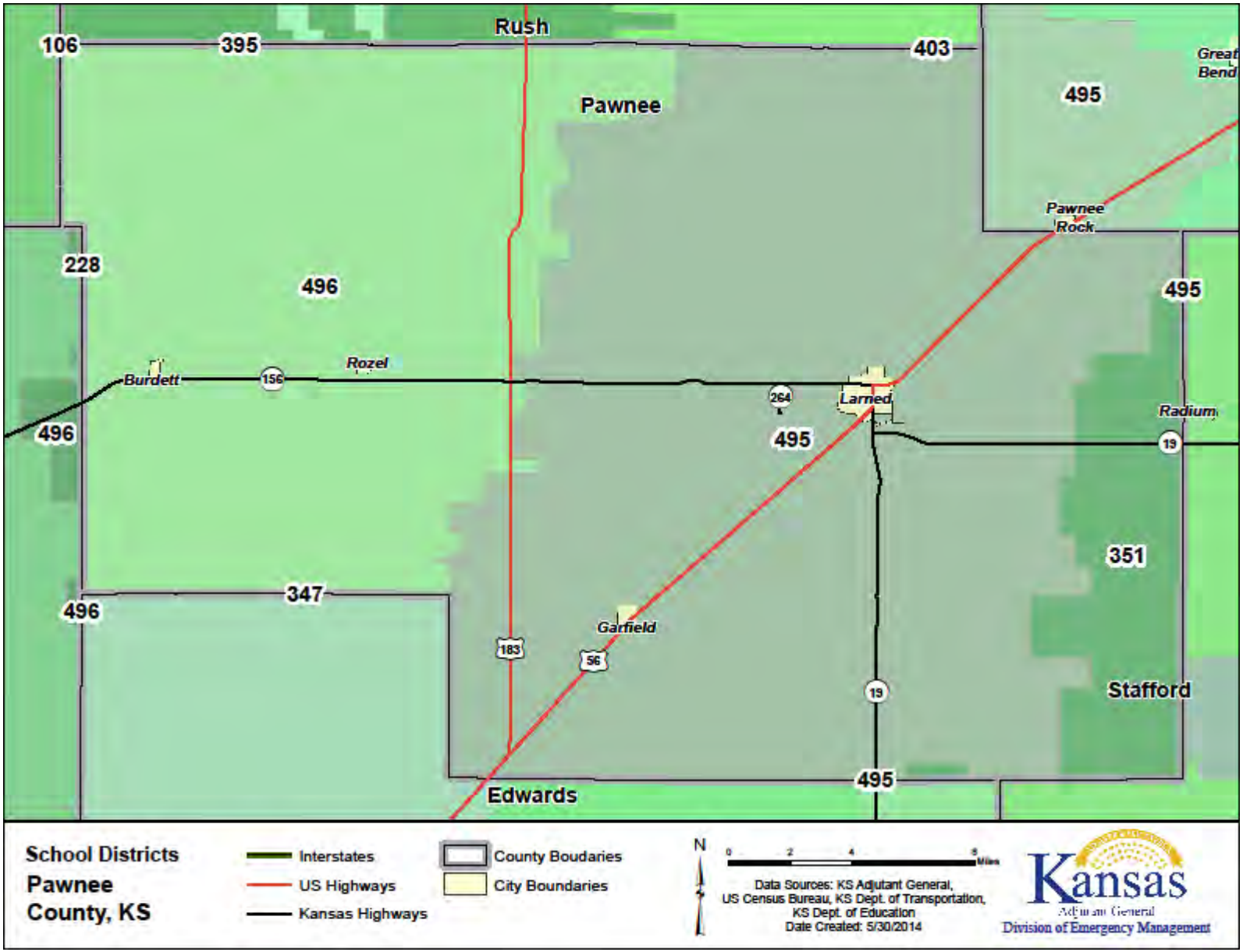
Barber
Sawyer
281
Isabel
42
254
Nashville
Zenda
438
254
Kiowa
474
Sun City
332
332
254
Medicine
Lodge
300
160
Sharon
511
Attica
281
254
Comanche
Harper
2
Hazelton
255
255
Hardtner
Kiowa
8
School Districts
Barber
County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0
2.75
5.5
11
Miles
Data Sources: KS Adjutant General,
US Census Bureau, KS Dept. of Transportation,
KS Dept. of Education
Date Created: 5/30/2014
Kansas
Adjutant General
Division of Emergency Management

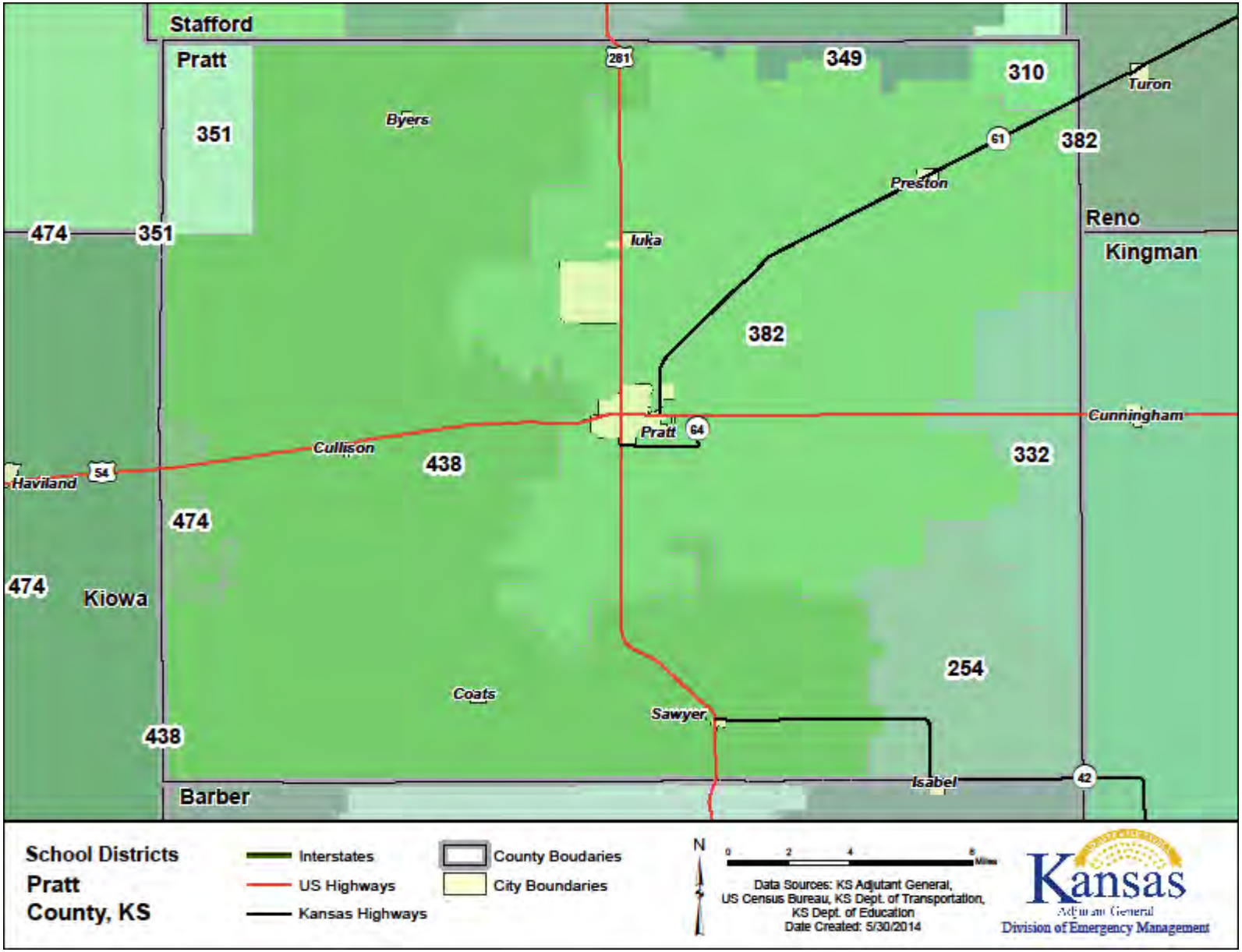

Russell
Barton
Ellsworth
Rush
Pawnee
Stafford
Rice
432
403
431
354
328
Galatia
Susank
Odin
Holyrood
Lorraine
Otis
Bison
Olmitz
Hoisington
Claflin
Bushton
Timken
Albert
495
428
Great Bend
Ellinwood
355
Chase
401
Raymond
Pawnee Rock
351
Alden
School Districts
Barton County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
Data Sources: KS Adjutant General, US Census Bureau, KS Dept. of Transportation, KS Dept. of Education
Date Created: 5/30/2014
Kansas
Adjutant General
Division of Emergency Management


Kiowa
Comanche
424
474
183
Sun City
Wilmore
34
160
300
Coldwater
Clark
Barber
254
Protection
300
300
220
183
1
School Districts
Comanche
County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0
2.25
4.5
9
Miles
Data Sources: KS Adjutant General,
US Census Bureau, KS Dept. of Transportation,
KS Dept. of Education
Date Created: 5/30/2014
Kansas
Adjutant General
Division of Emergency Management


Hodgeman
Pawnee
496
347
Garfield
183
56
19
495
347
Ford
Edwards
347
Kinsley
Lewis
Belpre
50
Macksville
Offerle
502
351
183
347
Stafford
Pratt
351
Kiowa
422
474
351
School Districts
Edwards
County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0
2
4
8
Miles
Data Sources: KS Adjutant General,
US Census Bureau, KS Dept. of Transportation,
KS Dept. of Education
Date Created: 5/30/2014
Kansas
Adjutant General
Division of Emergency Management


Edwards
Kiowa
422
474
351
Ford
459
Pratt
Haviland
Greensburg
54
Mullinville
400
474
422
474
34
Bucklin
424
424
183
438
34
Clark
Barber
254
300
424
474
Comanche
Sun City
School Districts
Kiowa
County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0 2 4 8 Miles
Data Sources: KS Adjutant General,
US Census Bureau, KS Dept. of Transportation,
KS Dept. of Education
Date Created: 5/30/2014
Kansas
Adjutant General
Division of Emergency Management


Rush
106
395
403
Great Bend
495
Pawnee
Pawnee Rock
228
496
495
Rozel
Burdett
156
264
Larned
Radium
496
495
19
351
347
496
Garfield
183
56
19
Stafford
495
Edwards
School Districts
Pawnee County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0 2 4 8 Miles
Data Sources: KS Adjutant General, US Census Bureau, KS Dept. of Transportation, KS Dept. of Education
Date Created: 5/30/2014
Kansas
Adjutant General
Division of Emergency Management


Stafford
Pratt
Byers
349
310
Turon
351
281
61
382
Preston
474
351
Iuka
Reno
Kingman
382
Cunningham
Pratt
64
Cullison
438
332
Haviland
54
474
474
Kiowa
254
Coats
Sawyer
438
Isabel
42
Barber
School Districts
Pratt
County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0
2
4
8
Miles
Data Sources: KS Adjutant General,
US Census Bureau, KS Dept. of Transportation,
KS Dept. of Education
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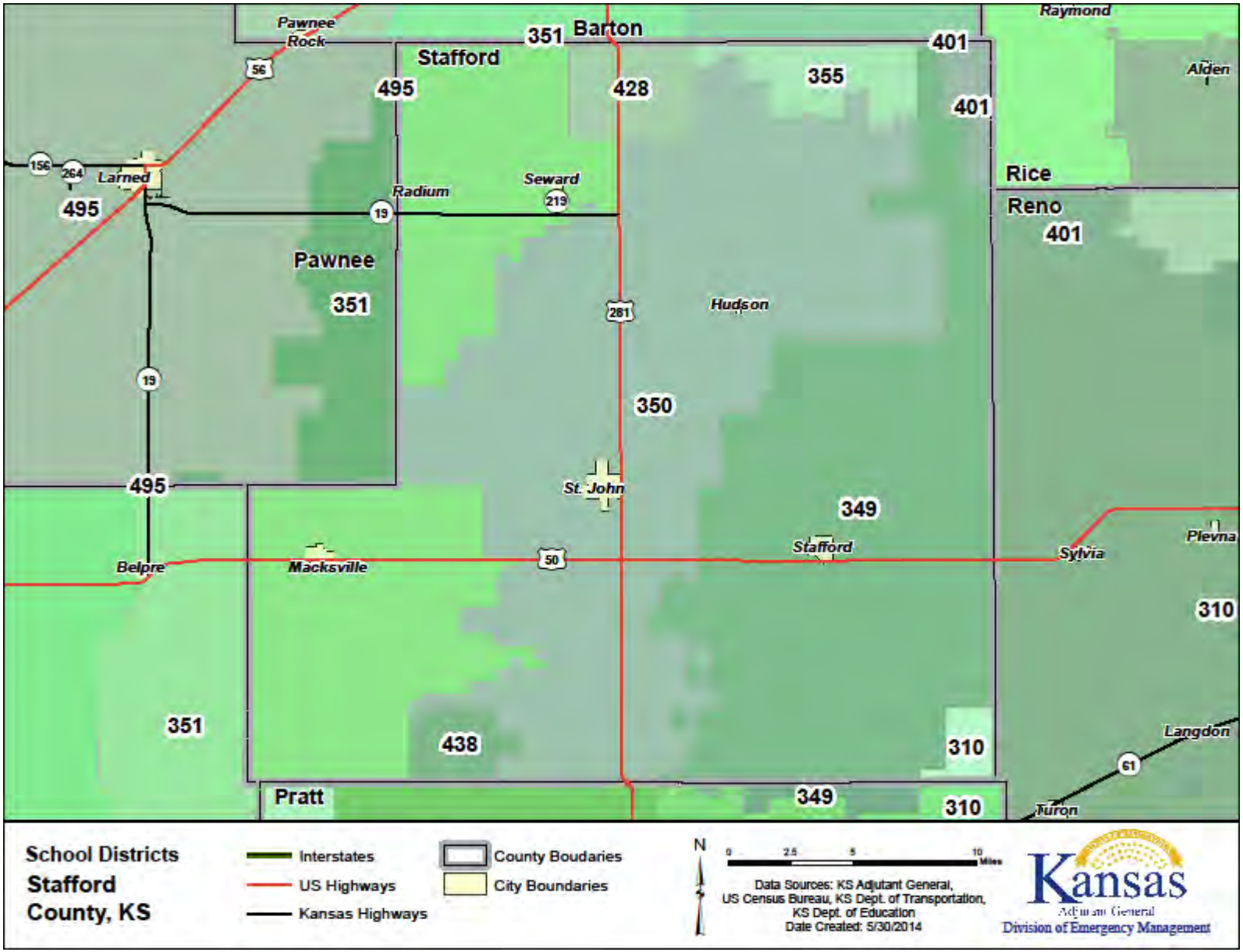
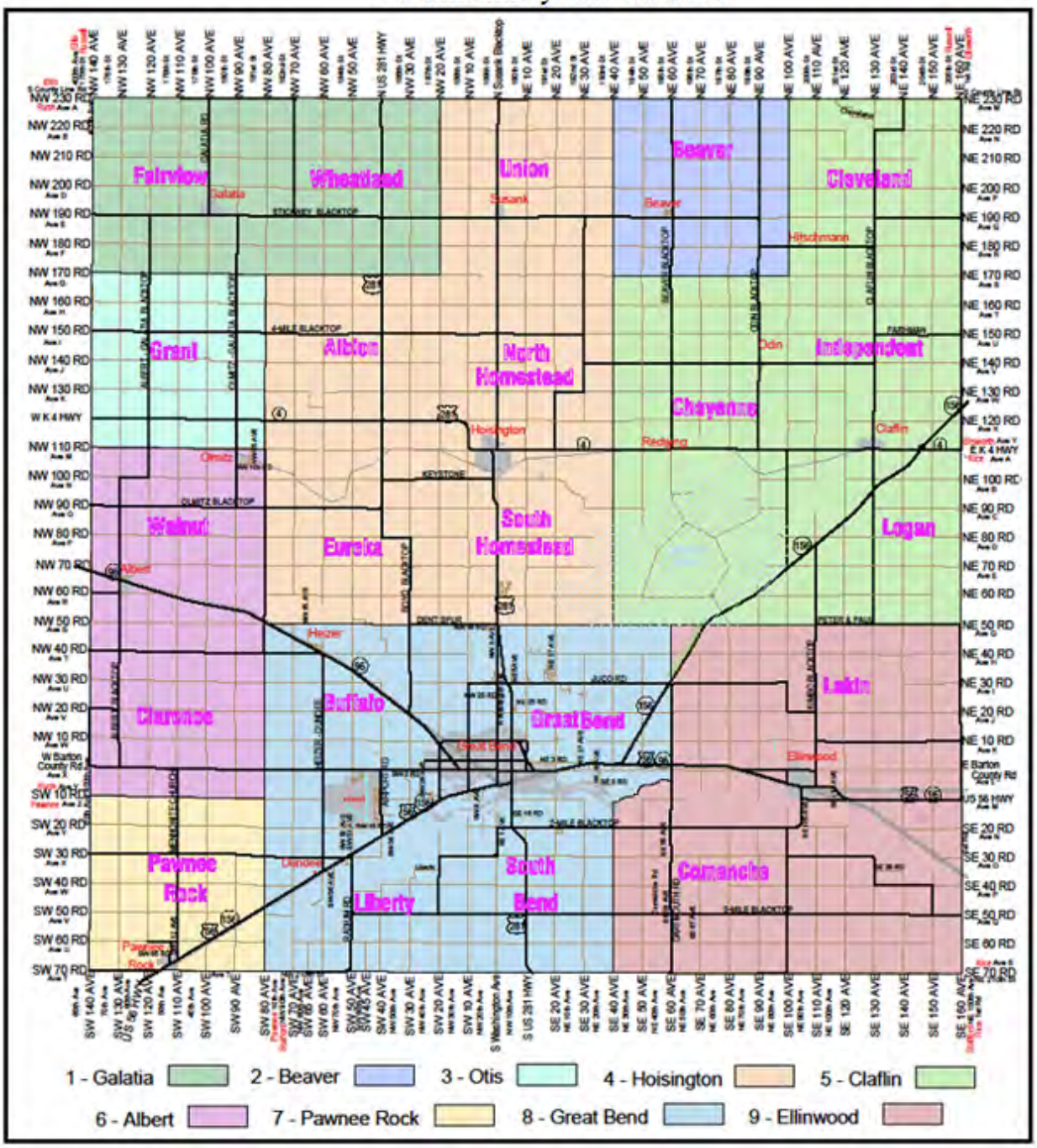
Kansas
Adjutant General
Division of Emergency Management

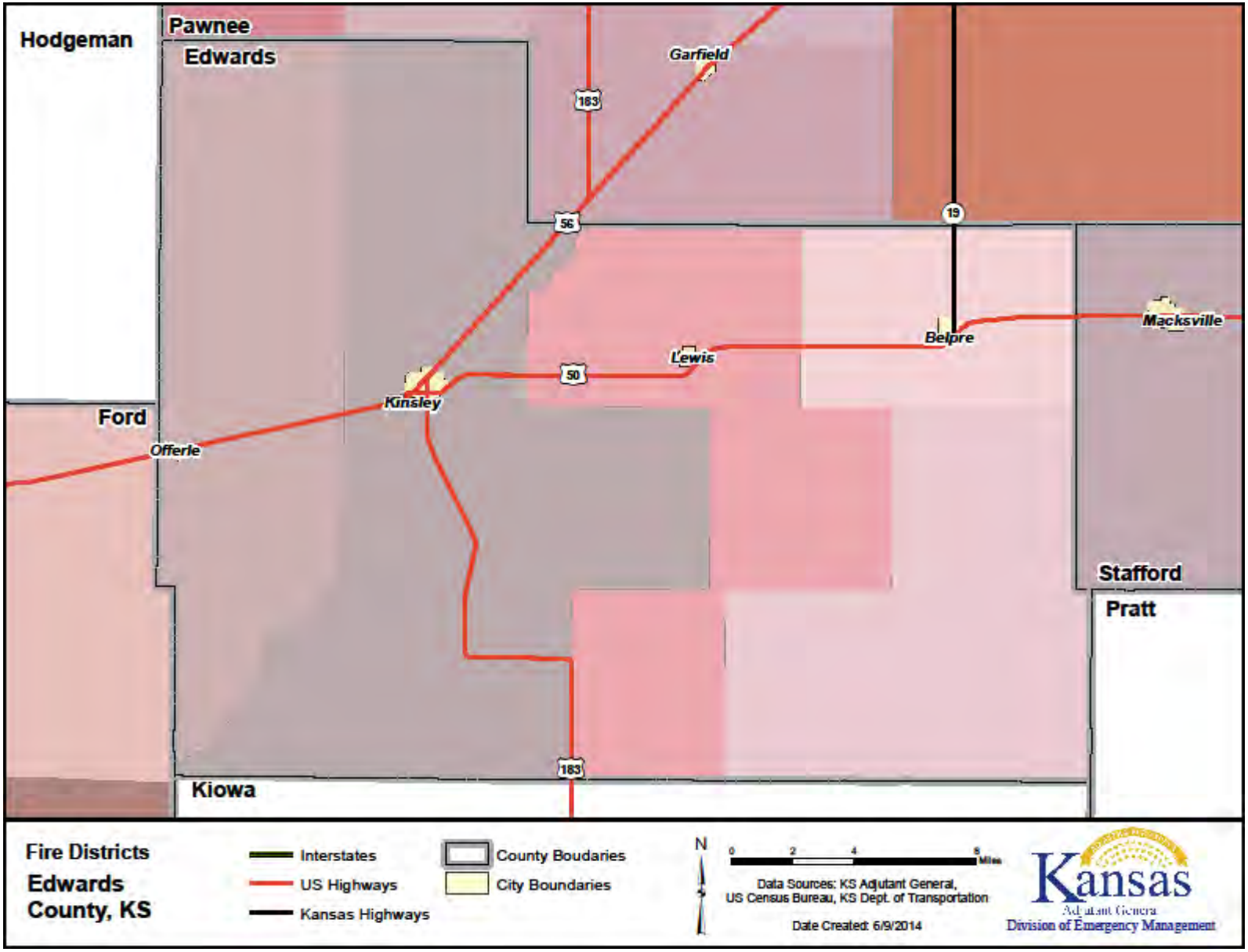

Pawnee Rock
Barton
Stafford
Raymond
Alden
Rice
Reno
Larned
Radium
Seward
Pawnee
Hudson
St. John
Stafford
Sylvia
Plevna
Belpre
Macksville
Langdon
Turon
Pratt
351
401
495
428
355
401
495
401
351
350
495
349
310
351
438
310
349
310
School Districts
Stafford
County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0 2.5 5 10 Miles
Data Sources: KS Adjutant General,
US Census Bureau, KS Dept. of Transportation,
KS Dept. of Education
Date Created: 5/30/2014
Kansas
Adjutant General
Division of Emergency Management

2.15 FIRE DISTRICT BOUNDARIES

The following maps present regional fire district boundaries by county. Note that not all participating counties and jurisdictions had this information available for use

Barton County Fire Districts




Hodgeman
Pawnee
Edwards
Garfield
183
56
19
Macksville
Belpre
Lewis
50
Kinsley
Ford
Offerle
Stafford
Pratt
183
Kiowa
Fire Districts
Edwards County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
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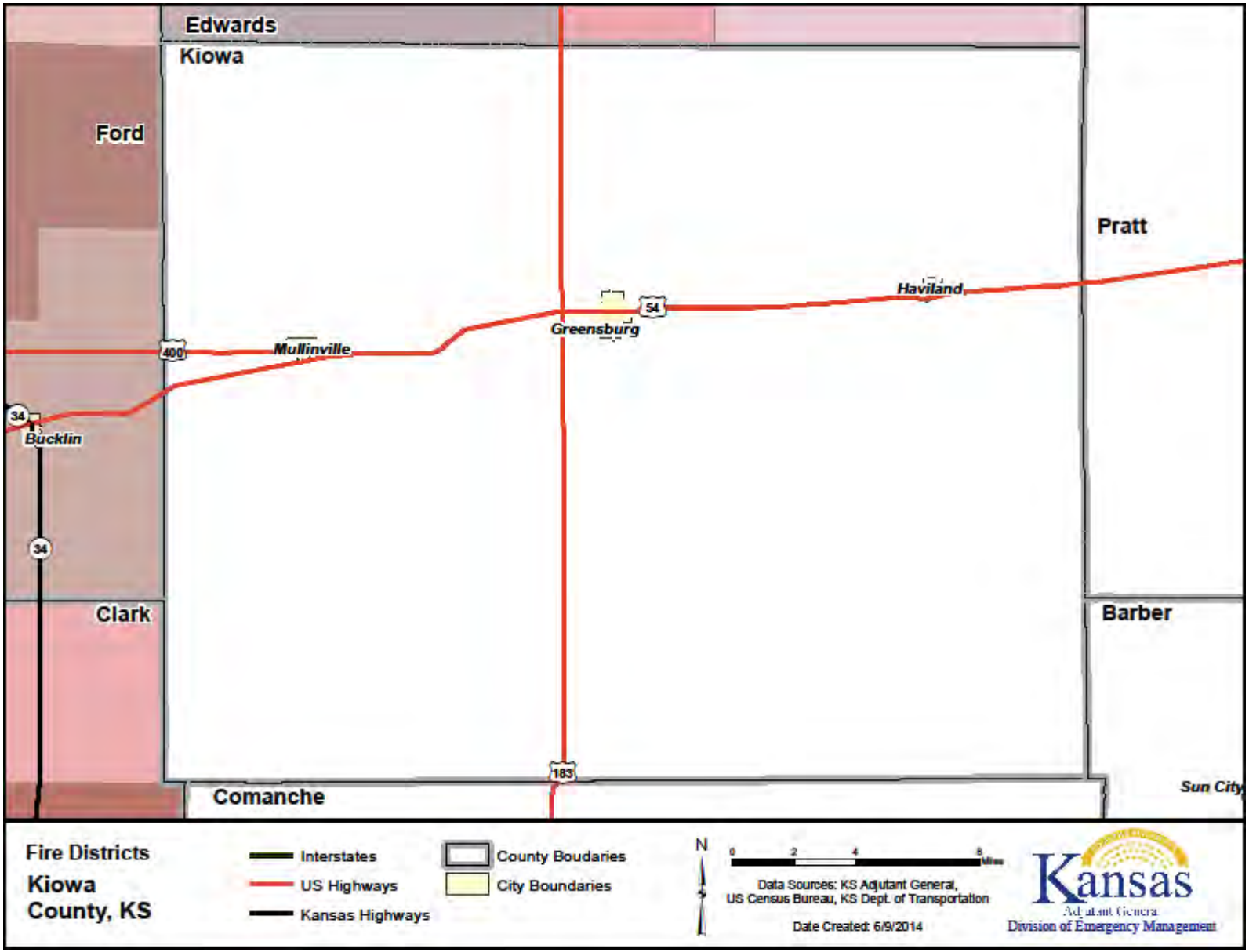
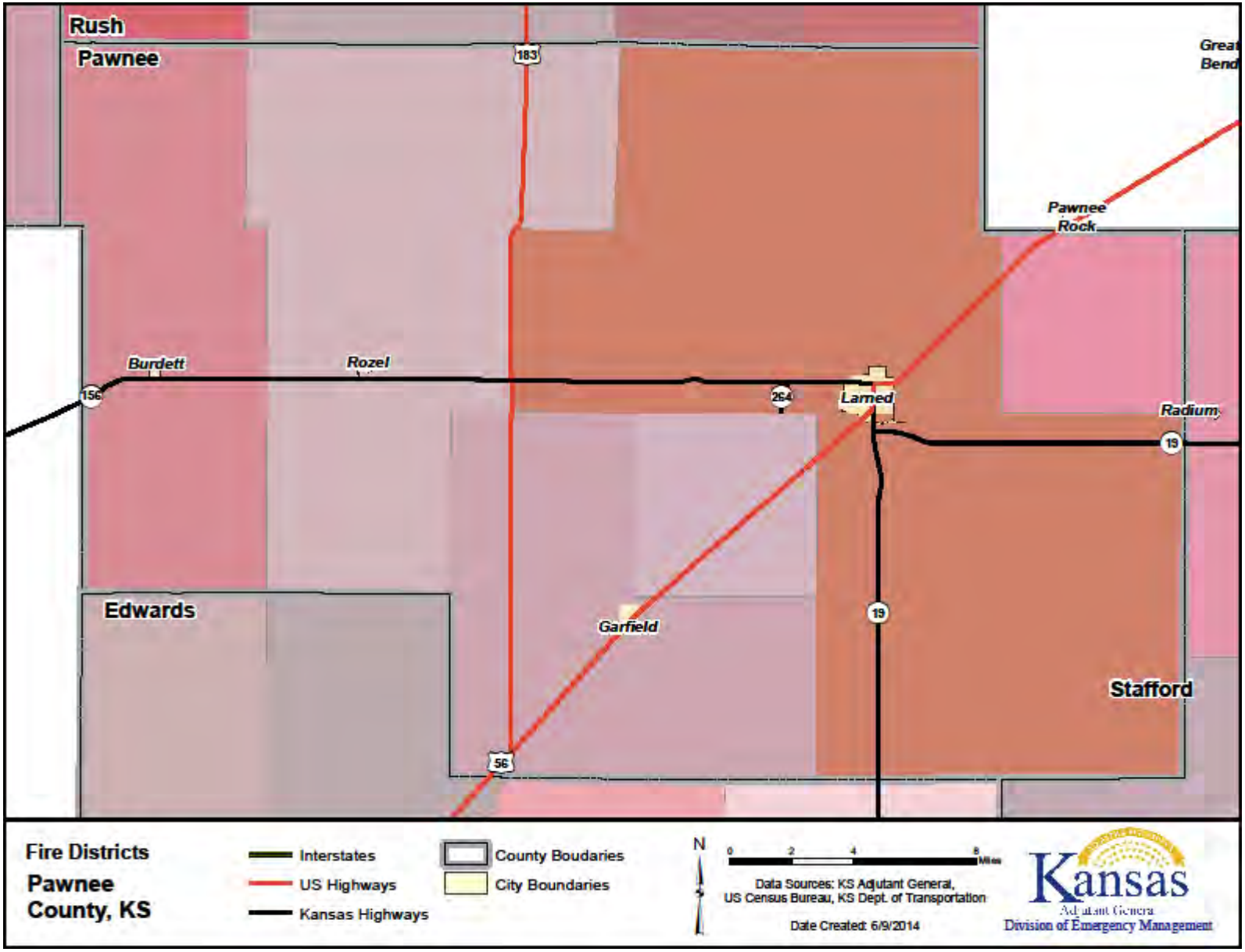
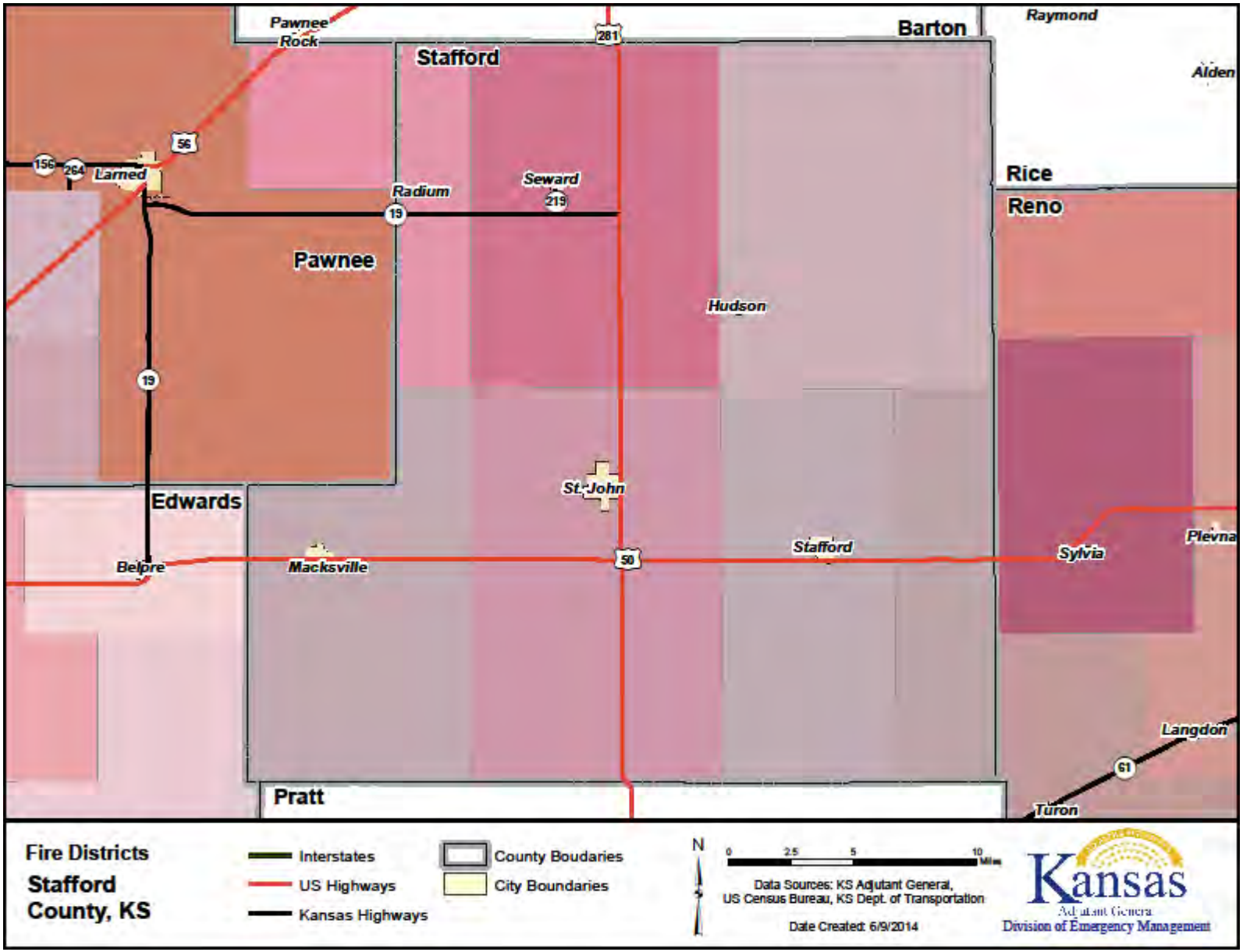
0 2 4 8 Miles
Data Sources: KS Adjutant General, US Census Bureau, KS Dept. of Transportation
Date Created: 6/9/2014
Kansas
Adjutant General
Division of Emergency Management


Edwards
Kiowa
Ford
Pratt
Haviland
54
Greensburg
400
Mullinville
34
Bucklin
34
Clark
Barber
183
Comanche
Sun City
Fire Districts
Kiowa
County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0
2
4
8
Miles
Data Sources: KS Adjutant General,
US Census Bureau, KS Dept. of Transportation
Date Created: 6/9/2014
Kansas
Adjutant General
Division of Emergency Management


Rush
Pawnee
183
Great Bend
Pawnee Rock
Burdett
Rozel
156
264
Larned
Radium
19
Edwards
Garfield
19
Stafford
56
Fire Districts
Pawnee County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0 2 4 8 Miles
Data Sources: KS Adjutant General, US Census Bureau, KS Dept. of Transportation
Date Created: 6/9/2014
Kansas
Adjutant General
Division of Emergency Management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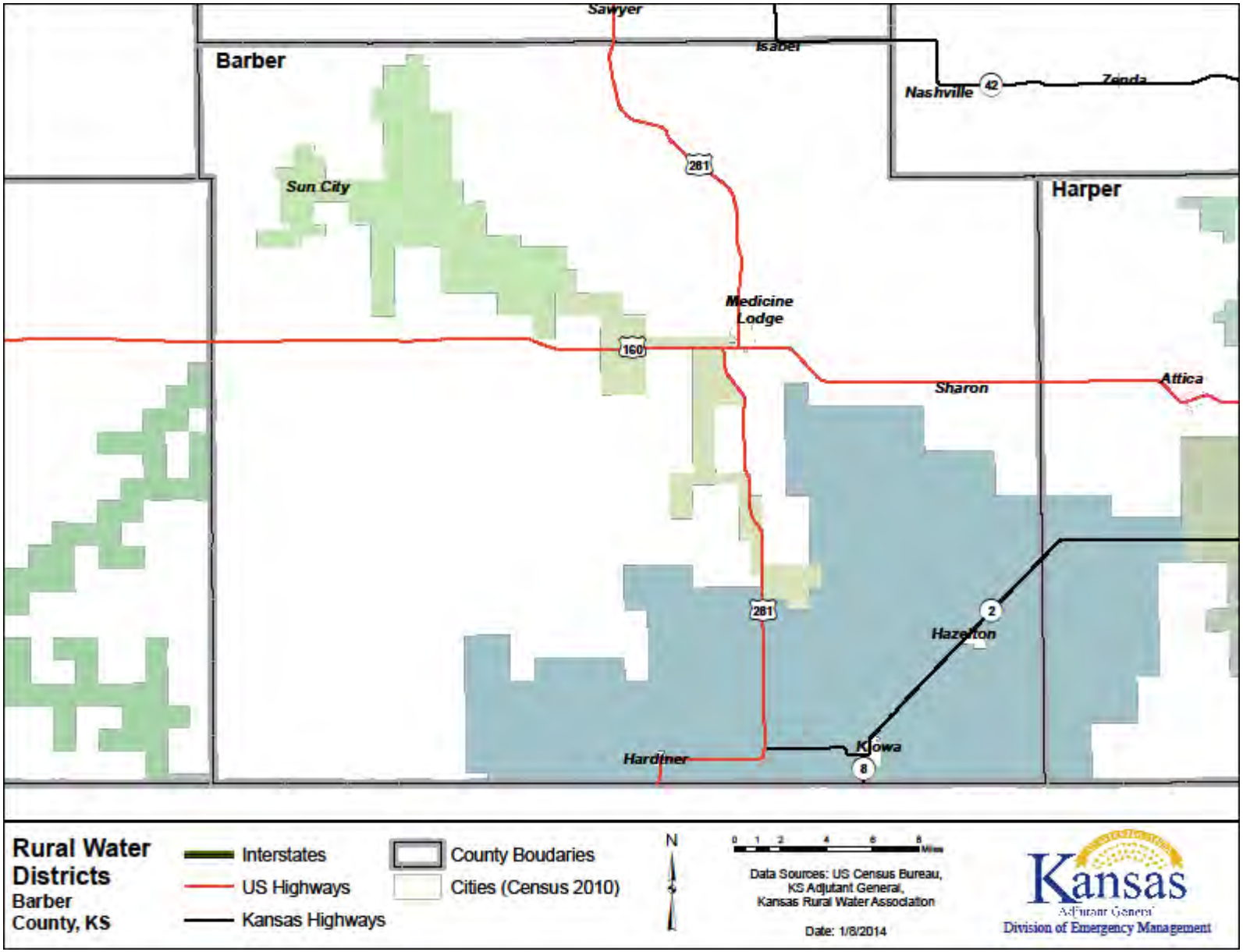
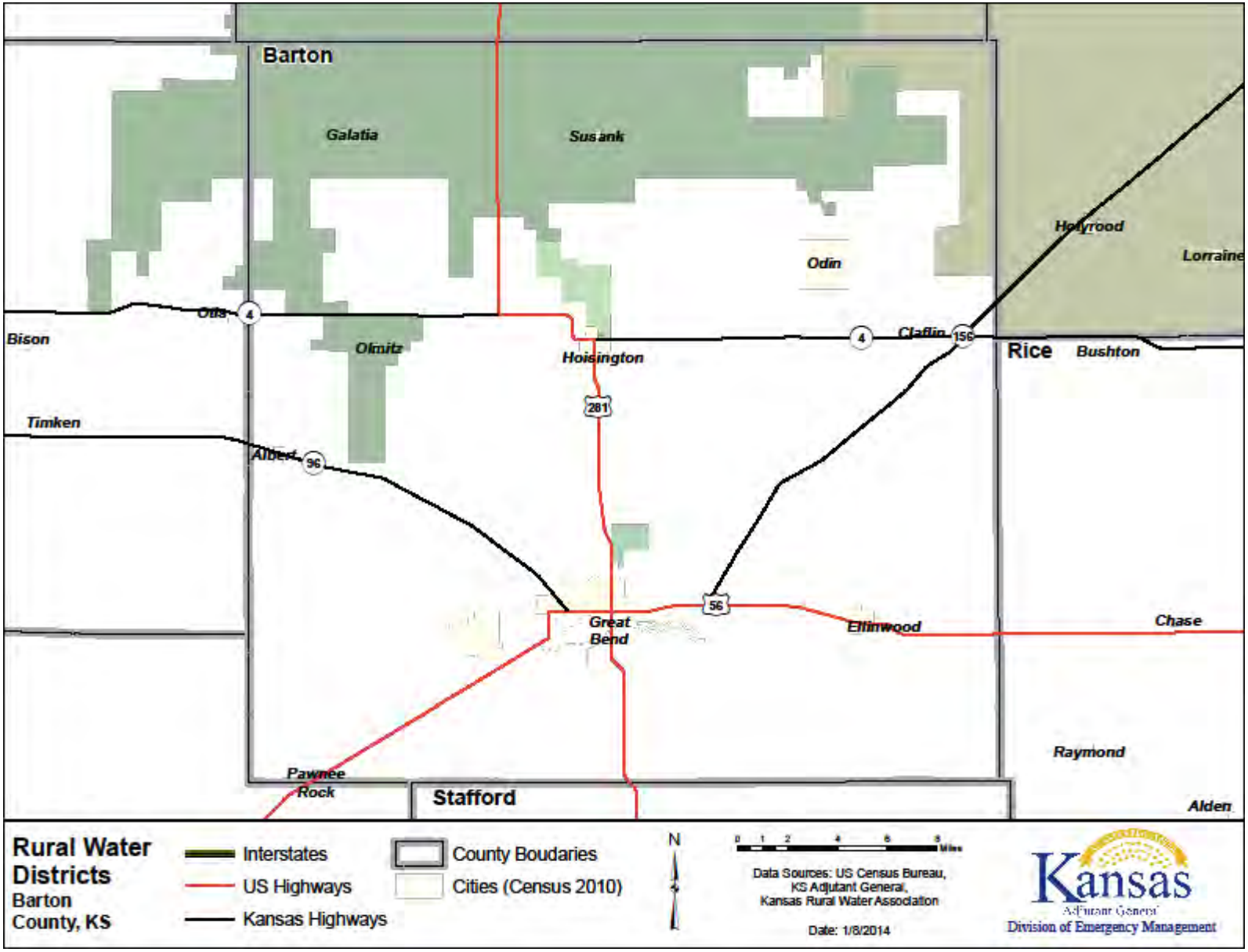
Stafford
Barton
Raymond
Alden
Rice
Reno
Larned
Radium
Seward
Pawnee
Hudson
St. John
Edwards
Belpre
Macksville
Stafford
Sylvia
Plevna
Langdon
Turon
Pratt
Fire Districts
Stafford County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
City Boundaries
N
0 2.5 5 10 Miles
Data Sources: KS Adjutant General, US Census Bureau, KS Dept. of Transportation
Date Created: 6/9/2014
Kansas
Adjutant General
Division of Emergency Management

2.16 WATER DISTRICT BOUNDARIES

The following maps present regional water district boundaries by county.


Sawyer
Isabel
Barber
Nashville
42
Zenda
281
Sun City
Harper
Medicine Lodge
160
Sharon
Attica
281
2
Hazelton
Kiowa
Hardtner
8
Rural Water Districts
Barber County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
0 1 2 4 6 8 Miles
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management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Galatia
Susank
Odin
Hollyrood
Lorraine
Otis
4
Bison
Olmitz
Hoisington
4
Claflin
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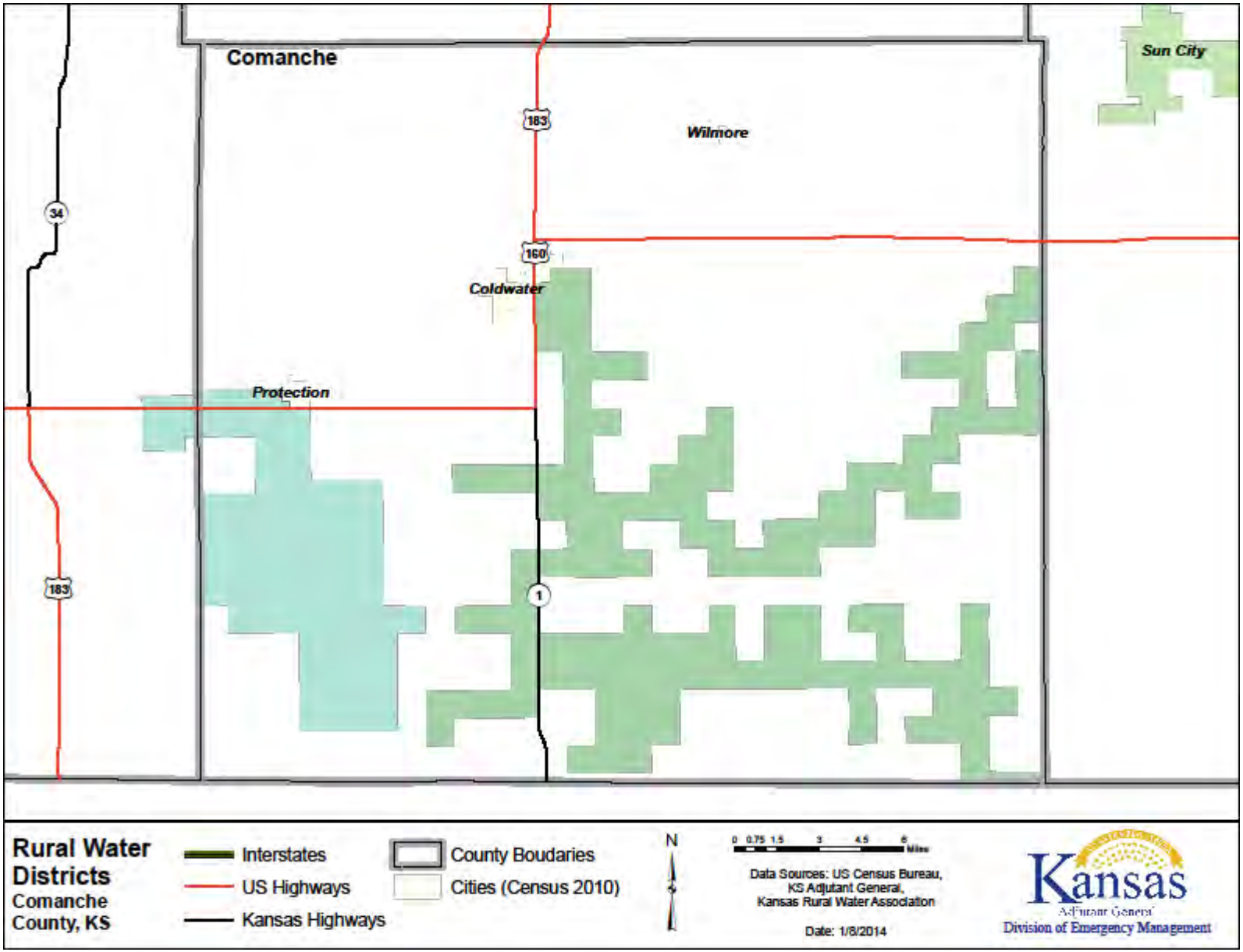
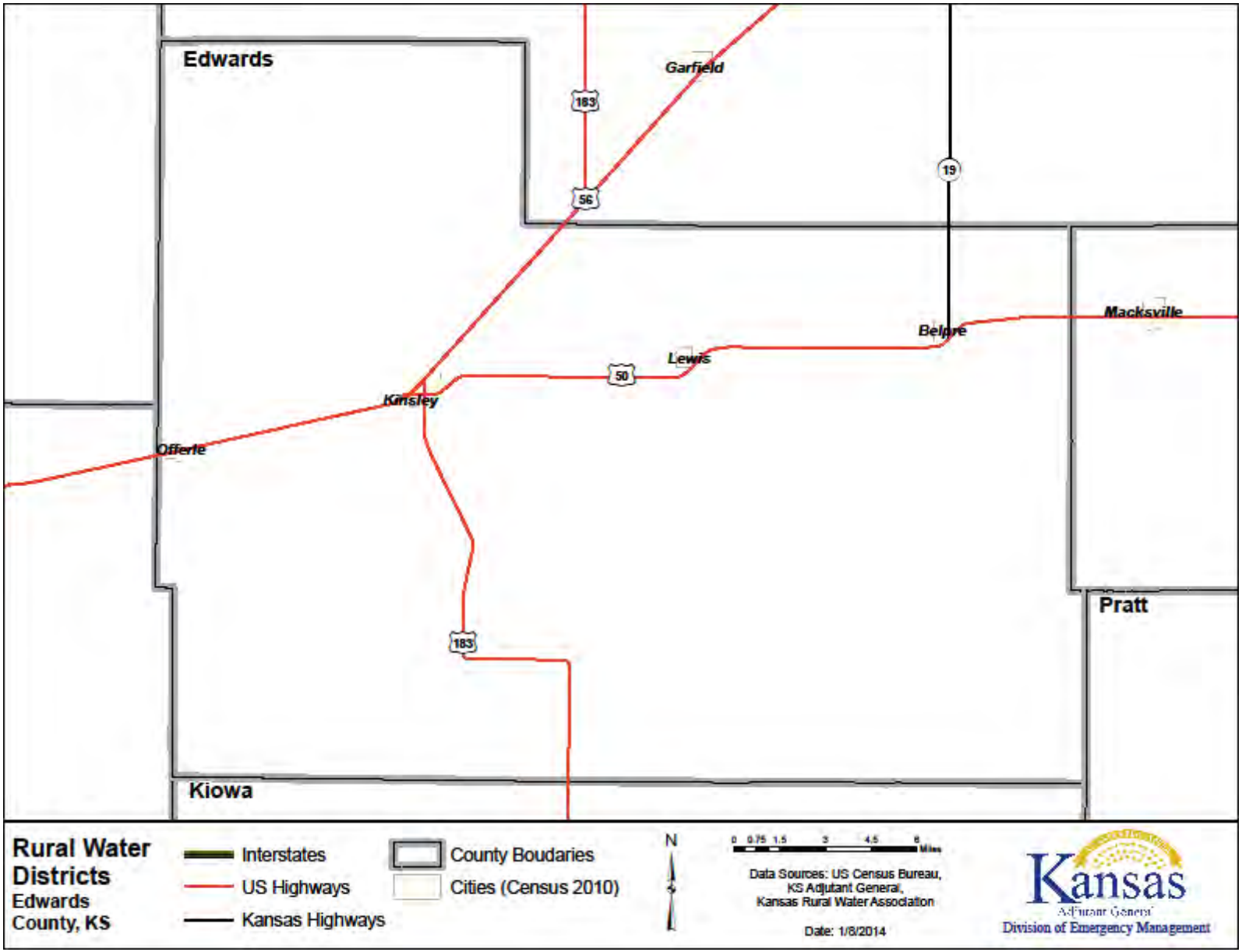
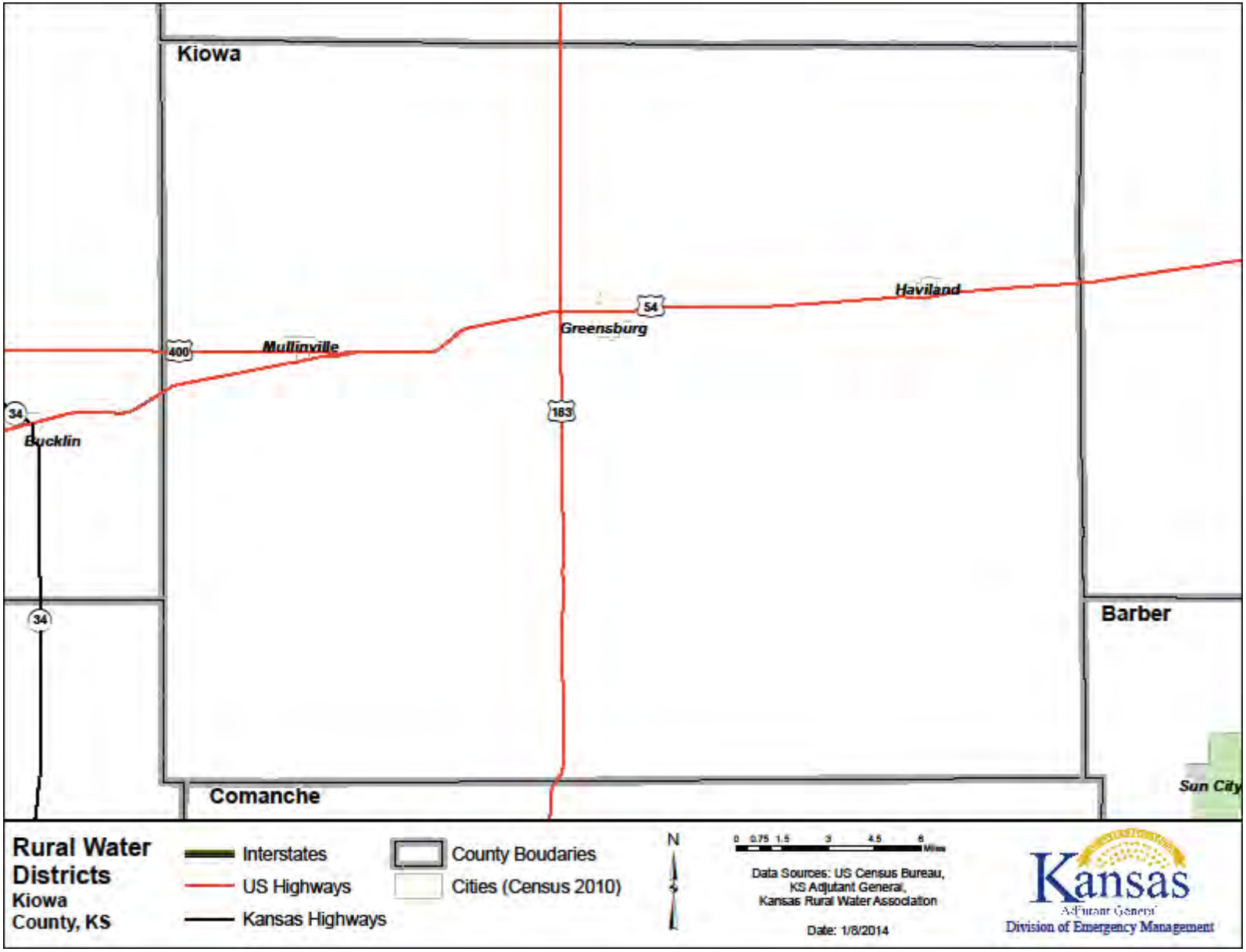
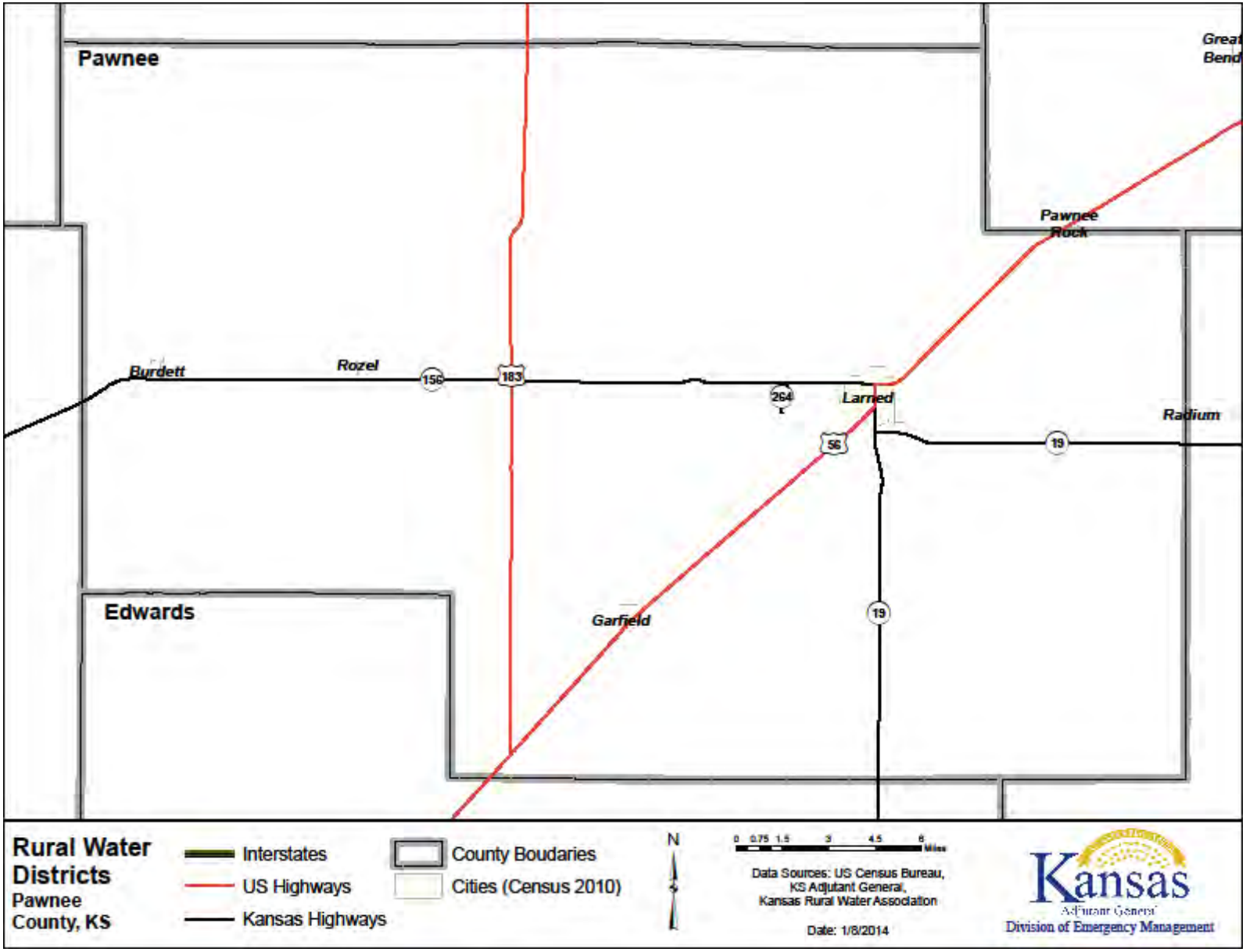
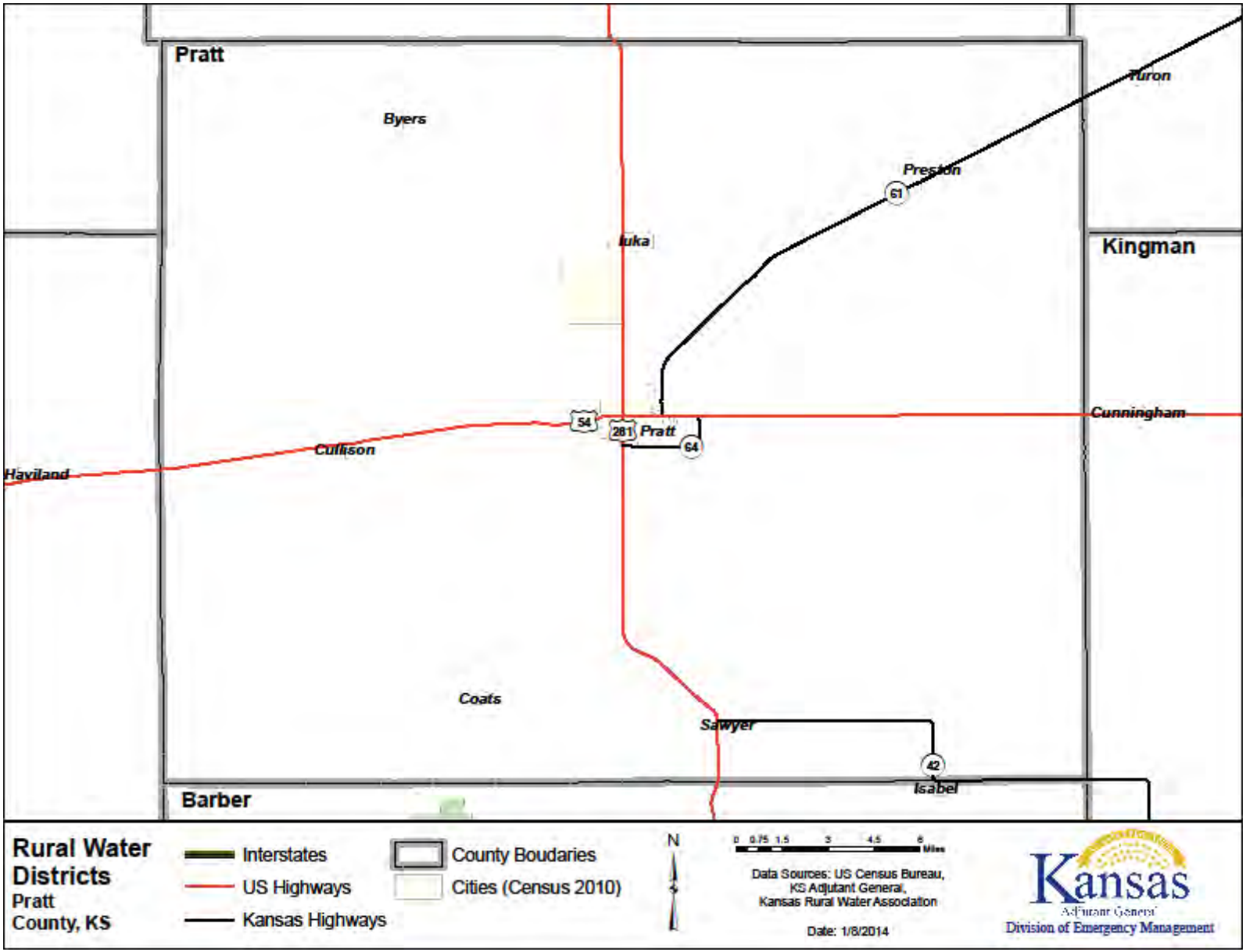
Rice
Bushton
281
Timken
Albert
96
56
Great Bend
Ellinwood
Chase
Raymond
Pawnee Rock
Stafford
Alden
Rural Water Districts
Barton County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management

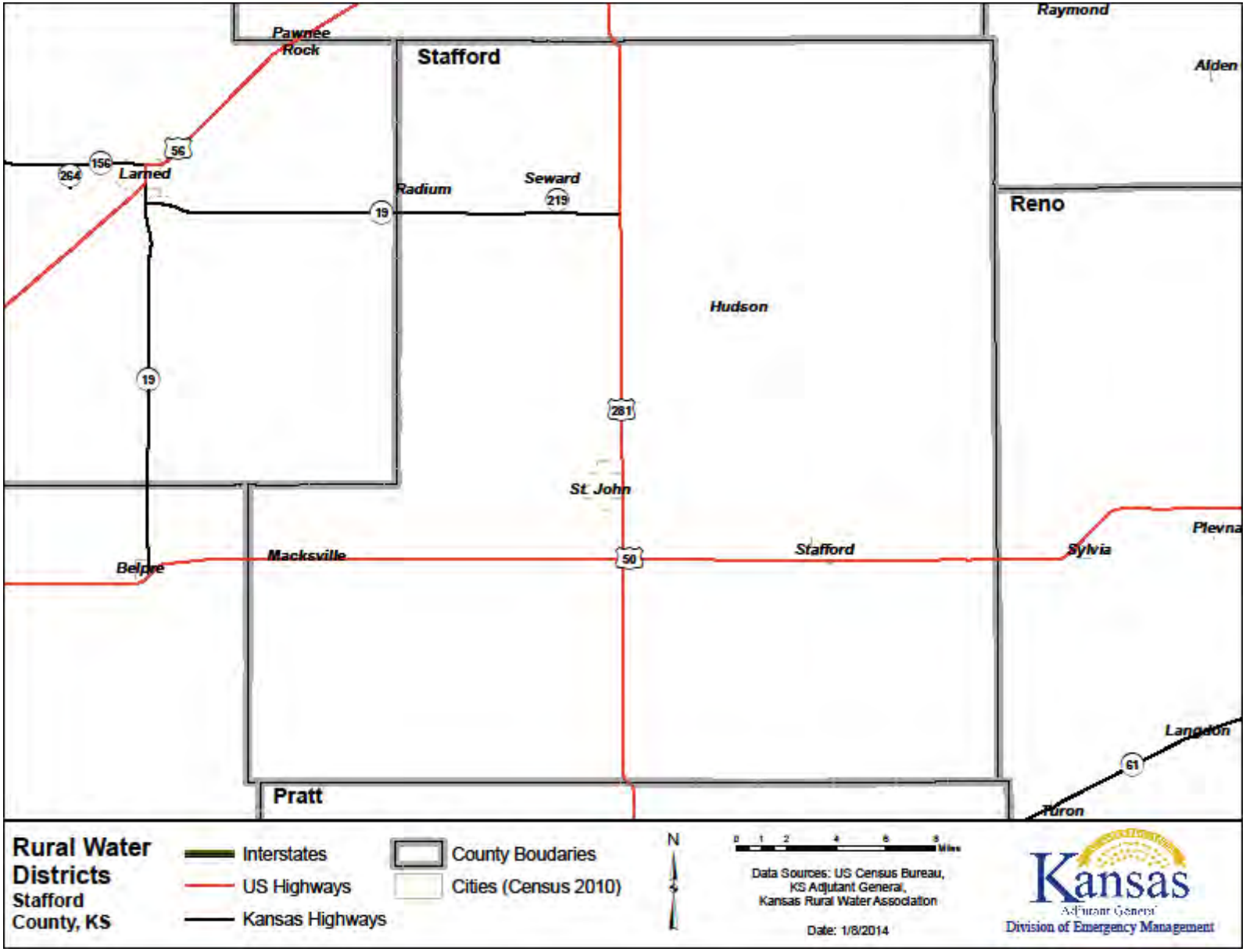

Comanche
Sun City
Wilmore
183
34
160
Coldwater
Protection
183
1
Rural Water Districts
Comanche County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
0 0.75 1.5 3 4.5 6 Miles
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management


Edwards
Garfield
183
56
19
Macksville
Belpre
Lewis
50
Kinsley
Offerle
Pratt
183
Kiowa
Rural Water Districts
Edwards County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
0 0.75 1.5 3 4.5 6 Miles
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management


Kiowa
Haviland
54
Greensburg
400
Mullinville
34
183
Bucklin
34
Barber
Comanche
Sun City
Rural Water Districts
Kiowa County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
0 0.75 1.5 3 4.5 6 Miles
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management


Pawnee
Great Bend
Pawnee Rock
Burdett
Rozel
156
183
264
Larned
56
19
Radium
Edwards
Garfield
19
Rural Water Districts
Pawnee County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
0 0.75 1.5 3 4.5 6 Miles
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management


Pratt
Byers
Turon
Preston
61
Iuka
Kingman
Cunningham
54
281
Pratt
64
Cullison
Haviland
Coats
Sawyer
42
Isabel
Barber
Rural Water Districts
Pratt County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
0 0.75 1.5 3 4.5 6 Miles
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management


Pawnee Rock
Stafford
Raymond
Alden
56
156
264
Larned
Radium
Seward
219
19
Reno
Hudson
19
281
St. John
Plevna
Macksville
50
Stafford
Sylvia
Belpre
Langdon
61
Pratt
Huron
Rural Water Districts
Stafford County, KS
Interstates
US Highways
Kansas Highways
County Boudaries
Cities (Census 2010)
N
Miles
Data Sources: US Census Bureau, KS Adjutant General, Kansas Rural Water Association
Date: 1/8/2014
Kansas
Adjutant General
Division of Emergency Management

2.17 REGIONAL THREATENED AND ENDANGERED SPECIES

The Endangered Species Act (ESA) established a Federal program to conserve, protect, and restore threatened or endangered plants and animals, as well as their habitats. ESA specifically charges Federal agencies with the responsibility of using their authority to conserve threatened or endangered species. Jurisdictions using funding from the Federal government cannot authorize any actions that jeopardize the existence of an endangered or threatened species, or result in the destruction of habitats for these species. The following provide definitions for endangered and threatened species:

- **Endangered species:** any species of wildlife whose continued existence as a viable component of the state's wild fauna is determined to be in jeopardy. That term shall also include any species of wildlife determined to be an endangered species pursuant to Pub. L. No. 93-205 (December 28, 1973), the Endangered Species Act of 1973, and amendments thereto

- **Threatened species:** any species of wildlife which appears likely, within the foreseeable future, to become an endangered species. That term shall also include any species of wildlife determined to be a threatened species pursuant to Pub. L. No. 93-205 (December 28, 1973), the Endangered Species Act of 1973, and amendments thereto.

The following table is a list of the endangered or threatened species for the region.

- Whooping Crane (Grus Americana
- Lesser Prarie Chicken (Tympanuchus pallidicinctus)
- Arkansas Darter (Eteostama cragini)
- Least Tern (Sterna antillarum)
- Piping Plover (Charadrius melodus)
- Arkansas River Shiner (Notropis girardi)