

Water Rights and Your Community

2009 REAP Regional Water Conference

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KANSAS
DEPARTMENT OF
AGRICULTURE

Division of Water Resources

Water Agencies and Coordination

Water and natural resources agencies

- Kansas Dept of Agriculture with DWR**
- Kansas Water Office**
- Kansas Dept of Health and Environment**
- State Conservation Commission**
- Kansas Dept. of Wildlife and Parks**
- Others (GMD's and KGS)**

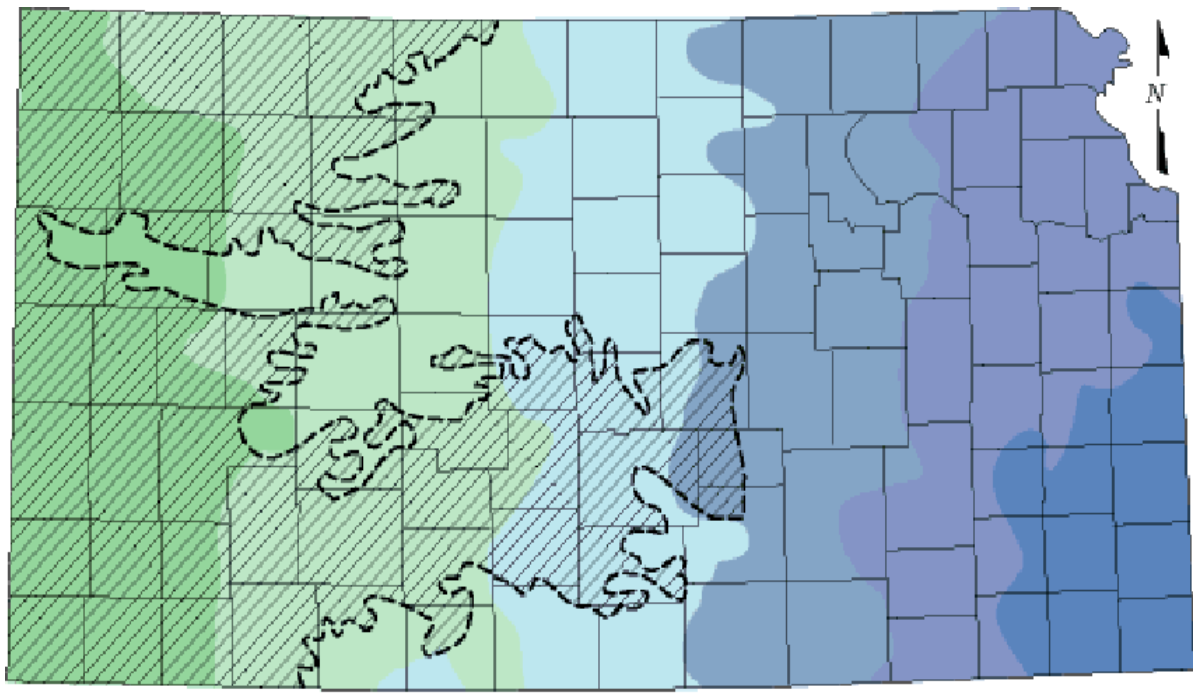
Kansas Water Authority/ Water Planning Process

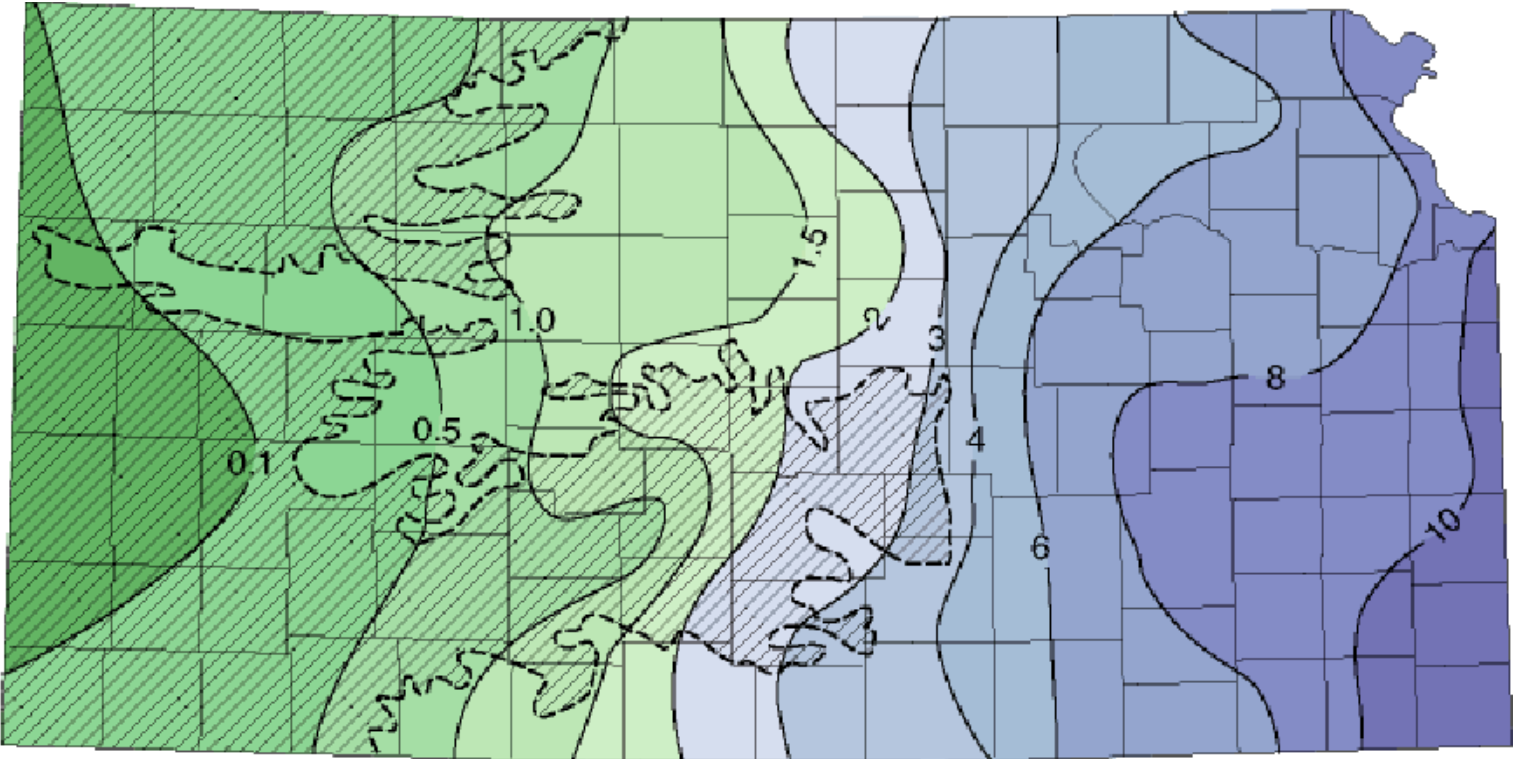
DWR Programs

- Water Structures
 - Dam permitting and Dam safety, Levees and Stream obstructions permitting, floodplain regulation
- Interstate Water Issues
 - Republican River, Arkansas River, Missouri River
- Water Appropriation

Limited Water in Kansas

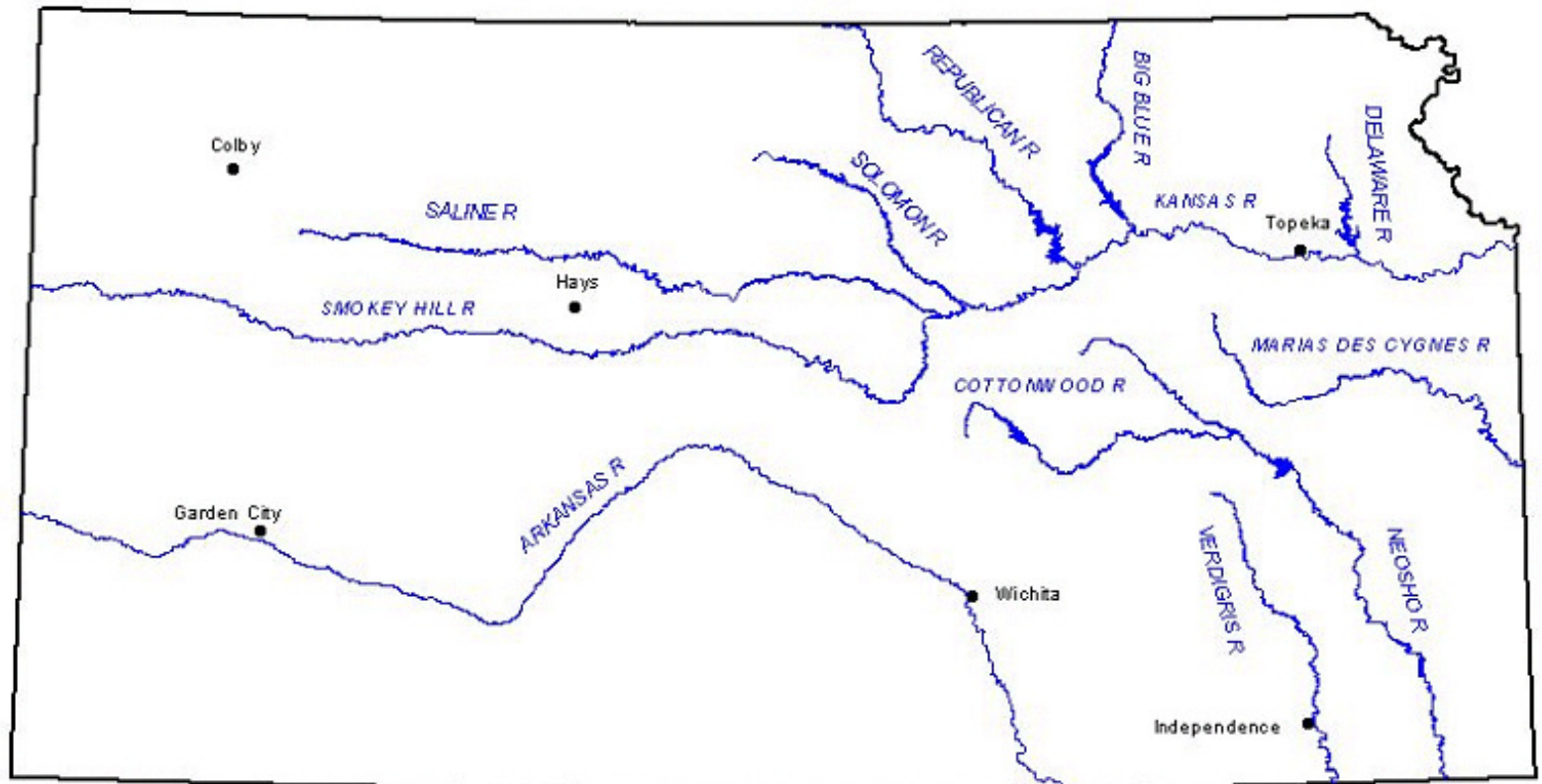
- Kansas: variability in hydrologic conditions across the state
 - Average precipitation ranges from 16 inches in western Kansas to 40 inches in eastern Kansas
 - Droughts can be persistent
- Western Kansas
 - Primarily relies on the Ogallala-High Plains aquifer for its water supply
- Eastern Kansas
 - Primarily relies on surface water supplies
- Central Kansas
 - Relies on a mixture of surface and groundwater



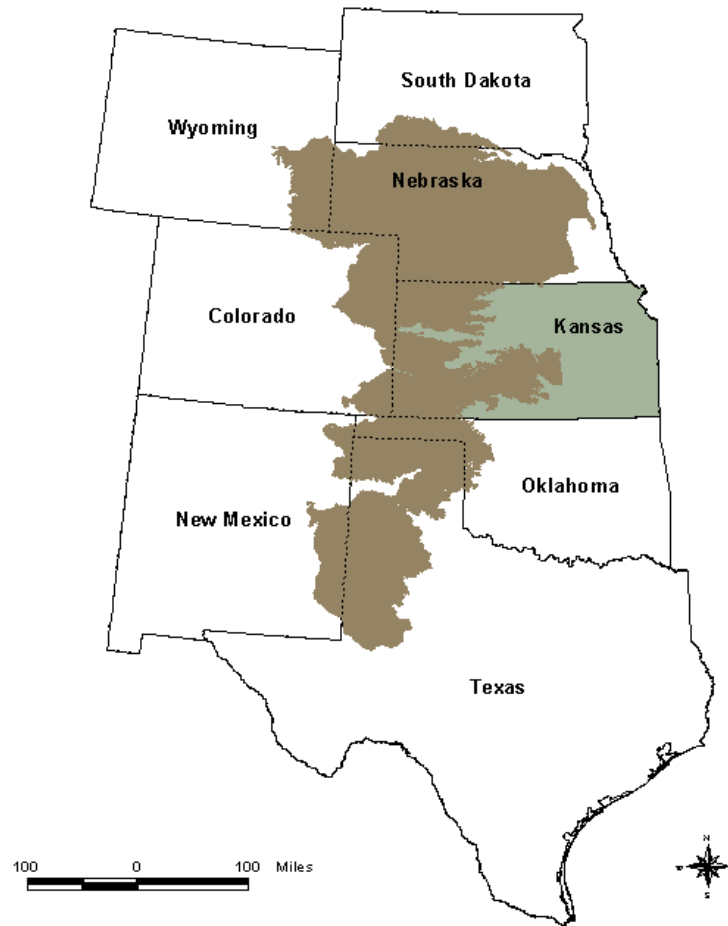


Water Supplies

Major surface water resources

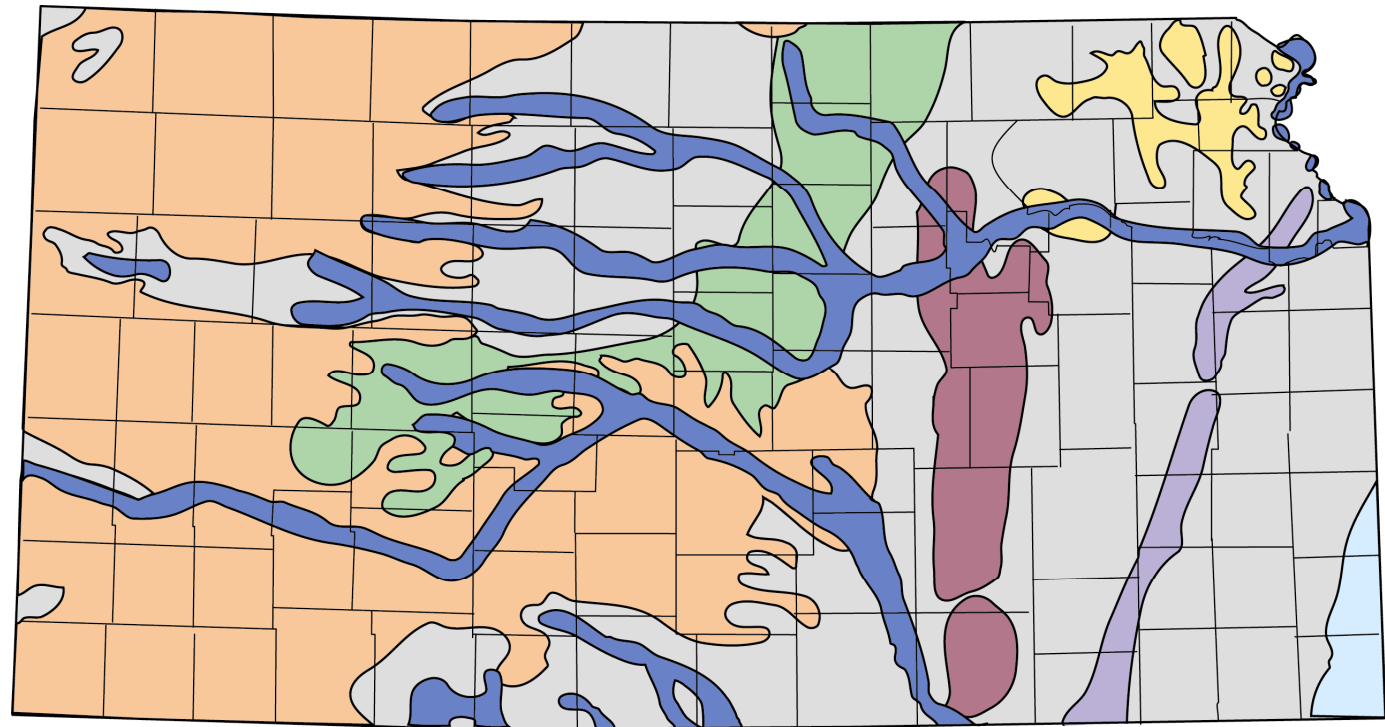










The Ogallala Aquifer



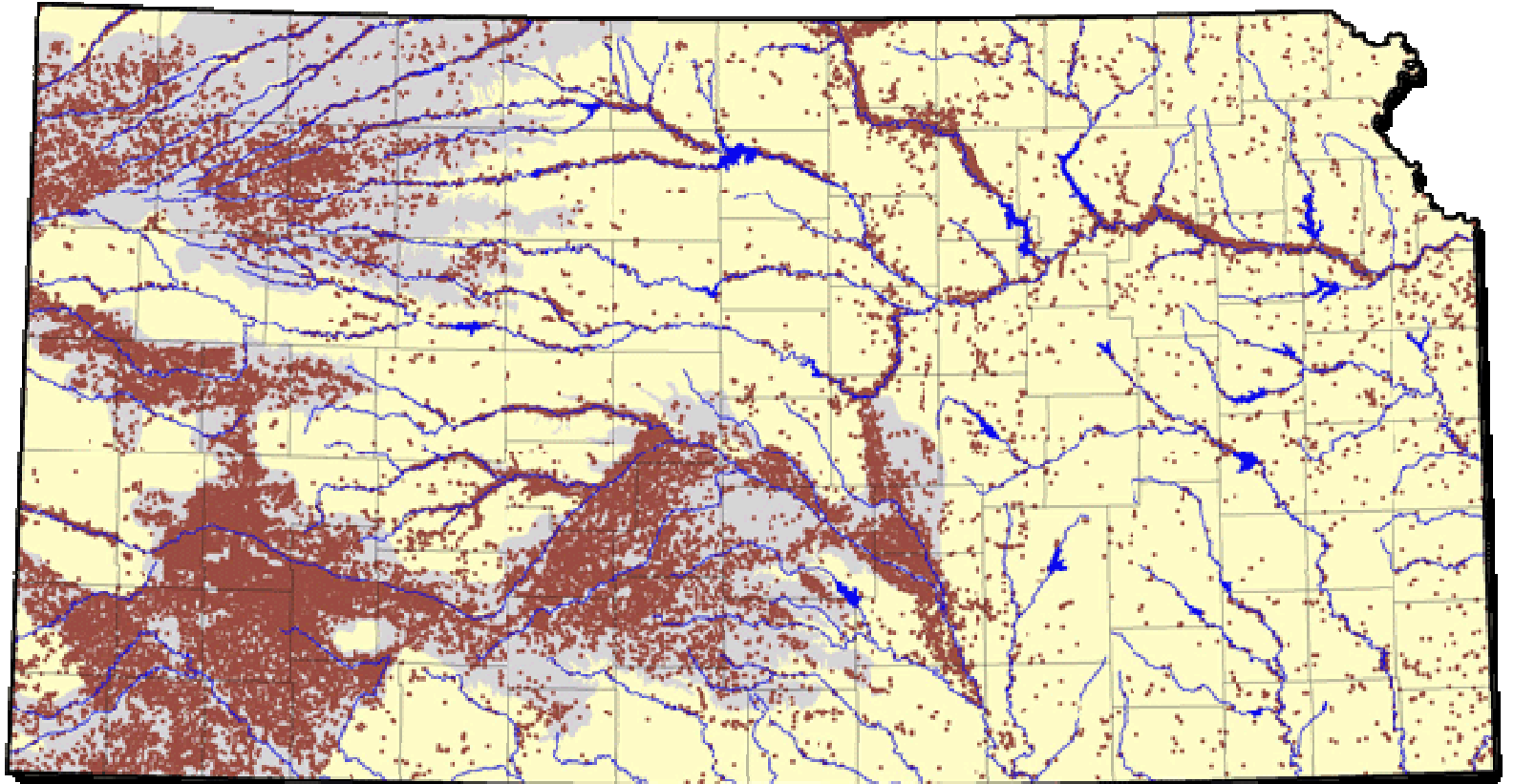
Water Supplies

Major groundwater resources

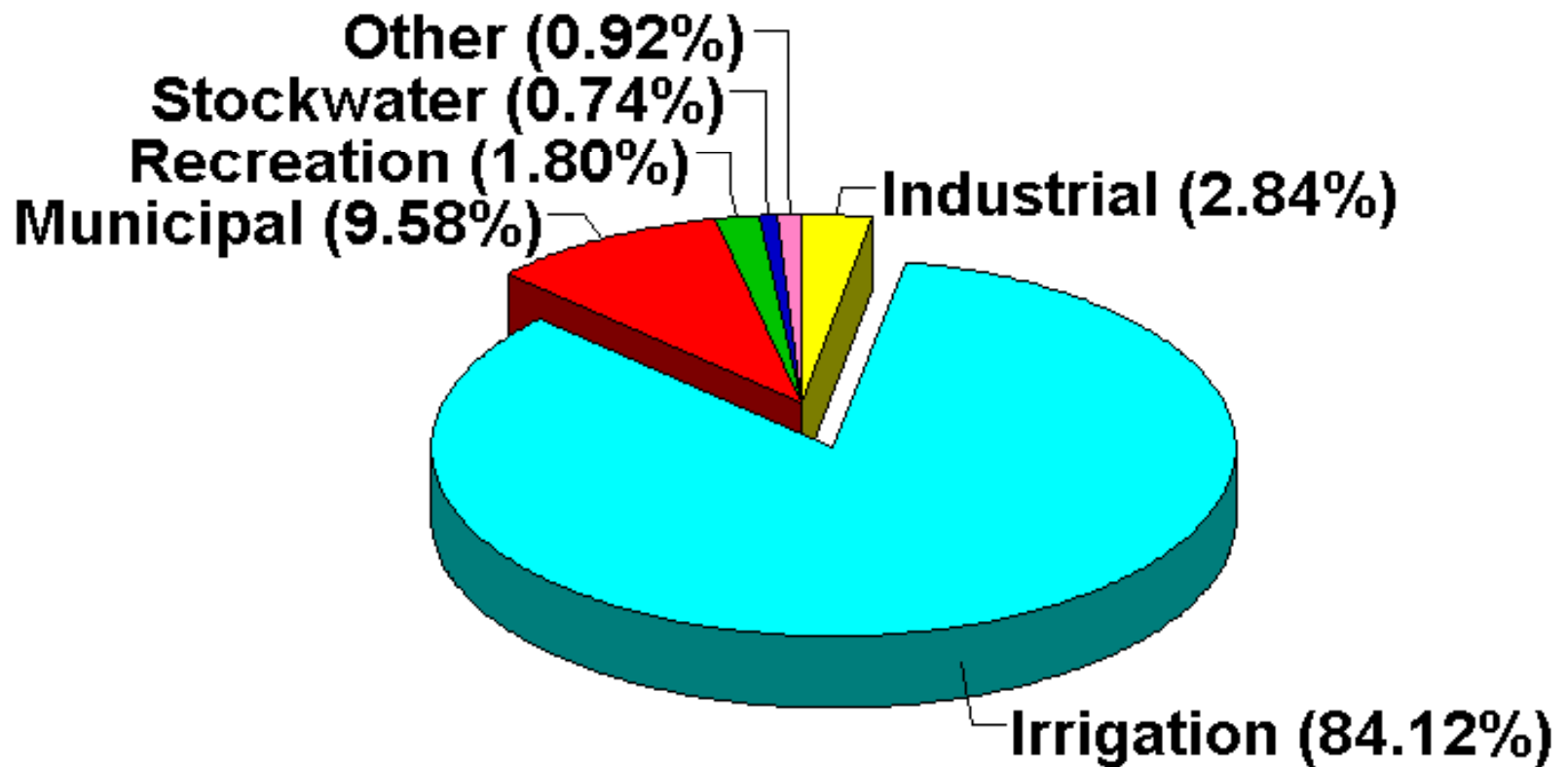


- | | | |
|---|---|---|
|  Alluvial aquifers |  Glacial-drift aquifers |  High Plains aquifer |
|  Dakota aquifer |  Chase and Council Grove |  Douglas aquifer |
|  Ozark aquifer |  Not a principal aquifer | |

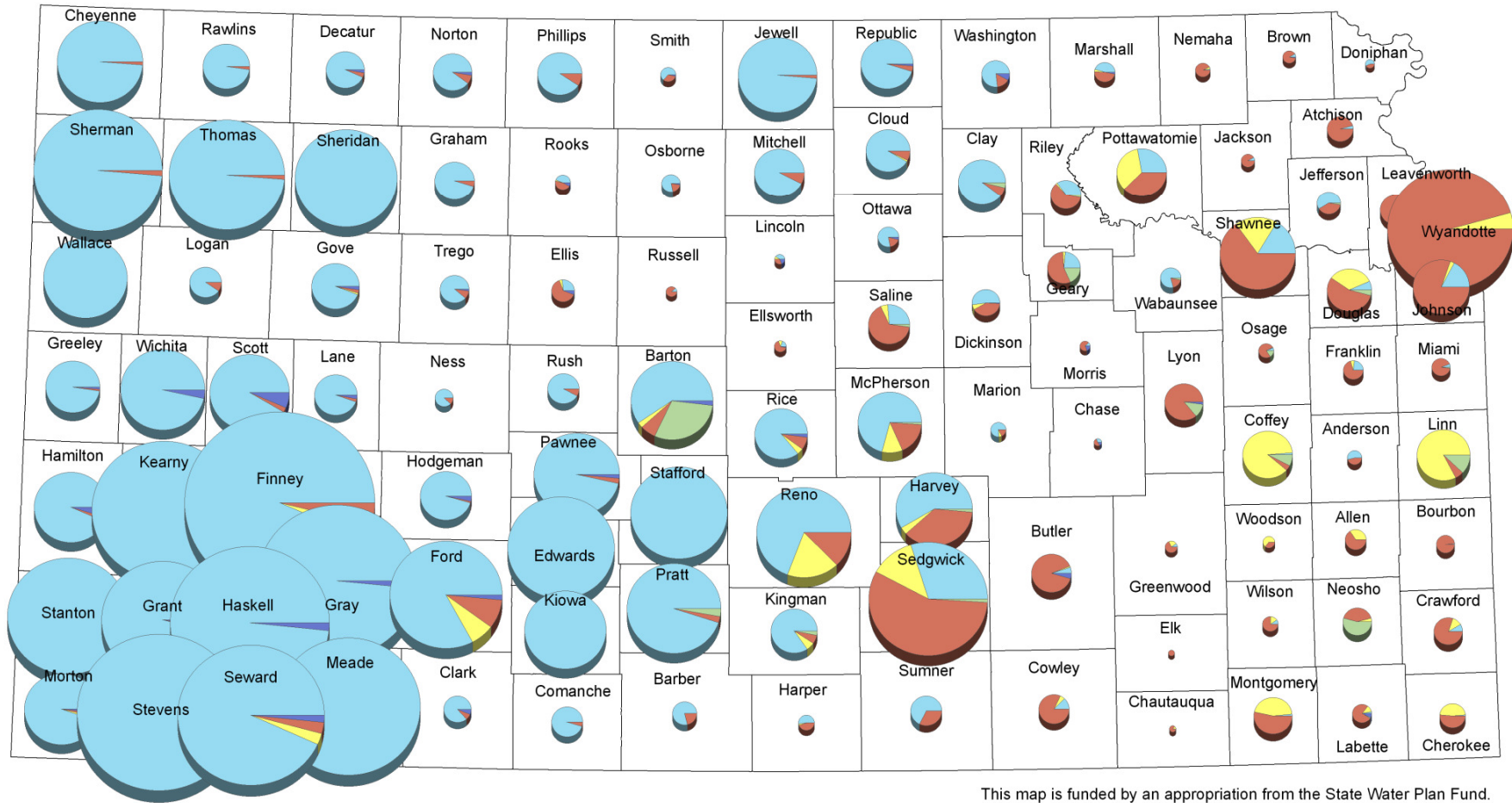
Points of Diversion in Kansas



Typical Breakdown Between Authorized Uses Statewide



2007 Reported Water Use, by Type of Use for Kansas Counties



This map is funded by an appropriation from the State Water Plan Fund.

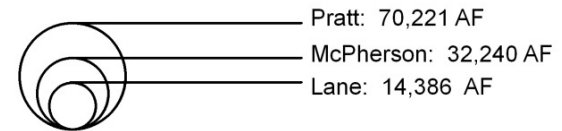
Disclaimer: Features on this map represent conditions as of the date of the map and are subject to change. The user is referred to specific policies, regulations and/or orders of the Chief Engineer.

Percentages of 1.5% or less do not show up in the pie charts.

This map is intended for planning purposes only.



Kansas Department of Agriculture
Division of Water Resources
Water Use Unit
March 3, 2009



Kansas Water Appropriation Act 1945

- All water dedicated to use of the people of Kansas
- Right to use water is based on Prior Appropriation or “**First in time - First in Right**”
- Limits rights to reasonable needs
- Allows a limited resource to be allocated for beneficial use and to protect minimum desirable streamflows
- Protects investments, property rights and the resource

Water Management

- During periods of shortage, junior water rights may be curtailed to satisfy senior rights and minimum desirable stream flow
- Releases from storage may be protected
- Statutes provide additional comprehensive tools to deal with long-term water problems, e.g. Intensive Groundwater use Control Areas (IGUCAs)

Municipal Water Use

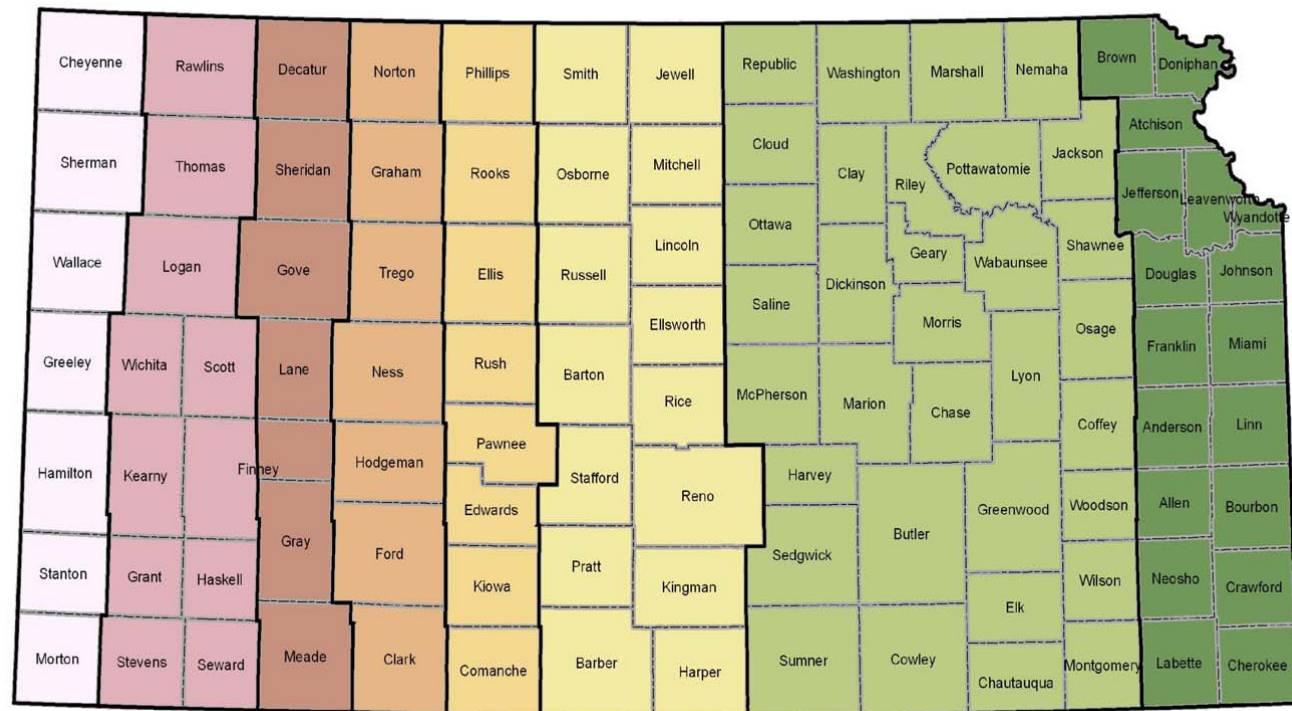
- “Municipal use” means the various uses made of water delivered through a common distribution system operated by:
- Municipalities
 - Rural Water Districts
 - Public Wholesale Water Supply Districts
 - Any person or entity serving **10 or more** hookups for residences or mobile homes; or any other similar entity distributing water to other water users for various purposes.

Considerations for New Applications

- Safe Yield of the Source of Supply (Precipitation Recharge vs. Existing Appropriations.)
- Well Spacing between wells, both domestic and appropriated wells.
- Requested Rate and Quantity (Proposed annual quantity must be reasonable.)

Regional Comparisons

Figure 1
Regions Used for Gallons Per Capita Per Day (GPCD) Analysis



Region 1 Region 2 Region 3 Region 4 Region 5 Region 6 Region 7 Region 8

Average Water Use

(By Region)

<i>AVERAGE GPCD USE FOR PUBLIC WATER SUPPLIERS BY REGION AND SIZE KANSAS 2003-2007</i>						
Region	Year					Average
	2003	2004	2005	2006	2007	
1	278	253	272	293	272	274
2	248	234	246	258	245	246
3	243	224	221	244	241	235
4	198	179	192	188	170	185
5	164	155	150	156	149	155
6-ML	150	143	145	150	135	145
6-S	130	124	123	138	125	128
7-L	150	139	137	147	135	142
7-M	108	102	105	107	101	105
7-S	101	97	97	96	92	97
8-L	144	128	128	130	130	132
8-M	103	98	99	102	98	100
8-S	87	82	80	84	82	83
Kansas	128	120	121	126	119	123