WATER RIGHTS IN KANSAS

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Stockton Field Office
Overview

- Kansas Water Appropriation Act
- Beneficial Uses of Water
- Permit Types & Requirements
- Limited water in Kansas
- Major Groundwater Sources
- Groundwater Managements Districts
- Safe Yield
- Stratigraphic Log Requirements
- Water Level Measuring Tubes
- Water Right Perfection & Certification Process
- Water Availability
- Protections
- LEMAs & IGUCAs
- Annual Water Use – Water Use Reporting
- Applications, Fees, Violations, & Penalties
- WIMAS
- Meters
Kansas Water Appropriation Act (KWAA)

• Since 1945 – Right to use water based on prior appropriation or "First in time – First in right"

• **All** water is dedicated to the use of the people of Kansas

• 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
  • A water right does not grant ownership of water. It is a real property right to divert and use water for beneficial purposes with reasonable limitations
Some Quick (and Shortened) Definitions

- **Vested Right**: a right to use water for beneficial use that was recognized, on or before June 28, 1945.

- **Water Appropriation**: a right to divert water at a specific amount, rate, use, etc. *In general, non-certified files are referred to as water appropriations.*

- **Water Right**: any vested right or appropriation right. *In general, certified files are referred to as water rights.*
Why do I need a Water Right?

• Water is protected for the use and benefit of the citizens of the state in order of priority

• KDA-DWR issues permits to appropriate water, regulate usage & keeps records of all water rights

• It is illegal to use water without holding a vested right, or applying for & receiving a permit to appropriate water from DWR

• Exception is domestic use – household, 2 acres of lawn & garden use, livestock on pasture & secondary uses
A **Beneficial Use of Water** is described as water that is used for financial purposes or aesthetic value and classified under one of the fourteen uses listed in KAR 5-1-1.

**Others:**
- Municipal
- Domestic
- Dewatering
- Hydraulic Dredging
- Thermal Exchange
## Permit Types

### Appropriation of Water
- Goes through a perfection period to determine the perfected amount of water for the approved use
- Becomes an actual property right tied to the place of use

### Term Permits
- Finite projects lasting longer than 6 months or needing more than 4 mg
- Commonly used for contamination remediation, oil/gas wells, dewatering & construction
- No well log if less than 5 years

### Temporary Permits
- Last for no more than 6 months
- A quantity of water no greater than 4 mgy at the place of use, unless for dewatering or wind farms
- Most commonly used for oil/gas wells, dewatering, and wind farm construction
- No well log required

### Domestic Use
- Not required to have a permit, but may be recognized
- Irrigate up to 2 acres (lawn & garden) & watering livestock at pasture
- Household purposes
Permitting Requirements

- Source of supply
- Proposed place of use, point of diversion & type of use
- Maximum rate of diversion & quantity of water requested
- If applying for groundwater, a test hole log or well log within 300 feet of proposed well
- Names of well/landowners within ½ mile
- Justification for amount of water requested – must be reasonable for intended use
- Must meet minimum well spacing and safe yield (K.A.R. 5-4-4 & 5-3-10)
- Evidence of legal access to the point of diversion
Limited Water in 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

Images from kansastrailguide.com
Major Groundwater sources in Kansas
Groundwater Management Districts (GMDs)

Groundwater Management Districts in Kansas

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.

Kansas Department of Agriculture
Division of Water Resources
July 24, 2017
Groundwater - Safe Yield

- Process of determining the amount of water available to sustainably appropriate at a specific location.

- For groundwater, the extent of the aquifer was determined within a 2-mile radius of the point of diversion.

- A quantity of water is calculated that can be safely appropriated based on an estimate of precipitation recharge multiplied by the percentage determined by the Chief Engineer to be available for non-domestic uses.

- That quantity is compared to the quantity of water that has already been appropriated within the area of consideration.

- If the remaining quantity of water available is sufficient for the application, it will be approved, if not, it will be denied.

Alluvium to the south was removed from the Safe Yield analysis due to determination of different source of supply.
Safe Yield – continued

- Term Permits are not subject to safe yield as long as the term extent does not exceed 5 years
- Temporary Permits are not subject to safe yield
- Domestic use is not subject to safe yield

**Analysis Results**
The selected PD is in an area **OPEN** to new appropriations.
The safe yield based on the variables listed below is **2,714.34 AF**.
Total prior appropriations in the circle is **2,482.41 AF**.
Total quantity of water available for appropriation is **231.93 AF**.

**Safe Yield Variables**
The area used for the analysis is set at **8,042 acres**.
The potential annual recharge at the circle center is estimated to be **5.4 inches**.
The percent of recharge available for appropriation is **75%**.

Authorized Quantity values are as of **20-APR-2018** and are based on Appropriated and Vested ground water right and possible stream nodes for GMD #2. Domestic, Term and Temporary water rights have been excluded.
There are **20 water rights** and **31 points of diversion** within the circle.
Stratigraphic Log Requirements

• Test hole logs are to be submitted with a new application, though they are not necessary for re-drilling of wells due to being required to be within the same source of supply.

• We require a test log, unless we know what you will be sourcing (i.e. KS River alluvium)

• We always require a test log if the source is in the Dakota, High Plains, or Glacial aquifers

• Test holes must be within 300 feet of the proposed or replacement well

• Completed stratigraphic logs of the actual point of diversion, approved and authorized by the permit, are required to be provided to DWR
### Test Hole Log Examples

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>Top soil</td>
</tr>
<tr>
<td>3-125</td>
<td>Clay, brown to gray</td>
</tr>
<tr>
<td>125-151</td>
<td>Sand fine, trace medium grades to med. at 146 ft.</td>
</tr>
<tr>
<td>151-169</td>
<td>Clay, gray</td>
</tr>
<tr>
<td>169-178</td>
<td>Sand, fine</td>
</tr>
<tr>
<td>178-190</td>
<td>Clay, gray</td>
</tr>
<tr>
<td>190-197</td>
<td>Sand, fine</td>
</tr>
<tr>
<td>197-266</td>
<td>Clay, gray</td>
</tr>
<tr>
<td>266-317</td>
<td>Sand, fine with clay</td>
</tr>
<tr>
<td>317-324</td>
<td>Gravel, pea, sub angular</td>
</tr>
<tr>
<td>324-326</td>
<td>Shale, gray</td>
</tr>
<tr>
<td>326</td>
<td>Limestone, total depth</td>
</tr>
</tbody>
</table>

Static Water Level estimated at 100 feet below ground surface.

The test hole is estimated to yield over 200 gpm based on the gravel thickness and the history of other wells in the area.

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Darin R. Duncan, PG  
Associated Drilling, Inc.

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Glacial deposits in Nemaha Co.

Unconfined Dakota system in Cloud Co.
Water Level Measuring Tubes

- Good, no problems
- Bad cap, electrical tape
- No cap

*Must have if rate greater than 100 gpm*
Water Right Perfection

Perfection Period
• The time during which a water appropriation is developed; including completing the diversion and distribution system, as well as applying water in compliance with the permit

Certificate of Appropriation
• A legal document issued after the perfection period that contains the same types of information as the permit to proceed, but the values are based on what was actually done during the perfection period
Process - From Application to Certificate

File an Application
- Know what you need, where it is coming from, and where it is going to
- Have data to back up what you need
- Assistance available at the local field office

After the permit is approved, complete the diversion works
- Install the well/surface diversion and meter it with an approved meter
  - A list of approved (certified) meters can be found online at www.agriculture.ks.gov
- File the Notice of Completion and pay the $400 N&P fee
- Extension of time to complete can be requested - $100 fee

After completion, use what you need during the perfection period
- Accurate records and water use reporting are vital
- Extensions of time to perfect can be requested - $100 fee
- Reminders are sent in October of the deadline year & a reason to extend must be given

Inspection of diversion works & continuation of perfection period
- Several visits made by DWR staff who will verify:
  - Well/surface diversion location
  - Meter type & installation
  - Place of use and rate of diversion

After expiration of the perfection period, DWR will issue a Certificate
- DWR will review the water use history to determine what was used from:
  - The permitted well(s) / surface diversion(s) as well as all of the diversions for the place of use
  - A draft certificate will be sent to the landowner of record for review
  - DWR will issue the final Certificate with corrections, if needed
In areas **closed** to new appropriations of water, additional water use for population growth, new industry, or feedlot can be accommodated through purchase and conversion of existing water rights.

| Changes must pertain to the same local source of supply | Changes from irrigation to another use such as stock or municipal cannot increase net consumptive use | We no longer have to worry about “use it or lose it” in closed areas in Kansas |
Protections

- During periods of shortage, junior water rights may be curtailed to satisfy senior water rights and minimum desirable streamflows
- Releases from storage are protected
- Strict first in time, first in right can be harsh
- Statutes provide additional comprehensive tools such as LEMAs and IGUCAs to deal with water problems
Intensive Groundwater Use Control Areas (IGUCA)

- Created in 1978 when permits were required
- Water Management tool that works in conjunction with the KWAA
- Allows for more-flexible solutions taking into account the area & aquifer
- Provides alternatives to strict administration of water rights by priority
- Formal public hearings are held
- Decision by the Chief Engineer based on hearing record
Local Enhanced Management Areas (LEMAS)

- Proactive plans developed by locals and GMDs
- Include conservation measures to address specific water resource problems
- Hearings before the Chief Engineer to adopt, reject or return plan to the GMD
- Shared solution respecting priority
LEMA example

• GMD No. 4 identified high priority areas (HPA)
• Model demonstrated benefits of cuts stay put
• “Sheridan 6” HPA wanted to cut use by 20%
• Tried regulations and explored IGUCA option
• GMD 4 now has adopted a LEMA that is district wide.

• Correction controls are based on inches per acre.

• The LEMA stood up in a legal challenge in district court.

• We have three LEMAs in Kansas. Two are in GMD 4 and one in GMD 1.

• GMD 4 is a leader in managing the Ogallala.
Water Use Reporting

- **Who reports water use?** → Any water right owner or the designated water use correspondent (usually the tenant).

- **When does water use reporting take place?** → Begins January 1st and runs until March 1st each calendar year.
Water Use Reporting

Water Use details are used:
- To certify water rights
- In interstate compact administration
- For water banking
- In possible abandonment of water rights
- For compliance & enforcement actions

Who uses our data:
- Kansas Water Office
- KGS/USGS
- KRWA
- K-State Extension
- KS Dept. Of Revenue

Each year approx. 16,000 water use report forms are mailed for 32,500 active water rights.

Largest beneficial use in KS is irrigation.
Online Water Use Reporting

• Initiated in 2013 to allow water users to report water usage online
• System reduces chance of errors & incorrect information
• Free to use, with real-time confirmation of report submittal

91% of 2020 water use reports were submitted online.

www.KSWaterUseReport.org
Applications, Fees, Violations, & Penalties

**Overpumping Penalties**

<table>
<thead>
<tr>
<th>Category</th>
<th>Level A (≤24 Hours)</th>
<th>Level B (24 – 72 Hours)</th>
<th>Level C (More than 72 Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Penalty w/in 5 yrs</td>
<td>Written Notice of Non-Compliance</td>
<td>$1000 per day and a reduction in quantity equal to 2X quantity overpumped (not to exceed one year suspension)</td>
<td>$1000 per day and a reduction in quantity equal to 3X quantity overpumped (not to exceed one year suspension)</td>
</tr>
<tr>
<td>One Penalty w/in 5 yrs</td>
<td>$1000 per day and a reduction in quantity equal to 2X quantity overpumped (not to exceed one year suspension)</td>
<td>$1000 per day and a one year suspension</td>
<td>$1000 per day and a three year suspension</td>
</tr>
<tr>
<td>Two Penalties w/in 5 yrs</td>
<td>$1000 per day and a one year suspension</td>
<td>$1000 per day and a three year suspension</td>
<td>$1000 per day and a four year suspension</td>
</tr>
<tr>
<td>Three Penalties w/in 5 yrs</td>
<td>$1000 per day and a three year suspension</td>
<td>$1000 per day and a four year suspension</td>
<td>$1000 per day and a five year suspension</td>
</tr>
</tbody>
</table>

**Late Water Use Penalties**

- Update to K.S.A 82a-732 – 2018 was the first year of increased fines for the 2017 reporting season. Civil and other penalties for failure to submit a water use report are:
  - If report is not received by March 1, owner is subject to **$250 penalty** per file number
  - If report is not received by June 1, owner is subject to **$1000 penalty** per file number
# Civil Fines for Other Water Right Violations

<table>
<thead>
<tr>
<th>Violation of K.A.R. 5-14-10</th>
<th>Monetary Penalty</th>
<th>Maximum Number of Days Penalty Applied</th>
<th>Maximum Suspension of Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower-tier miscellaneous</td>
<td>$500 per day</td>
<td>20</td>
<td>One year</td>
</tr>
<tr>
<td>Failure to provide information</td>
<td>$500 per day, for each day the violation exists</td>
<td>20</td>
<td>One year</td>
</tr>
<tr>
<td>Unauthorized diversion or threat to divert</td>
<td>$500 per day</td>
<td>20</td>
<td>One year</td>
</tr>
<tr>
<td>Denial of access</td>
<td>$1,000 per day</td>
<td>10</td>
<td>Three years</td>
</tr>
<tr>
<td>Lack of water flowmeter</td>
<td>$1,000 per day</td>
<td>10</td>
<td>Three years</td>
</tr>
<tr>
<td>Noncompliance with a substantial order</td>
<td>$1,000 per day</td>
<td>10</td>
<td>Five years</td>
</tr>
<tr>
<td>Meter manipulation</td>
<td>$1,000 per day</td>
<td>10</td>
<td>Five years</td>
</tr>
<tr>
<td>Falsification</td>
<td>$1,000 per instance of falsification</td>
<td>Not applicable</td>
<td>Five years</td>
</tr>
<tr>
<td>Noncompliance with a special condition of a change application approval</td>
<td>$1,000 per day</td>
<td>10</td>
<td>Two years</td>
</tr>
</tbody>
</table>

Image: Waste of water – lower tier – $500 per day penalty & 1 year suspension of water right
WIMAS is a web based application that allows users to query, analyze, and map Kansas water rights data. Data is retrieved daily from the Kansas Department of Agriculture's, Division of Water Resources Water Rights Information System.

WIMAS version 5 for the Web was funded in part by the State Water Plan Fund of the Kansas Water Office and the Kansas GIS Policy Board.

Related Links
- KDA Division of Water Resources: OWWR administers 28 state laws, including the Kansas water appropriation act, and statutes concerning construction of dams, levees and other changes to streams within Kansas. OWWR administers the state's surface water compacts and coordinates the national flood insurance program in Kansas.
- Kansas Water Office: The KWO is the State's water planning, policy, and coordination agency and develops the Kansas Water Plan.
- KDHE Bureau of Water: The Bureau of Water administrators programs related to public water supplies, wastewater treatment systems, the disposal of sewage, and nonpoint sources of pollution. Programs are designed to provide safe drinking water, prevent water pollution, and assure compliance with state and federal laws and regulations such as the Clean Water Act and Safe Drinking Water Act.
- Groundwater Management Districts: Five groundwater management districts are responsible for regional planning and management of groundwater resources, collecting resource data and...
• Online application that allows users to query, analyze & map Kansas Water Right Data

• Data updated daily from DWR database
Meters

- Water flowmeters required by KDA-DWR must be from the Certified Water Flowmeter list

- Meters must be installed according to manufacturer instructions and with minimum 5 pipe diameters upstream and 2 downstream
  - Multijet, full-bore electromagnetic & positive displacement meters are exempt from spacing requirements

- McCrometer propeller meters must be installed in approved chamber with flow straightening vanes
Meter spacing – the good
Out of compliance – does not meet upstream spacing & spigot location
Out of compliance – does not meet upstream spacing
Meters

- Meters must have sufficient register capacity to not roll over more than once per year
- They must be maintained in satisfactory operating condition
- Must have appropriate seals and labels. Seals can only be broken by an authorized representative of the manufacturer
- One must submit a repair/replacement form when meter is repaired or replaced.
Meter Issues

Unreadable
or
Broken
Meter Seal Issues

- Missing
- or
- Broken
QUESTIONS

Visit our website: http://Agriculture.KS.gov/Divisions-Programs/DWR