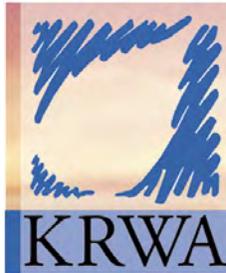


This issue of "The Clarifier" is published by the Kansas Rural Water Association and is provided to water and wastewater utilities, associate members, agencies and other friends. Have a comment? Send it to KRWA at P.O. Box 226, Seneca, KS 66538; ph. 785/336-3760; e-mail: [krwa@krwa.net](mailto:krwa@krwa.net). This newsletter is in addition to KRWA's regular news magazine, *The Kansas Lifeline*.



# CLARIFIER

December 2015

Vol. 4

## Online Water Use Reporting Now Up To Full Speed

**T**he Division of Water Resources (DWR) is ready and wants as many water use reports as possible to be filed online in 2016.

Last year, it was possible to report irrigation use and municipal use through the on-line water use reporting Web site but the mailed report forms did not point out the Water Use correspondent's unique user number and personal identification number, or PIN. The water use reporting cards and forms were already printed last year before it was known that the system would be ready. This year, the reporting documents will have better explanations of login numbers.

All public water systems are encouraged to login to their water use reporting forms and give it a try. There is no requirement to continue with the online reporting if something seems



uncomfortable. One of the good things about the process is that the values that are reported are saved if there isn't enough time to complete the whole report. You can logout on Monday and login on Tuesday and the same numbers that were entered will still be there. Also, if a significant mistake is found, the forms can be cleared and the values re-entered. There is also some error checking in the reporting form. For example, if the beginning and ending meter readings were entered in reverse order, the form will catch that the first number is larger than the second number. At the end of the process, there is a final submission button which is clicked to make the report final, and only then at the end.

**Do not mail a paper report if you submit the water use electronically.**

This online process is significantly better than the traditional mail process. One reason is that entries are saved in the water use database, not someone else's interpretation between your "3" and "8", or your "2" and "7". Also an instant confirmation is provided to print for your files that your report was received. No more "hope they got it" or extra certified mail expenses.

The Division of Water Resources will gladly take any questions anyone has by phone if anyone runs into difficulties. Kansas Rural Water Association may also be able to assist you with your questions.

KRWA encourages water systems to give the online reporting system a try and see if it doesn't make reporting a little bit easier. Here is the link: [www.kswaterusereport.org/](http://www.kswaterusereport.org/)

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- Wastewater Workshops Well-Attended



### Quality Water



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Coliform bacteria are a commonly used bacterial indicator of sanitary quality of water. Coliforms can be found in the aquatic environment, in soil and on vegetation; they are universally present in large numbers in the feces of warm-blooded animals. While coliforms themselves are not normally causes of serious illness, they are easy to culture and their presence is used to indicate that other pathogenic organisms of fecal origin may be present.

# The Revised Total Coliform Rule – Changes Are Coming!

The following article was published in the November 2015 issue of *The Kansas Lifeline* magazine. Due to increased interest in the topic of the Revised Total Coliform Rule (RTCR) and its rapidly approaching compliance deadline of April 1, 2016, KRWA is repeating the article to help provide answers to any questions that public water systems may have regarding the RTCR.

The Safe Drinking Water Act requires the U.S. Environmental Protection Agency (EPA) to review and revise, as necessary, each drinking water regulation at least every six years. The Total Coliform Rule (TCR) was originally published in 1989; the TCR is the only microbial drinking water regulation that applies to all public water systems (PWSs). The main objectives of the TCR were to evaluate the effectiveness of treatment, determine integrity of the distribution system, and to signal the possible presence of microbial contamination. In 2003, the EPA decided that it was time to revise the TCR. An advisory committee of 15 organizations, including the National Rural Water Association, was formed to make recommendations for rule revisions.

The final Revised Total Coliform Rule (RTCR) was promulgated on February 13, 2013. The RTCR aims for greater public health protection using a “find and fix” approach.

## The top three provisions of the RTCR

It is important to note that in the state of Kansas, the RTCR is yet to be adopted as a state regulation. Currently the RTCR exists as a federal regulation and the rule is currently under development by the Kansas Department of Health and Environment (KDHE). KDHE has an agreement with the EPA to implement the rule prior to obtaining primacy. Although there is no official regulatory language from KDHE at this point, KDHE has

**It is important to note that in the state of Kansas, the RTCR is yet to be adopted as a state regulation.**

expressed intentions on how the agency plans to implement the RTCR. All PWSs must comply with the RTCR beginning April 1, 2016.

## 1. Monitoring

The current TCR requires that PWSs conduct routine (monthly) monitoring for total coliform (TC) bacteria in the distribution system. The number of required samples varies depending on population served. Under the RTCR the number of required routine TC samples will not change. Also, KDHE intends to maintain the monitoring frequency at monthly. This is a change from the federal regulation. EPA’s RTCR allows for reduced (quarterly) TC monitoring for groundwater systems that serve less than 1,000 if the system meets specific requirements. KDHE also intends to be more stringent than the federal RTCR by not allowing groundwater systems that serve less than 4,900 to collect all routine TC samples on the same day. These systems will be required to spread out their TC sampling throughout each month.

## REVISED TOTAL COLIFORM RULE (RTCR)

Who: All Public Water Systems (PWS) in Kansas

When: PWS must comply with RTCR beginning April 1, 2016

What are the major provisions?

<b>Monitoring</b>	<b>No Change</b>	
	Continue routine, monthly total coliform (TC) bacteria monitoring. Same frequency; same # of samples.	
	PWSs must sample according to a written sampling plan.	
	Each routine TC+ sample must be analyzed for the presence of <i>E. coli</i> .	
	Following a TC+ routine sample, three repeat TC samples must be collected: <ul style="list-style-type: none"> <li>■ One at same tap as the original sample</li> <li>■ One within five service connections upstream</li> <li>■ One within five service connections downstream</li> </ul>	
<b><i>E. coli</i> MCL Violation</b>	<b>New Requirements</b>	
	An <i>E. coli</i> MCL violation occurs with the following sample result combination:	
	Routine	Repeat
	TC+	EC+
	TC+	TC+ (but no <i>E. coli</i> analysis)
	EC+	TC+
	EC+	Any missing sample
	EC+	EC+
<i>E. coli</i> MCL violation requires Tier 1 Public Notice within 24 hours.		
<b><u>Level 1 and Level 2 Assessments</u></b>  <i>Purpose is to identify Sanitary Defects that could provide a pathway of entry for microbial contamination or indication of failure of protective barriers against microbial contamination.</i>	<b>Level 1 Assessment Triggers:</b> <ul style="list-style-type: none"> <li>■ A PWS collecting &lt;40 samples per month has two (2) or more TC+ routine/repeat samples in the same month</li> <li>■ A PWS fails to take every required repeat sample after any single TC+ sample</li> </ul>	
	Level 1 Assessments to be performed by PWS owner or operator within 30 days of trigger using the "Data Collector" within the Kansas Environmental Applications Portal (KEAP) - <a href="http://keap.kdhe.state.ks.us/">http://keap.kdhe.state.ks.us/</a> .	
	<b>Level 2 Assessment Triggers:</b> <ul style="list-style-type: none"> <li>■ A PWS incurs an <i>E.coli</i> MCL violation</li> <li>■ A PWS has a second Level 1 Assessment within a rolling 12-month period</li> </ul>	
	Level 2 Assessment to be performed by KDHE within 30 days of trigger.	
	Sanitary defects identified during either a Level 1 or Level 2 Assessment must be corrected within 30 days or within KDHE-approved timeframe.	
<b><u>Seasonal Systems</u></b>	PWSs that start up and shut down during the operating season must: <ul style="list-style-type: none"> <li>■ Complete all KDHE-approved start-up procedures BEFORE serving water to customers</li> <li>■ Submit certification of completed start-up procedures to KDHE BEFORE serving water to customers</li> </ul>	
	Examples of start-up procedures: <ul style="list-style-type: none"> <li>■ Disinfection and flushing</li> <li>■ Sampling for TC / <i>E. coli</i></li> <li>■ Minimum disinfectant residual in distribution</li> <li>■ Verification that any current or historical sanitary defects have been corrected</li> </ul>	

There will be no change in repeat sampling requirements. If any routine TC sample tests positive, it must also be tested for the presence of E. coli and the water system will be required to collect three repeat samples. One sample is to be collected at the site of the original TC+, one sample is to be collected within five service connections upstream of the TC+, and one sample is to be collected within five service connections downstream of the TC+. KDHE will not require water systems to update their TC sampling plans unless the system wants to designate specific locations for repeat sampling.

### 2. Violations

Another change under the RTCR is Maximum Contaminant Level (MCL) violations. A PWS will be in violation of the E. coli MCL if any of the following sample result combinations occur:

Violation of the E. coli MCL requires PWSs to distribute Tier 1 Public Notice within 24 hours.

### 3. Assessments

The biggest change that some water systems will experience under the RTCR is the Level 1 and Level 2 Assessments. This is where the “find and fix” approach comes in. The RTCR requires PWSs to investigate the system when monitoring results show the system may be vulnerable to contamination and correct any “sanitary defects” identified. There are two levels of assessments based on the severity and frequency of the problem.

The following situations will trigger a Level 1 Assessment:

- A PWS collecting fewer than 40 samples per month has two or more TC+ routine and/or repeat samples in the same month.
- A PWS collecting at least 40 samples per month has greater than 5.0 percent of the routine/repeat samples in the same month that are TC+.
- A PWS fails to take every required repeat sample after any single TC+ sample.

Level 1 Assessments will be conducted by the PWSs, within 30 days of notification, using the “Data Collector” within the KDHE’s online Kansas Environmental Application Portal (KEAP) at <http://keap.kdhe.state.ks.us/>.

The following situations would trigger a Level 2 Assessment:

- A PWS incurs an E. coli MCL violation.

- A PWS has a second Level 1 Assessment within a rolling 12-month period.

Level 2 Assessments will be more detailed than a Level 1 Assessment and they will be conducted by KDHE within 30 days of a trigger.

If a “sanitary defect” is identified during either a Level 1 or Level 2 Assessment, it must be corrected by the PWS within 30 days for the completed assessment, or within a KDHE-determined timeframe. Failure to correct a sanitary defect within the specified timeframe would be considered a treatment technique violation and would require Tier 2 Public Notice (within 30 days).

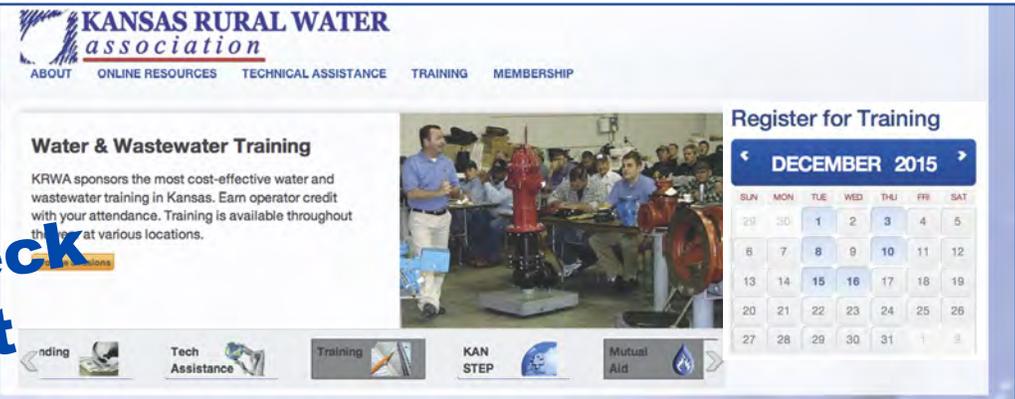
### Conclusion

KRWA hopes to have the opportunity, in the near future, to review and provide comments on KDHE’s draft version of the RTCR before it is presented to the Legislature for approval. If anything changes, KRWA will keep systems informed. If you have any questions regarding the RTCR you may email me at [monica@krwa.net](mailto:monica@krwa.net) or call me at 785-262-7301 or also contact KDHE staff Jean Herrold at 785-296-5518; [jherrold@kdheks.gov](mailto:jherrold@kdheks.gov) or Andrew Hare, 785-296-5946; [ahare@kdheks.gov](mailto:ahare@kdheks.gov).

**KRWA hopes to have the opportunity, in the near future, to review and provide comments on KDHE’s draft version of the RTCR before it is presented to the Legislature for approval.**

*About the Author: Monica Wurtz began work with KRWA in October 2013. She previously worked at the Kansas Department of Health and Environment and also at US EPA Region 7 for four years. Monica is considered a national expert on various drinking water regulations.*

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27	28	29	30	31		

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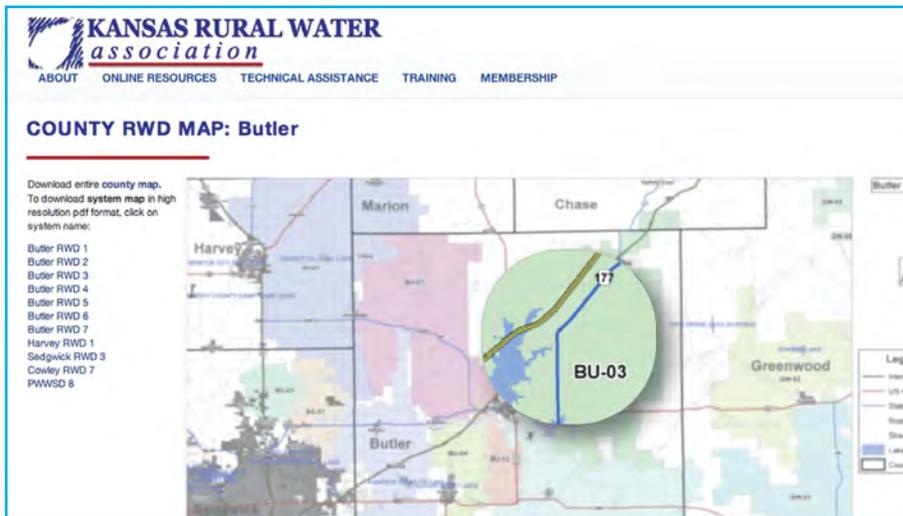
# Rural Water District Online Maps Updated

**K**RWA, in partnership with the Kansas Water Office and the Data Access Support Center recently updated the rural water district maps that are available online on KRWA's Web site, [www.krwa.net](http://www.krwa.net).

Individual county maps are available under the link "Online Resources" (<http://krwa.net/mapovers/index.shtml>). Selecting the county of interest opens a new screen similar to that shown. (See Graphic 1.)

Viewers may use the "looking glass" to zoom in to determine which rural water district serves a particular area, or can immediately go to the listing to open the pdf map of a particular district.

"The online RWD maps are a great resource," says KRWA GIS staff member Mark Thomas. "There were numerous



Graphic 1



Graphic 2

consolidations and mergers, some new systems formed and others that attached lands since the first version of online maps were loaded," he says.

Individual districts are encouraged to check the map for their system and notify KRWA of any additional changes.

Although the online maps may not be perfect down to every minor parcel that has been added to every system, the maps reflect the most current information available. Anyone wanting to

have specific information is going to need to contact the respective system. KRWA produced the pdf maps for counties and all the districts. KRWA can update any map to reflect additional updates.

Another very useful feature on the KRWA Web site is the location tool on the homepage. (See Graphic 2.)

Clicking on the "What Water District Am I In" link, opens up a subsequent page as shown in Graphic 3.

Any physical address can be typed into the search bar at the top of the page. The mapping tool will then open to that area and will display the name of the rural water district that serves that area.



Graphic 3

# Division of Water Resources Expected to Propose Regulations for Over-Pumping

**I**n October 2013, Governor Sam Brownback announced that state government agencies were to develop a 50-Year Vision for the Future of Water in Kansas. Since then, many meetings have been held to explain that Kansas needs a sustainable source of water for current needs and future growth. These many meetings held throughout the state were also excellent forums to gather the opinions of the state’s citizens and to weigh the various options that might be employed to meet the needs of the next fifty years.

One obvious way to reduce depletion of the very slowly recharging Ogallala Aquifer (and other sources of water) is to enhance enforcement of existing water law by eliminating use in excess of water right limits. In 2012, the heat and sudden lack of rainfall that occurred in mid-summer put many irrigators in a precarious position. A good crop was in the field, but in many cases, that year’s water demand became much greater than most water rights were allowed. To save the crop that already had significant water use, a program was put in place to allow water rights to be exceeded if applications were filed to cover the high use in 2012. A condition of these special permits was a reduction of use in subsequent years to a quantity less than the normal amount allowed by the water right. This program has been relatively successful for the irrigation community.

Since the appearance of the drought in 2012, greater emphasis has been placed on reviewing the reported quantities of water by all water users, not just irrigation, by the Kansas Department of Agriculture’s Division of Water Resources (DWR). The 50-Year Vision has also heightened the public’s awareness of the

**DWR has had hearings in recent years with irrigators who have been found to have installed meters to measure flow “backwards”.**

state’s water supply. Because of this, and because many parts of the state have been considered to be at least “unusually dry” since 2012, many water users have been tempted to be less than honest in regards to their water use.

DWR has had hearings in recent years with irrigators who have been found to have installed meters to measure flow “backwards”, and their staff have observed meter registers with a quantity reading smaller than the reading observed a few weeks prior, suggesting some form of tampering.

Brought to light in a recent hearing of a joint Kansas House and Senate Interim Committee on Natural Resources and agriculture, DWR announced plans to make the penalty structure more



This photo shows the face of a typical irrigation water flow meter.



A thirsty field of alfalfa in Cloud County is being watered.

stringent. It has been noticed that some water users are now treating the \$250 penalty for failure to file a water use report as a legitimate cost of doing business, especially when the water use report shows excessive water use. (Somehow, these persons appear to think

**It has been noticed that some water users are now treating the \$250 penalty for failure to file a water use report as a legitimate cost of doing business, especially when the water use report shows excessive water use.**

that failing to provide a water use report won't land them on a list of important field visits in the following year.) Currently, a violation of the maximum quantity results in a formal notice of the violation and a directive to comply. A second violation could result in a \$1,000 fine. A third violation is a daily fine of \$1,000 with suspension of the water right for one year. A fourth violation is a ten-year suspension. The details of any new regulations were not shared with the committee, but it appears that the penalty for failure to file a report will be at least equal to the penalty for using water in excess of the water right.

It is expected that these regulations will be ready for review and adoption by the



The typical installation of an irrigation flow meter is shown in this photo.

Legislature in the coming session. Lane Letourneau of the Division of Water Resources will be scheduled to give a presentation on these and possibly other regulations which support the 50-Year Vision at the 2016 Kansas Rural Water Conference and Exhibition in Wichita, March 29-31.

## Wastewater Workshops Well-Attended

During October and November, KRWA sponsored wastewater workshops in Carbondale and Leavenworth. Attendance was very good at both sessions and KRWA staff received lots of positive feedback.

The session at Carbondale was held on October 15 and covered state of the art technologies available for rehabilitating sewage collection systems. Sessions such as this provide systems a wealth of information on how to identify and solve problems with infiltration and inflow caused by deteriorating sewers and manholes. Sam Johnson, P.E., BG Consultants, reviewed the process for upgrading collection systems, focusing on the on-going project at Carbondale. Sam covered methods available for locating I&I sources such as closed circuit television inspections (CCTV), smoke testing and flow monitoring. Brian McCrary, P.E., of Insituform, discussed the use of cured-in-place (CIPP) technology to upgrade sewers. His session covered both gravity and pressure pipe situations. Finally, Todd Mayer of Mayer Specialty Services, LLC provided information on various methods and materials available for manhole rehabilitation. Todd and his staff also provided a live demonstration of cementitious manhole rehabilitation and those specific products used for improving the Carbondale collection system.

On November 4, a training session was held at Leavenworth at the Riverfront Community Center with 26 operators in attendance. The primary purpose of this workshop was to help



KRWA staff member Jeff Lamfers discusses certification requirements with 26 operators at Leavenworth on November 4.

those operators preparing to take a KDHE certification examination in the near future. Presenters included Charlie Schwindamann and Jeff Lamfers of KRWA. The workshop covered such basics as a discussion of wastewater terms, permit requirements and sample collection. It also covered the most common treatment methods in use including waste stabilization ponds, trickling filters and activated sludge. Providing such broad-based workshops have been successful in the past helping operators pass their examinations.



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The banner has a solid blue background with a repeating pattern of white snowflakes and dotted lines. The snowflakes are stylized with multiple points and small circles at their tips. The dotted lines are vertical and vary in length, some ending in a small circle.

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